

OFFICIAL
EXHIBITS

IURC
PETITIONER'S

EXHIBIT NO.

2577

DATE

REPORTER

13

~~DE~~

UR



Glass-lined tank contractors since 1954

920G Prairie Drive • Sycamore, Illinois 60178 • PHONE 815.899.5678 • FAX 815.899.5681

October 3, 2013

Charles Alexander
C/O Utilities, Inc.
10996 Four Seasons Place
Suite 100 G
Crown Point, IN 46307

Ref: Twin Lakes Utilities Proposal, Revision 2
Ground Storage Water Tank

Cady Aquastore, Inc. an authorized dealer for CST Storage company., the tank manufacturer, is pleased to offer the following Aquastore thermoset epoxy coated structure for the bolted steel water storage tank for the Twin Lakes Utilities Indiana project.

Cady Aquastore, Inc shall furnish engineered shop drawings, O & Ms, materials, erection, and start up services that meets the AWWA D103-09 design requirements commonly called for in the Crown Point Indiana area. Note that this offer is limited to providing the tank foundation design only, with the installation of the foundation and yard piping be by others. The proposal does contain materials, equipment and labor for the design and installation as detailed below.

INCLUDED IN THIS OFFER ARE:

One (1) 59 foot diameter by 24 (nom) foot high, Aquastore water storage tank. Net capacity shall be 473,200 gallons at a 6 inch freeboard. Tank floor and shell shall be designed per AWWA D103-09 standards.

Tank coatings shall be Thermoset epoxy coated tank panels. Exterior color shall be white, interior shall be manufacturer's standard tan or white color.

APPURTENANCES:

One (1) Aluminum AWWA vent, with frost proof, resettable pest screen and SS mesh bird screen.

One (1) Roof access hatch, 30" X 30", equipped with lift assist device and lockable hasp.

One (1) Outside ladder system: Aluminum ladder rails and non-skid rungs; Galvanized steel ladder brackets and ladder cage, Ladder shall extend to within 6 feet from the top of the finished floor.

One (1) Top manway hatch/observation platform 30" X 30".

One (1) Ladder access gate, cage mounted with lockable hasp.

Two (2) 30 Diameter, AWWA, hot dip galvanized bottom shell access door with davit arm for door plate and full faced white gasket.

APPURTENANCES (continued):

- One (1) 8" schedule 40 aluminum overflow pipe system with internal circular weir inlet, stainless steel standoff brackets, terminating with a 90 degree elbow 12 to 18 inches above the splashpad (by others) and includes a replacable #24 SS mesh screen at the bottom.
- One (1) 10" removable silt stop for the outlet pipe, Sch 40 pipe X 12" tall, epoxy coated.

OTHER MATERIALS LABOR AND SERVICES INCLUDED IN OFFER ARE:

- Lot Item of concrete reinforced ring-wall foundation design, drawings and calculations for the tank foundation based on the USGS seismic design loads and AWWA D103-09 design standards. All designs and calculations shall be submitted with a licensed Indiana Professional Engineer's stamp.

This offer assumes a minimum soil bearing capacity of 2000 PSF shall be available at time of construction. This price may change depending on actual conditions discovered by, and provided by the customer's geotechnical investigation.
Geotechnical site exploration has not been included in this offer.

- Lot Item of structural designs, drawings and calculations for tank floor and shell. All designs and calculations shall be submitted with a licensed Indiana Professional Engineer's stamp.
- Lot Item of labor, materials & equipment to install foundation sheet leveling plate assemblies into tank footings. (tank footings by others, see below)
- Lot Item of labor, materials, and equipment; To install, level, and round off embedded steel starter sheets onto leveling plate assemblies.
- Lot Item of labor and materials to install Aquastore seal strip systems onto starter sheets and any other floor penetrations and to witness floor pour.
- Lot Item of turnkey tank shell, dome, and tank appurtenance assemblies erection. Includes proprietary Aquastore erection equipment, certified Aquastore factory trained erection crews.
- Lot Item of non-supervised tank testing, any disclosures to be corrected per the manufacturers recommended procedures.

ITEMS NOT INCLUDED:

1. **Foundation, Concrete, rebar, excavation, backfill or compaction**, materials, labor or equipment, designs, excavation, or material costs shall be accepted by Cady Aquastore Inc. if the assumed 2000 PSF foundation design is changed due to new site conditions, site grading, or local or state construction codes.
2. **Yard Piping**, ALL below grade piping, tank inlet/outlet pipe, pipe fittings, restraining glands, gaskets, valves, heat tracing, insulation, labor, materials nor equipment, except removable silt stop and overflow pipe system as noted above.

ITEMS NOT INCLUDED (continued):

3. Rough in or finished **Electrical**, systems, components, finished parts, lights, instruments, materials, labor, nor equipment.
4. Access road, access rough in, site rough in preparation, surveying/staking, fencing removals or additions, road restoration materials, equipment or labor other than that listed above.
5. Any required state or local permits specific to installing, operating, or transporting goods to this water system.

SITE CONDITIONS/INSTALLATION ITEMS TO BE PROVIDED BY BUYER:

1. Appropriate access road to building site providing free and clear access to the tank site by tractor-trailer for tank delivery, and 6 wheeled pick-up trucks with fifth wheel trailer systems for building equipment, is required.
2. Uninterrupted accessibility for 8' around the entire tank site is required.
3. Site preparation and engineered soils investigation. This quote assumes we shall have a minimum bearing capacity of **2000 psf**. Costs associated with a foundation and floor other than as offered in this Proposal, shall be extra to the total price of this proposal.
4. BUYER is responsible to give at least three (3) weeks prior notification to SELLER when the access road is ready and the site has been completely prepared for the scope of SELLER's work.
5. The BUYER shall be responsible for providing a level area for storing the tank components as they are delivered.
6. The BUYER shall be responsible for reasonable access to this job site including but not limited to: traffic control, snow removal, and all maintenance, repair, and restoration to access roads, temporary or permanent, if required.
7. The BUYER shall be responsible for furnishing and maintaining all required daily sign in logs, schedule arrangements for deliveries and work, authorization letters, identification cards, identification badges or hardhat stickers, specific work clothing if applicable, All security authorizations, locks, and all security reporting responsibilities including any journals, logs, or incident reports.

PROJECT TERMS:

PRICE: **59' X 24' (nom.) EPOXY COATED STORAGE TANK, PER CADY EMAIL OF 8/9/13 INCLUDING SECOND MANWAY PER CADY 9/18/13 EMAIL:**
* * * * * **\$305,437**
Three hundred-Five thousand Four hundred Thirty-seven dollars, no cents.

VALIDITY: Price is firm for this project.

TAXES Applicable Indiana taxes are included.

Utilities, Inc.

Page 4 of 7

October 3, 2013

PROJECT TERMS (continued):

ALLOWANCES: None.

DRAWINGS: 2 to 3 weeks after receipt of accepted, signed contract.

FREIGHT: Freight for the equipment offered herein is included in our quote. The buyer shall be responsible for providing access to the tank site and storage space at time of delivery.

LABOR: THIS QUOTE IS VALID ONLY WITH CADY AQUASTORE FACTORY CERTIFIED BUILDERS USING SHOP WAGES FOR THE TANK AND FOUNDATION CONSTRUCTION (AS DESCRIBED ABOVE).

UTILITIES: Power (110 volt, 1 phase) service shall be available within 50' of the tank construction site. All site facilities, including sanitary, shall be the responsibility of the BUYER.

DELIVERY: 8 to 10 weeks after approved shop drawings are received.

CONSTRUCTION: Foundation install: By others.
Tank and appurtenances: 2 to 3 weeks.

BONDING: Not included.

INSURANCE: As required for Cady Aquastore Inc. portion of project, certificate holders shall be as required per specifications.

TERMS: Progress payments, Net 30 days; 2% late charge per month 24% per annum will be added to all over due invoices, 10% retainage.

SCHEDULE OF VALUES:

20%	With purchase order for Engineering Designs and PE review.
20%	With receipt of approvals for Project release.
40%	Delivery tank & appurtenances. – crew, & equipment mobilization.
10%	Foundation installed.
9.75%	Erection of Tank & Appurtenances
0.25%	Tank closed, ready for Punch list and testing.

We trust the above information shall be sufficient for your immediate use. If you should have any questions, please feel free to call the writer. Thank you for the opportunity to assist you with this project.

Sincerely,


Dave Hemauer
Project Manager

ACCEPTANCE PAGE

Accepted By: _____

Accepted By: _____

Cady Aquastore

Randy Cady, President

Date: _____

Date: _____

This area reserved for Corporate Seals

--	--

1. General. These Terms and Conditions shall apply to the sale by Cady of the scheduled Equipment to Purchaser and the construction agreed to for the placement of the Equipment on Purchaser's premises. Acceptance of orders, whether oral or written, is based on the express condition that Purchaser agrees to all the terms and conditions contained herein. Placement of orders, whether oral or written, by Purchaser will constitute Purchaser's assent to these terms and conditions. These terms and conditions represent the complete agreement of the parties, superseding all previous communications, and no terms or conditions in any way adding to, modifying or otherwise changing the provisions stated herein shall be binding upon Cady unless made in writing and signed and approved by an officer of Cady. No modification of any of these terms will be affected by Cady's shipment of Equipment following receipt of Purchaser's purchase order, shipping request or similar request or similar forms containing printed terms conflicting or inconsistent with the terms herein. No action or failure to act by Cady shall constitute a waiver of a right afforded to it under the Contract nor shall such action or failure to act constitute approval or acquiescence in a breach there under except as may be specifically agreed in writing.

2. Site. Purchaser shall furnish the legal description of the site or of the land upon which the site is located and the names and addresses of the owners thereof. Should there be owners other than Purchaser they shall in writing authorize the construction on the site and agree to all security interests which may be claimed by Cady. Cady shall be entitled to rely on the accuracy of information furnished by the Purchaser but shall exercise proper precautions relating to the safe performance of the work. Purchaser will furnish a jobsite free to all obstructions above and below ground level and furnish verification that the final excavated site will support soil bearing pressures of at least 2000# per square foot. Purchaser will acquire all required permits prior to commencement of construction. Purchaser will further secure and pay for all necessary approvals, easements, assessments and charges required for construction.

3. Electric Power. The Purchaser will provide adequate current of the proper phase and voltage to within 150 feet of the structure to be constructed on the site and/or other equipment sites as required.

4. Highway Limitations. Purchaser has determined highway limitations, which may affect the delivery of the Equipment and accepts variance in delivery as necessitated by such restrictions.

5. Security Interest. Purchaser intends that the Equipment made the subject of this Contract shall at all times be and remain personally which is severable from the Purchaser's property. Purchaser hereby grants to Cady a security interest in the Equipment, together with all parts, accessories, attachments, additions, and replacements, now to hereafter installed in, affixed to, or used in conjunction with said Equipment. Cady shall have all rights and remedies of a secured party under the Uniform Commercial Code. The security interest of Cady will terminate upon payment in full by Purchaser. In the event that Purchaser finances this purchase through someone other than Cady, Cady agrees to assign the security interest to such financing agency upon receipt by Cady of payment in full. The Equipment shall be located on Purchaser's property at the site. Purchaser designates Cady as its attorney-in-fact to execute any financing statements on behalf of Purchaser necessary to perfect such security interest.

6. Disclaimer. CADY IS AN INDEPENDENT CONTRACTOR NONE OF WHOSE REPRESENTATIONS ARE BINDING ON THE MANUFACTURER.

7. WARRANTY LIMITATIONS. PURCHASER UNDERSTANDS THAT THE SOLE WARRANTY, EXPRESS OR IMPLIED, PROVIDED TO PURCHASER IN REGARD TO THE EQUIPMENT IS THE MANUFACTURER'S WRITTEN WARRANTY. CADY WARRANTS ITS INSTALLATION AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS OF ITSELF, ITS MATERIAL SUPPLIERS AND ITS SUBCONTRACTORS UNDER NORMAL AND PROPER USE AND OPERATING CONDITIONS FOR A PERIOD OF TWELVE MONTHS FROM THE DATE OF COMPLETION. CADY SHALL NOT BE RESPONSIBLE FOR DEFECTS IN ERECTION WORK PERFORMED BY OTHERS THAN LISTED ABOVE. EXCEPT FOR ITS ABOVE-STATED WARRANTY PERTAINING TO INSTALLATION, THERE ARE NO UNDERSTANDINGS, AGREEMENTS, REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, RUNNING TO PURCHASER INCLUDING SPECIFICALLY, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

8. Price Adjustments. If Cady's steel or other material supplier increases its prices to Cady prior to Contract initiation, Cady may increase the selling price of the Equipment by an amount equal to the percentage increase in the cost of Cady's steel or other materials from date of this Contract and the effective date of steel or other material increases to Cady. Cady shall give Purchaser thirty days written notice of any such increase, and, unless Purchaser shall within such period notify Cady in writing that it is unwilling to accept any such increase, the increased price shall be paid on all Equipment shipped after such thirty day period. If Purchaser shall notify Cady of its dissent, Cady shall have the right to cancel this Contract by giving to Purchaser written notice within ten days after receipt by Cady of Purchaser's notice. (Stenographic and electrical errors are subject to correction by Cady.)

9. Delivery. Unless otherwise stated on the face hereof, the price and delivery of all standard Equipment, as listed in Cady's catalog are FOB the construction site to which they are shipped. Title to the Equipment shall pass to Purchaser when the Equipment is duly delivered at said site, except where Purchaser requests a delay in shipment, in which case the title shall pass to the Purchaser when the Equipment is ready for shipment. If Purchaser requests a delay in shipment, then Purchaser shall pay the factory's standard storage charges for the period from the scheduled shipment date to the actual date of shipment. The risk of loss to the Equipment shall pass to Purchaser when the Equipment is duly delivered to the Carrier at the factory. The processing of freight claims or loss claims is the responsibility of Purchaser.

10. Builder's Risk Insurance. The Purchaser shall purchase and maintain in a company or companies lawfully authorized to do business at the work site property insurance written on a Builder's Risk All Risk or equivalent policy form in the amount of the initial price plus value of such subsequent modifications and cost of materials supplied or installed by others comprising total value of the Equipment and Materials as installed at the site on a replacement cost basis without optional deductibles. Said insurance shall be maintained unless otherwise agreed in writing until final payment has been made. Said insurance shall include the interests of Purchaser, Cady, Sub-contractors and Sub-sub-contractors. Said insurance shall include without limitation insurance against the perils of the fire (with extended coverage) and physical loss or damage, including (without duplication of coverage), theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorms, false work, testing and start-up, temporary buildings and debris removal, including demolition, occasioned by enforcement of any applicable legal requirements. Equipment, or other attachment of accessories or components not sold hereunder.

11. Limitation of Remedies. Any action brought by Purchaser arising out of or in connection with an alleged breach of the manufacturer's Warranty shall be commenced within one year after tender of delivery of Equipment and not thereafter. Unless noted, this agreement does not contemplate any future performance by Cady after the tender of delivery of Equipment. If Purchaser desires to make a claim, it shall notify the manufacturer in writing before making any repairs or alterations of any kind to the Equipment. Once a claim has been made, the manufacturer shall have the right to perform on-site inspection of Equipment, or in the alternative, if so instructed by Cady, Purchaser shall ship Equipment, or any part thereof, claimed to be defective to Cady or as Cady directs under its shipping instructions and by freight prepaid. If Equipment or any part thereof is found to be defective, credit will be issued by Cady to cancel the charge for replacement. If Cady is required to do work on Purchaser's premises, Cady shall be granted permission to perform such work with its own service personnel under nonunion conditions.

12. Method of Shipment and Freight Charges. Orders specifically including freight or other transportation charges are based on rates in effect on date of this Contract and on the routing of shipment arranged by Cady. Cady will ship Equipment in accordance with Purchaser's routing whenever such routing will not result in an increase in freight or other transportation charges or whenever, in the event of such increases, the payment of any additional freight or other transportation charges is guaranteed by Purchaser to Cady's satisfaction. The Equipment shall be packaged for shipment at the lowest acceptable rate by common or other carrier, or any other method deemed necessary or advisable by Cady. Marking shall be in accordance with ordinary commercial practice at place of shipment, unless otherwise designated by Purchaser and accepted by Cady.

13. Force Majuro - Delivery. Shipping and delivery dates are approximate and are based upon Cady's ability to obtain all necessary labor, materials and parts and, where applicable, the receipt of all necessary information, plans or applications from Purchaser. Cady shall not be liable for damages resulting from any delay or failure to deliver the Equipment, or otherwise perform under this Contract, due to circumstances beyond the control and not occasioned by its fault or negligence, including but not limited to, any act of government, inability to obtain materials, failure of vendors, strikes, labor disputes, civil commotion, acts of God, or other occurrences rendering Cady's performance commercial impracticable, regardless of whether such occurrences are foreseeable. In the event of a production shortage, Cady shall have the right to allocate its available Equipment among its customers in such a manner as Cady shall desire.

14. Credit Approval. This Contract is subject to (a) execution by Purchaser of such additional Contract documents, security agreements, notes or other instruments as Cady shall deem necessary or desirable and (b) Cady's review and acceptance of the financial condition of Purchaser. If the financial condition of Purchaser at any time does not in the sole judgment of Cady, justify continuance of shipment under the terms of this Contract, Cady reserves the right to ship under reservation, or to require full payment before shipment or delivery. Additionally, Cady may at its discretion file such notices for financial protection under the lien or bond of each state, international sales terms, unless otherwise agreed, or require an irrevocable Letter of Credit confirmed by a major U.S. bank, payable at sign upon presentation of clean on-board bill of Lading (ocean or air) and other shipping documents as required.

15. Taxes. Cady's prices normally include sales, excise or similar taxes levied by governmental authority, either foreign or domestic. However, if Cady's prices do not include sales, excise or similar taxes levied by governmental authority then, in addition to the prices specified herein, the amount of any present or future sales, use, excise or other similar tax applicable to this transaction, shall be paid by Purchaser as a part of this sale, or in lieu thereof, Purchaser shall provide Cady with a tax exemption certificate acceptable to taxing authorities of the Shipped-To state. On any materials picked up by Purchase at the factory, the tax jurisdiction of the FOB State is applicable.

16. Additional Work and Inspection. No extra labor, materials or parts will be furnished under this Contract, unless it has been ordered by Purchaser on Cady's sales order form, and the prices and terms of sale are approved by Cady. Cady at its option, may subcontract labor, material and parts required by this Contract without Purchaser's consent. The Equipment shall be, at Cady option, subject to inspection and testing during manufacture. Unless otherwise agreed to, Cady shall be responsible for unpacking, storage, field assembly of Equipment, or construction of foundations. Cady shall not be responsible for the choice or use of linings, sealants and gasket materials not sold hereunder, or the installation, attachment or connection of piping, conveying and ventilating

17. Law. The rights and obligations of the parties shall be governed by the laws of the State and any legal action brought by the parties shall be initiated in the Circuit Court of Whiteside County, Illinois or in the U.S. district court for the Northern District of Illinois, Western Division, Rockford, Illinois.

18. Notice. Written notice shall be deemed to have been duly delivered if delivered in person to the individual or member of the firm or entity or to an officer of the corporation for which it was intended or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

19. Confidentiality of Proposal. All terms and conditions of this Contract shall be held in strict confidentiality by the Purchaser and shall not be divulged by the Purchase to any other person or entity without the express prior written approval of Cady.

20. Cancellation Charges. If Purchaser notifies Cady that it terminates this Contract for its convenience, Cady will stop all work as promptly as reasonably possible, but Purchaser shall be responsible for a cancellation charge, computed on the basis of Cady's full cost to the date of notice including overhead, all engineering work, work in progress, raw material, supplies, administrative expenses and all commitments made by Cady in connection with the Contract, less such allowances as Cady may be in position to make for any standard components and for the balance of the material as scrap, plus fifteen percent of the Contract price (or equal to fifteen percent of the total purchase price plus all non-recoverable costs and expenses). If any portion of the Equipment subject to the quotation, order acknowledgment or invoice is identified as special or Made to Order, Purchaser's order shall not be canceled or cancelable by Purchaser after acceptance by Cady, except upon payment in full of the purchase price.

21. Severability. In the event that any one or more of these terms or conditions are held invalid, illegal or unenforceable, such provisions shall be severed and the remaining terms and conditions shall remain binding and effective.

22. Default. In the event of default by the Purchaser in any of the payments of breach of any other terms and conditions provided herein, the contract may, at the option of the Seller, terminate and be forfeited and Cady may remove all equipment and/or materials delivered. Purchaser shall be given fifteen days written notice of any such breach or default and forfeiture of the contract and Purchaser shall have fifteen days after receipt of such notice to correct the default or take action reasonably likely to effect such correction within a reasonable time. If such default or breach has not been corrected or such action has not been taken to effect correction, Cady shall be entitled to take such action as necessary to enforce the contract or seek legal damages in the event of breach or default Purchaser.

Professional

Engineering

Services

Twin Lakes Headworks Improvements

Contract 1-2016

Project Manual

Utilities, Inc.

Issued for Bid

May 13, 2016

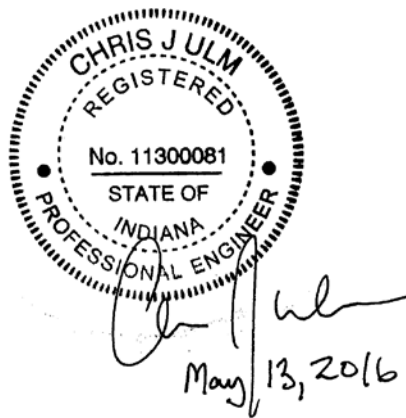


PLAN HOLDER: _____

Set No.: _____

PROJECT MANUAL

TWIN LAKES HEADWORKS IMPROVEMENTS
CONTRACT 1-2016
UTILITIES, INC.



Prepared by:

STRAND ASSOCIATES, INC.®
1170 South Houbolt Road
Joliet, IL 60431
www.strand.com

Issued for Bid
May 13, 2016



SECTION 00010

TABLE OF CONTENTS

TWIN LAKES HEADWORKS IMPROVEMENTS CONTRACT 1-2016 UTILITIES, INC.

Pages
Through

DIVISION 0-BIDDING AND CONTRACTING REQUIREMENTS

ADVERTISEMENT TO BID	00100- 1
INSTRUCTIONS TO BIDDERS	00200-10
BID	00400-11
BID BOND	00430- 2
BIDDER'S CERTIFICATION.....	00440- 1
NON- COLLUSION AND CERTIFICATION STATEMENT	00450- 1
AGREEMENT	00520-10
NOTICE TO PROCEED.....	00550- 1
EROSION CONTROL CERTIFICATION.....	00551- 1
PERFORMANCE BOND.....	00600- 3
PAYMENT BOND	00600- 6
GENERAL CONDITIONS	00700-62
SUPPLEMENTARY CONDITIONS.....	00800-15
CERTIFICATE OF LIABILITY INSURANCE	1

SPECIFICATIONS

DIVISION 1-GENERAL REQUIREMENTS

SUMMARY OF WORK	01010- 6
CONTRACT CONSIDERATIONS.....	01019- 2
COORDINATION, FIELD ENGINEERING, AND MEETINGS	01039- 3
CUTTING, PATCHING, AND ALTERATIONS	01045- 6
REGULATORY REQUIREMENTS.....	01060- 2
REFERENCE STANDARDS AND DEFINITIONS	01090- 6
SUBMITTALS	01300-11
QUALITY CONTROL.....	01400- 2
TEMPORARY FACILITIES	01500- 3
TEMPORARY CONTROLS	01560- 2
FIELD OFFICES AND SHEDS	01590- 2
MATERIALS AND EQUIPMENT	01600- 4
STARTING OF SYSTEMS.....	01650- 8
CONTRACT CLOSEOUT	01700- 3

DIVISION 2-SITE WORK

DEMOLITION	02050- 3
SITE CLEARING AND STRIPPING	02110- 2
DEWATERING	02140- 3
EXCAVATION, FILL, BACKFILL, AND GRADING	02222- 7

TABLE OF CONTENTS Continued

	Pages Through
AGGREGATE BASE COURSE	02231- 2
GEOTEXTILES.....	02240- 1
SLOPE PROTECTION AND EROSION CONTROL	02270- 4
HOT MIX ASPHALT PAVING	02510- 3
BURIED PIPING AND APPURTENANCES	02600- 9
SEEDING AND SODDING	02936- 5
 <u>DIVISION 3–CONCRETE</u>	
CONCRETE FORMWORK.....	03100- 4
CONCRETE REINFORCEMENT	03200- 5
CAST-IN-PLACE CONCRETE.....	03300-16
 <u>DIVISION 5–METALS</u>	
METAL FABRICATIONS	05500- 7
SLIDE GATES	05502- 3
ANCHOR BOLTS AND POST-INSTALLED ANCHORS	05560- 3
 <u>DIVISION 6–WOOD AND PLASTIC</u>	
WOOD FRAMING AND SHEATHING.....	06112- 2
WOOD BLOCKING AND CURBING	06114- 2
PLATE CONNECTED WOOD TRUSSES.....	06193- 4
FIBERGLASS PLANK SYSTEM	06600- 3
FIBERGLASS FABRICATIONS	06610- 2
FIBERGLASS WEIRS AND BAFFLES	06614- 2
 <u>DIVISION 7–THERMAL AND MOISTURE PROTECTION</u>	
VAPOR BARRIER	07191- 1
BOARD INSULATION.....	07212- 2
GUTTERS AND DOWNSPOUTS	07631- 2
CAULKING AND SEALANTS	07900- 3
 <u>DIVISION 8–DOORS AND WINDOWS</u>	
STANDARD STEEL DOORS AND FRAMES.....	08110- 3
ACCESS DOORS AND FRAMES.....	08305- 2
OVERHEAD COILING DOORS	08331- 3
DOOR HARDWARE	08710- 2
 <u>DIVISION 9–FINISHES</u>	
FRP WALL AND CEILING PANEL SYSTEMS.....	09450- 2
CHANNEL LINING SYSTEM	09882- 5
PAINTING.....	09900- 9

TABLE OF CONTENTS Continued

	Pages Through
<u>DIVISION 10–SPECIALTIES</u>	
MISCELLANEOUS SPECIALTIES.....	10050- 1
FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES.....	10522- 2
<u>DIVISION 11–EQUIPMENT</u>	
GRIT COLLECTOR	11320- 5
GRIT PUMPS	11327- 7
GRIT WASHER	11329- 5
SCREENING EQUIPMENT	11331-13
CONTROLS AND INSTRUMENTATION EQUIPMENT	11940- 8
I/O LISTING.....	11990- 3
<u>DIVISION 13–SPECIAL STRUCTURES</u>	
PARSHALL FLUME LINER.....	13031- 3
POLE BUILDING	13131- 5
<u>DIVISION 15–MECHANICAL</u>	
PIPING AND APPURTENANCES.....	15050-12
PIPING AND EQUIPMENT IDENTIFICATION.....	15195- 4
HEATING, VENTILATION, AND AIR CONDITIONING INSULATION.....	15290- 4
PLUMBING.....	15400- 4
TERMINAL HEAT TRANSFER UNITS	15835- 2
HVAC FANS	15860- 3
DUCTWORK	15890- 3
DUCTWORK ACCESSORIES.....	15910- 3
AIR OUTLETS AND INLETS	15940- 2
TESTING, ADJUSTING, AND BALANCING	15990- 3
<u>DIVISION 16–ELECTRICAL</u>	
GENERAL ELECTRICAL REQUIREMENTS	16010- 9
CONDUIT	16110- 9
UNDERGROUND CONCRETE DUCT BANKS.....	16111- 3
WIRE	16120-10
BOXES	16130- 5
WIRING DEVICES.....	16141- 4
CABINETS AND ENCLOSURES.....	16160- 2
SUPPORTING DEVICES	16190- 2
ELECTRICAL IDENTIFICATION	16195- 6
DISCONNECT SWITCHES	16440- 3
DRY TYPE TRANSFORMERS	16460- 5
PANELBOARDS.....	16470- 3
OVERCURRENT PROTECTIVE DEVICES.....	16475- 3
MOTOR CONTROL.....	16480-12
LIGHTING.....	16500- 7

TABLE OF CONTENTS Continued

	Pages Through
INSTRUMENT AND COMMUNICATION WIRE AND CABLE	16930- 3
STRUCTURED CABLING	16931- 6
CONTROLS AND INSTRUMENTATION	16940-20
CONTROLS AND INSTRUMENTATION DRAWINGS	16941- 4
SHORT-CIRCUIT, COORDINATION, AND ARC FLASH HAZARD STUDY	16949- 6

DRAWINGS

STANDARD DETAIL—SANITARY SEWER APPURTENANCES.....	01-975-43A
---	------------

APPENDICES (NOT PART OF CONTRACT DOCUMENTS)

SAMPLE DRAWINGS.....	23
SOILS INFORMATION (ATC GROUP SERVICES, INC.)	28
SOILS INFORMATION (ATEC ASSOCIATES, INC.)	58

END OF SECTION

BIDDING AND CONTRACTING REQUIREMENTS

SECTION 00100

ADVERTISEMENT TO BID

TWIN LAKES HEADWORKS IMPROVEMENTS
CONTRACT 1-2016
UTILITIES, INC.

Utilities, Inc. will receive sealed Bids for the Twin Lakes Headworks Improvements at 10996 Four Seasons Place, Suite 100G, Crown Point, Indiana 46307. Bids will be privately opened.

The Work includes a new pole building; new mechanical step screen equipment; new vortex grit removal equipment; new concrete junction boxes; new Parshall flume; associated site work; and heating, ventilation, and electrical work at the Twin Lakes Wastewater Treatment Plant.

Bids are to be addressed to Utilities, Inc., 10996 Four Seasons Place, Suite 100G, Crown Point, Indiana 46307, and shall be marked "Sealed Bid-Twin Lakes Headworks Improvements-Contract 1-2016."

Bidding Documents may be reviewed and paper copies may be obtained from the Issuing Office which is Utilities, Inc., 10996 Four Seasons Place, Suite 100G, Crown Point, Indiana 46307. A nonrefundable fee of \$100 will be required (shipping and handling fees included). Overnight mailing of Bidding Documents will not be provided.

All Bidders submitting a sealed Bid shall obtain the Bidding Documents from Utilities, Inc.

Bidders who submit a Bid must be a Plan Holder of record at the Issuing Office. Bids from Bidders who are not on the Plan Holders List may be returned as not being responsive.

Plan Holders are requested to provide an email address if they wish to receive addenda and other information electronically. Plan Holders are requested to designate whether they are a prime contractor, subcontractor, or supplier if they want this information posted on the project Plan Holders List.

The Bid must be accompanied by Bid security made payable to OWNER in an amount of 5% of the Bidder's maximum Bid price.

Utilities, Inc. reserves the right to reject any or all Bids, to waive any technicality, and to accept any Bid which it deems advantageous. All Bids shall remain subject to acceptance for 60 days after the time set for receiving Bids.

Contract award shall be made based on the lowest responsive and responsible Bidder.

The Utilities, Inc. project manager is Charles Alexander, who can be contacted at Utilities, Inc., 10996 Four Seasons Place, Suite 100G, Crown Point, Indiana 46307, (815.378.0995) regarding the project.

Published by the authority of the Utilities, Inc.
Thomas A. Tapella, Midwest Regional Manager

Dated at Crown Point, Indiana
May 16, 2016

END OF SECTION

SECTION 00200

INSTRUCTIONS TO BIDDERS

- A. These Instructions to Bidders establish requirements for Bidding and Award of Contract.
- B. These articles are not necessarily numbered consecutively.
- C. Table of Contents

ARTICLE 1–DEFINED TERMS.....	1
ARTICLE 2–COPIES OF BIDDING DOCUMENTS.....	1
ARTICLE 3–QUALIFICATIONS OF BIDDERS.....	2
ARTICLE 4–EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA AND SITE	2
ARTICLE 5–PREBID CONFERENCE.....	4
ARTICLE 6–SITE AND OTHER AREAS	4
ARTICLE 7–INTERPRETATIONS AND ADDENDA.....	5
ARTICLE 8–BID SECURITY	5
ARTICLE 9–CONTRACT TIMES	5
ARTICLE 10–LIQUIDATED DAMAGES.....	5
ARTICLE 11–SUBSTITUTE OR “OR EQUAL” ITEMS	6
ARTICLE 12–SUBCONTRACTORS, SUPPLIERS, AND OTHERS	6
ARTICLE 13–BID.....	6
ARTICLE 14–BASIS OF BID; EVALUATION OF BIDS	7
ARTICLE 15–SUBMISSION OF BIDS	8
ARTICLE 16–MODIFICATION AND WITHDRAWAL OF BIDS	8
ARTICLE 17–OPENING OF BIDS	8
ARTICLE 18–BIDS TO REMAIN SUBJECT TO ACCEPTANCE	8
ARTICLE 19–AWARD OF CONTRACT	8
ARTICLE 20–CONTRACT SECURITY AND INSURANCE	9
ARTICLE 21–SIGNING OF AGREEMENT.....	9
ARTICLE 22–RETAINAGE	10
ARTICLE 23–OTHER TAXES.....	10
ARTICLE 24–LAWS, ORDINANCES, AND REGULATIONS.....	10

ARTICLE 1–DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and the Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

- A. Issuing Office–The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2–COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained by paper copy as stated in the Advertisement to Bid.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither OWNER nor ENGINEER assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 OWNER in making copies of Bidding Documents available on the above terms does so only for the purpose of obtaining Bids for the Work and does not confer a license or grant for any other use.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of OWNER's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments and other such data as may be called for below.

3.02 Bidder must be prepared to submit evidence of Bidder's qualifications to do business in the state where the Project is located prior to award of the Contract.

3.03 Bidders shall submit the documentation listed in Paragraph 7.01 of the Bid Form (Section 00400).

3.04 Bidder is advised to carefully review those portions of the Bidding Documents requiring Bidder's representations and certifications.

3.07 Bidder must be on INDOT's Approved Contractor's list or approved by the Department of Administration, or be able to obtain approval, prior to issuance of Notice to Proceed.

3.08 Bidder must be registered with Lake County, Indiana, and must satisfy all requirements for the Lake County Building Permit prior to issuance of Notice to Proceed.

ARTICLE 4—EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA AND SITE

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify,

1. Those reports known to OWNER of explorations and tests of subsurface conditions at or contiguous to the Site.

2. Those drawings known to OWNER of physical conditions relating to existing surface and subsurface structures at the Site (except Underground Facilities).

B. Copies of reports and drawings referenced in Paragraph 4.01.A, which are not included with the Bidding Documents, will be made available by OWNER to any Bidder on request. Reports and drawings, whether included in the Bidding Documents or not, are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are based upon information and data

furnished to OWNER and ENGINEER by owners of such Underground Facilities, including OWNER, or others.

4.03 Hazardous Environmental Condition

A. The Supplementary Conditions identify those reports and drawings known to OWNER relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03.A, which are not included in the Appendices to the Bidding Documents, will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

4.05 On request in advance and after submittal of Bidder's evidence of insurance coverage meeting the requirements designated in the General and Supplementary Conditions, OWNER will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 OWNER-Related Items

A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, OWNER will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

B. Paragraph 6.13.C of the General Conditions indicates that if an OWNER safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents and any Addenda;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph 4.06 of the Supplementary Conditions containing reliable "technical data";

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by ENGINEER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the work.

ARTICLE 5—PREBID CONFERENCE

5.01 A prebid conference will not be held for the Project.

ARTICLE 6—SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary

construction facilities, construction equipment, or storage of materials and equipment are to be obtained and paid for by CONTRACTOR.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to ENGINEER in writing. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Issuing Office as having received the Bidding Documents.

7.02 All requests for interpretation must be received at least five days prior to the day set for receiving Bids. Addenda will be mailed not later than three days prior to the day set for receiving Bids. Failure of any Bidder to receive any such Addendum or interpretation shall not relieve such Bidder from any obligations under the Bid as submitted. All Addenda so issued shall become part of the Contract Documents.

7.03 Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.04 Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

7.05 Receipt of all addenda must be acknowledged in space provided in the Bid.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of 5 percent of the Bidder's maximum Bid price and in the form of a cashier's, certified, or bank check or a Bid Bond (on form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of the Bidder will be forfeited.

8.03 Bid security of Bidders will be retained unless requested to be returned and will not be returned until after Contract has been awarded or until the Bid hold period expires.

ARTICLE 9—CONTRACT TIMES

9.01 The numbers of days within which, or the dates by which the Work is to be substantially completed and ready for final payment are set forth in the Agreement (or incorporated therein by reference to the attached Bid Form).

ARTICLE 10—LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11—SUBSTITUTE OR “OR EQUAL” ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without evaluation of possible substitute or “or equal” items. Whenever it is specified or described in the Bidding Documents that a substitute or “or equal” item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be evaluated by ENGINEER until after the Effective Date of the Agreement.

ARTICLE 12—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individuals, or entities if requested by OWNER. If OWNER or ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute in which case apparent Successful Bidder shall submit an acceptable substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and OWNER may consider such price adjustment in evaluating Bids and making the Contract award.

12.02 If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for the forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity listed and against which OWNER or ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06.B of the General Conditions.

12.03 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

ARTICLE 13—BID

13.01 The Bid Form is included with the Bidding Documents.

13.02 All blanks on the Bid Form must be completed by printing in ink and the Bid signed in ink. A Bid price shall be indicated for each section, Bid item, alternative, adjustment unit price item or unit price item listed therein, or the words “No Bid,” “No Change,” or “Not Applicable” entered. Erasures or alterations shall be initialed in ink by the person signing the Bid Form.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or vice president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member, if the LLC is member-managed, or by a manager, if manager-managed, and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture shall be shown.

13.08 All names shall be printed in ink below the signatures.

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid form.

13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the Project, if any, shall also be shown on the Bid Form.

13.12 All Bids shall be signed in the presence of and be notarized by a Notary Public or other Officer authorized to administer oaths.

ARTICLE 14—BASIS OF BID; EVALUATION OF BIDS

14.01 Lump Sum

A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

14.02 Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.03 For cash allowances the Contract Price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents as provided for in Paragraph 11.02 of the General Conditions. These costs shall not be included in the cash allowance. The final Contract Price will be adjusted to reflect actual costs on account of cash allowances.

14.04 The following cash allowances shall be included in the Bid for Contract(s).

Unsuitable Foundation Material for Structures
and Roads

Section 02222—Excavation, Fill, Backfill and
Grading

ARTICLE 15–SUBMISSION OF BIDS

15.01 Bids will be received for all divisions of the Specifications and all other provisions of the Bidding Documents.

15.02 Bidder is furnished one copy of the Bidding Documents with one separate unbound copy of the Bid Forms and the Bid Bond. The Bidding Documents may be retained by Bidder. The unbound copy of the Bid Forms is to be completed and submitted with the Bid security along with any data required by the Bidding Documents to be attached to and made a condition of the Bid. Additional copies may be obtained from the Issuing Office.

15.03 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope, plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If the Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to place indicated in the Advertisement or Invitation to Bid. No relief will be provided for a mailed Bid not being received by the prescribed time. No Bid will be considered which is received after the time set for receiving Bids.

ARTICLE 16–MODIFICATION AND WITHDRAWAL OF BIDS

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time set for receiving Bids.'

ARTICLE 17–OPENING OF BIDS

17.01 Bids will be opened privately.

ARTICLE 18–BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19–AWARD OF CONTRACT

19.01 OWNER reserves without limitation the right to reject any or all Bids, to waive any and all informalities not involving price, time or changes in the work and to negotiate Contract terms with the Successful Bidder; and the right to accept or reject all incomplete, nonconforming, nonresponsive, unbalanced, obscure, or conditional Bids, or Bids which contain additions not called for, erasures, alterations, or irregularities of any kind, or which do not comply with the Instructions to Bidders. OWNER reserves the right to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be nonresponsive.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more

than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bids, OWNER will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the work when such data is required to be submitted prior to the Notice of Award.

19.05.1 OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals or entities to perform the Work in accordance with the Contract Documents to OWNER's satisfaction within the prescribed time. Bidder shall furnish to OWNER all such information and data for this purpose as OWNER may request. OWNER reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy OWNER that such Bidder is properly qualified to carry out the obligations of the Contract Documents and to complete the work contemplated therein.

19.05.2 OWNER shall be satisfied that Bidder involved (1) maintains a permanent place of business, (2) has adequate plant and equipment to do the work properly and expeditiously, (3) has a suitable financial status to meet obligations incident to the work, (4) has appropriate technical experience, and (5) can submit a satisfactory performance record.

19.06 If a Contract is to be awarded, it will be awarded to the responsive and responsible Bidder with the lowest Bid whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project.

19.07 If a Contract is to be awarded, OWNER will give the successful Bidder a Notice of Award within 35 days after the time set for opening Bids.

ARTICLE 20—CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment bonds and insurances. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment bonds and insurances.

ARTICLE 21—SIGNING OF AGREEMENT

21.01 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with all other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to ENGINEER with the required Bonds and insurances. Within 10 days after receipt of properly executed documents and Bonds and insurances which meet all requirements of the Contract Documents, ENGINEER will deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22—RETAINAGE

22.01 Provisions concerning retainage are set forth in the Agreement.

ARTICLE 23—OTHER TAXES

23.01 The Bid shall include all taxes in effect at the time the Bid is submitted. Bidders who are uncertain as to what items are subject to tax, or who require further explanation or clarification, are requested to contact the State of Indiana Department of Revenue. Refer to the Supplementary Conditions SC-6.10 for additional information on taxes.

ARTICLE 24—LAWS, ORDINANCES, AND REGULATIONS

24.01 Bidder must familiarize itself with all laws, ordinances, and regulations by federal, state, city, or other governmental agency, which by reason of being neglected or violated may affect the Work contemplated and must secure and pay the fee required for any permits which may be necessary unless such fees are otherwise indicated to be paid in the Bidding Documents.

END OF SECTION

SECTION 00400

BID

TWIN LAKES HEADWORKS IMPROVEMENTS
CONTRACT 1-2016
UTILITIES, INC.

A. Table of Contents

ARTICLE 1.	BID RECIPIENT
ARTICLE 2.	BIDDER'S ACKNOWLEDGEMENTS
ARTICLE 3.	BIDDER'S REPRESENTATIONS
ARTICLE 4.	FURTHER REPRESENTATIONS
ARTICLE 5.	BASIS OF BID
ARTICLE 6.	TIME OF COMPLETION
ARTICLE 7.	ATTACHMENTS TO THIS BID
ARTICLE 8.	DEFINED TERMS
ARTICLE 9.	COMMUNICATIONS
ARTICLE 10.	BID SUBMITTAL

ARTICLE 1–BID RECIPIENT

Bids to be received until 2 P.M. local time, May 30, 2016.

1.01 This Bid is submitted to: Utilities, Inc.
10996 Four Seasons Place, Suite 100G
Crown Point, Indiana 46307

1.023 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2–BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

2.02 Bidder will sign and deliver the required number of counterparts of the Agreement with the bonds, insurance certificates and other documents required by the Bidding Requirements within 15 days after the date of OWNER's Notice of Award.

ARTICLE 3–BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda (list addenda by addendum number and date), receipt of all which is hereby acknowledged:

Date:

Addendum Number:

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures if any, at the Site (except Underground Facilities) which have been identified in SC-4.02, as containing reliable “technical data” and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the site that have been identified in SC-4.06 as containing reliable “technical data.”

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work, methods, techniques, sequences, and procedures of construction to be employed by Bidder including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder’s safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work for which this Bid is submitted.

ARTICLE 4—FURTHER REPRESENTATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and,

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the Bidding process;

2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the Bidding process to the detriment of OWNER, (b) to establish bid prices at artificial noncompetitive levels, or (c) to deprive OWNER of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of OWNER, a purpose of which is to establish bid prices at artificial noncompetitive levels; and

4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

E. Bidder intends to contribute no less than 15% of the Bidder’s total contract price by contributions made directly by the Bidder in the form of work, materials, or services by Bidder or Bidder’s employees.

ARTICLE 5–BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

The following abbreviations may be used in this Bid:

CIP	-	Complete in Place	LF	-	Linear Foot
CY	-	Cubic Yard	LS	-	Lump Sum
DI	-	Ductile Iron	LT	-	Left
DIA	-	Diameter	MBF	-	Thousand Board Feet
EA	-	Each	MH	-	Manhole
EST	-	Estimate(d)	RCP	-	Reinforced Concrete Pipe
EXCL	-	Excluding	RT	-	Right
FT	-	Feet	SF	-	Square Foot
GAL	-	Gallon	STA	-	Station
HERCP	-	Horizontal Elliptical RCP	SY	-	Square Yard
HRS	-	Hours	T	-	Ton
IN	-	Inch	VLF	-	Vertical Linear Foot
INCL	-	Including	W/	-	With
LBS	-	Pounds	W/O	-	Without

BIDDERS SHOULD NOT ADD ANY CONDITIONS OR QUALIFYING STATEMENTS TO THIS BID OR THE BID MAY BE DECLARED IRREGULAR AS NOT BEING RESPONSIVE TO THE INSTRUCTIONS TO BIDDERS.

BID

TWIN LAKES HEADWORKS IMPROVEMENTS
CONTRACT 1-2016
UTILITIES, INC.

LUMP SUM BID:

_____ Dollars \$ _____
(Words) (Numbers)

See Section 01019–Contract Considerations for discussion of cash allowances to include in the Bid.

BID

TWIN LAKES HEADWORKS IMPROVEMENTS
CONTRACT 1-2016
UTILITIES, INC.

CASH ALLOWANCES

The following Cash Allowances shall be included in the Lump Sum Base Bid. The Cash Allowances for non-Lump Sum items shall be equal to the product of the quantity included in the Lump Sum Base Bid and the Unit Price. The Cash Allowances will be adjusted in the event that estimated quantities to be included in the Lump Sum Base Bid are different from final measured quantities. A single Unit Price shall be bid for each item. Failure to include one or more of the following Unit Price items may result in rejection of the entire Bid as nonconforming. For items with a quantity of 1, the Cash Allowance shall be adjusted based on actual final costs.

Item Number	Description	Quantity Included in the Lump Sum Base Bid	Unit	Unit Price	Total Amount Included in the Lump Sum Base Bid
1.	Unsuitable Foundation Material for Structures and Roads Section 02222	100	CY	\$	\$

ARTICLE 6–TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete on or before February 28, 2017, and will be completed and ready for final payment in accordance with Paragraph 14.07.B of the General Conditions on or before March 30, 2017.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the Contract Times.

ARTICLE 7–ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

- A. Required Bid security in the form of _____ in the
(Bond or Certified Check)
amount of _____ Dollars
(\$_____) as required by the Instructions to Bidders.
- B. Bidder's Certification
- C. Non-Collusion and Certification Statement.

ARTICLE 8–DEFINED TERMS

8.01 The terms used in this Bid with initial or all capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9–COMMUNICATIONS

9.01 Communications concerning this Bid shall be addressed to the address of Bidder indicated below:

Name: _____

Street: _____

City, State, Zip Code: _____

Phone No.: _____ Fax No.: _____

E-mail address: _____

ARTICLE 10–BID SUBMITTAL

Submitted on _____

State Contractor License Number _____ (if applicable).

INDOT Approved Contractor	Yes	No
---------------------------	-----	----

Department of Administration Approved Contractor	Yes	No
---	-----	----

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____
Business address: _____

Phone No.: _____ Fax No.: _____

E-mail address: _____

A Partnership

Partnership Name: _____(SEAL)
By: _____
(Signature of general partner-attach evidence of authority to sign)

Name (typed or printed): _____
Business address: _____

Phone No.: _____ Fax No.: _____

E-mail address: _____

A Corporation

Corporation Name: _____(SEAL)
State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability): _____
By: _____
(Signature-attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____(CORPORATE SEAL)

Attest _____
(Signature of Corporate Secretary)

Business address: _____

Phone No.: _____ Fax No.: _____

E-mail address: _____

Date of Qualification to do business in (State where the Project is located) is _____

Sworn and subscribed to before me this
_____ day of _____, _____

Notary Public or Other Officer
Authorized to Administer Oaths.
My Commission expires: _____

A Limited Liability Company (Note: If member-managed, an authorized member must sign; if manager-managed, the authorized manager must sign. Attach evidence of authority to sign on behalf of LLC).

(Fill in complete name of LLC)

State of Formation: _____

By: _____
(Signature)

_____, [Member] [Manager]
(Print Name)

Business Address: _____

Telephone.: _____

Email: _____

Fax: _____

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____(SEAL)

By: _____
(Signature of first joint venture partner-attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ Fax No.: _____

E-mail address: _____

Second Joint Venturer Name: _____(SEAL)

By: _____
(Signature of second joint venture partner-attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ Fax No.: _____

E-mail address: _____

Phone No., Fax No., and postal and E-mail address for receipt of official communications:

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Sworn and subscribed to before me this
_____ day of _____, _____

Notary Public or Other Officer
Authorized to Administer Oaths.
My Commission expires: _____

END OF SECTION

SECTION 00430
5% BID BOND

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

BID:

BID DUE DATE: _____

PROJECT (Brief Description Including Location):

BOND:

BOND NUMBER: _____

DATE: (Not later than Bid Due Date): _____

PENAL SUM: _____

Surety and Bidder, intending to be legally bound hereby, subject to the terms hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

SURETY

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

BIDDER

Bidder's Name and Corporate Seal (Seal)

By: _____
Signature and Title

Attest: _____
Signature and Title

Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Bidder the penal sum set forth on the face of this Bond. Payment of penal sum is the extent of Surety's liability.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 OWNER accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by OWNER, or
 - 3.3 OWNER fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by OWNER and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety, and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notice required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage prepaid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of the Bond conflicts with any applicable provision of any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

END OF SECTION

BIDDER'S CERTIFICATION

I, _____ (Individual
having been duly sworn on oath), do depose and state that I presently reside at
_____ (Address), and
that I am the duly authorized principal, officer or agent of
_____ (Name of CONTRACTOR) and do
hereby certify to OWNER, its Commissioners, officers and employees that neither I nor
_____ (Name of CONTRACTOR) are barred
from bidding on the contract for which this bid is being submitted, as a result of violation of either
Section 33E-3 ("Bid-rigging") or Section 33E-4 ("Bid-rotating") of Article 33E of the Criminal Code
of 1961 of the State of Illinois approved July 28, 1961, as amended.

(Individually and on behalf of CONTRACTOR)

Sworn and subscribed to before me this
_____ day of _____

Notary Public or Other Officer
Authorized to Administer Oaths.
My Commission expires: _____

NON-COLLUSION AND CERTIFICATION STATEMENT

1. By submission of the Bid, each Bidder and, in the case of a joint Bid, each party to the joint Bid certifies as to his or her own organization, that in connection with the Bid:

a. The prices in the Bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to the prices with any other bidder or with any competitor;

b. Unless otherwise required by law, the prices quoted in the Bid have not knowingly been directly or indirectly disclosed to any other bidder or to any competitor prior to Bid opening; and

c. No attempt has been made or will be made by the Bidder to induce any other person or firm to submit or withhold a Bid for the purpose of restricting competition. Also, each Bidder shall submit a certification regarding compliance with Article 33 E-11 of the Illinois Criminal Code of 1961 [720 ILCS 5/33 E-11]; and

2. Each person signing the Bid shall certify that (check one):

--- He/she is the person in the Bidder's organization responsible for the decision as to the prices being bid and that he/she has not participated, and will not participate, in any action contrary to 1.a. through 1.c.; or

--- He/she is not the person in the Bidder's organization responsible for the decision as to the prices being bid but that he/she has been authorized to act as agent certifying that the persons determining the prices have not participated, and will not participate, in any action contrary to 1.a. through 1.c., and as their agent shall so certify. He/She shall also certify that he/she has not participated, and will not participate, in any action contrary to 1.a. through 1.c.

Signature of Authorized Representative

Date

Typed Name and Title of Authorized Representative

Sworn and subscribed to before me this
_____ day of _____

Notary Public or Other Officer
Authorized to Administer Oaths.
My Commission expires: _____

SECTION 00520

AGREEMENT

THIS AGREEMENT is by and between _____
(hereinafter called OWNER) and _____
(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants set forth herein, agree as follows:

Article 1. WORK

1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Article 2. THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Article 3. ENGINEER

3.01 The Project has been designed by Strand Associates, Inc.®

3.02 OWNER has retained Strand Associates, Inc.® ("ENGINEER") to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents, except for resident project representative services. OWNER will assume these duties and responsibilities and the right and authority thereto in accordance with the Contract Documents.

Article 4. CONTRACT TIMES

4.01 Time of the Essence

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Dates for Substantial Completion and Final Payment

A. The Work will be substantially complete on or before February 28, 2017, and will be completed and ready for final payment in accordance with Paragraph 14.07.B of the General Conditions on or before March 30, 2017.

4.03 Liquidated Damages

A. CONTRACTOR and OWNER recognize that time is of the essence as stated in Paragraph 4.01 above and that OWNER will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as penalty):

1. Substantial Completion: CONTRACTOR shall pay OWNER \$1,000 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete. This amount is comprised of \$800 per day for engineering, construction administration services, construction observation services, and inspections and \$200 per day for administration, labor, expenses, and other costs that will be incurred by OWNER.

2. Completion of Remaining Work: After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, CONTRACTOR shall pay OWNER \$1,000 for each day that expires after such time until the Work is completed and ready for final payment. This amount is comprised of \$800 per day for engineering, construction administration services, construction observation services, and inspections and \$200 per day for administration, labor, expenses, and other costs that will be incurred by OWNER.

3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

Article 5. CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds as follows:

A. For all Work, at the prices stated in CONTRACTOR's Bid, attached hereto as an exhibit.

B. All specific cash allowances are included in the Contract Price and have been computed in accordance with Paragraph 11.02 of the General Conditions.

Article 6. PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

6.02 Progress Payments; Retainage

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as established at the preconstruction conference during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, OWNER will retain an amount equal to 10% of each progress payment application until 50% of the Work has been completed. At 50% completion, further progress payment applications shall be paid in full to the CONTRACTOR and no additional amounts will be retained.

2. Upon Substantial Completion, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 98% of the Work completed, less such amounts as ENGINEER shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 200% of ENGINEER's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

3. In accordance with IC 5-16-5.5-6, retained funds held by OWNER shall be released and paid to CONTRACTOR within sixty-one (61) days following the date of Substantial Completion, less 200% of ENGINEER's estimate of the value of the remaining items of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 Final Payment

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said Paragraph 14.07.

Article 7. HIERARCHY

7.01 In resolving inconsistencies among two or more sections of the Contract Documents, precedence shall be given in the following order:

- | | |
|---------|--------------------------|
| First: | WRITTEN AMENDMENTS |
| Second: | AGREEMENT |
| Third: | CHANGE ORDERS |
| Fourth: | ADDENDA |
| Fifth: | SUPPLEMENTARY CONDITIONS |
| Sixth: | GENERAL CONDITIONS |

Seventh: SPECIFICATIONS
Eighth: DRAWINGS

Figure dimensions (numerical) on Drawings shall take precedence over dimensions measured utilizing a scale.

Article 8. CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. CONTRACTOR is familiar with and is satisfied as to all statutory requirements of IC 5-16-13 for all tiers of contractors and subcontractors, as defined by IC 5-16-13, involved with the Work.

E. CONTRACTOR has carefully studied (1) all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.

F. CONTRACTOR has obtained and carefully studied (or accepts consequences of not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site that may affect the cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents and safety precautions and programs incident thereto.

G. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

H. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

I. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract

Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

J. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

K. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 9. CONTRACT DOCUMENTS

9.01 Contents

A. The Contract Documents consist of the following:

1. This Agreement (pages 00520-1 through 00520-____, inclusive);
2. Performance bond (pages to 00600-1 through 00600-3, inclusive);
3. Payment bond (pages 00600-4 through 00600-6, inclusive);
4. Other bonds
 - a. _____ (pages _____ to _____, inclusive);
5. General Conditions (pages 00700-1 through 00700-____, inclusive);
6. Supplementary Conditions (pages 00800-1 through 00800-____, inclusive);
7. Specifications as listed in the table of contents of the Project Manual;
8. Drawings-Sheets No. ____ through No. _____

inclusive incorporated herein by reference with each sheet bearing the following general title:

as well as drawings listed in the table of contents that are bound at the back of these specifications.

9. Addenda (_____).
10. Exhibits to this Agreement (enumerated as follows):
 - a. CONTRACTOR's Bid (pages ____ to ____);

- b. Documentation submitted by CONTRACTOR prior to Notice of Award
(_____);

11. The following may be delivered or issued on or after the Effective Date of the Agreement:

- a. Notice to Proceed (pages {_____} to {_____}, inclusive);
- b. Work Change Directives (not attached to this Agreement);
- c. Change Order(s) (not attached to this Agreement).

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

Article 10. MISCELLANEOUS

10.01 Terms

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.06 Nonwaiver

A. No provision of the Contract Documents will be deemed waived by reason of one party failing to enforce the provision on one or more occasions. Any such waiver must be in writing.

10.07 Integration

A. The parties' entire agreement is contained in the Contract Documents, and the provisions of the Contract Documents supersede all prior discussions or writings between the parties.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR, and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or identified by ENGINEER on their behalf.

This Agreement will be effective on _____,
(which is the Effective Date of the Agreement).

OWNER

Signature and Title (Seal)

ATTEST:

By:

Signature and Title

Address for Giving Notices:

Name:

Street:

City, State, Zip Code:

Phone:

Facsimile:

E-mail:

Designated Representative:

CONTRACTOR _____

Signature and Title (Seal)

ATTEST:

By: _____
Signature and Title

Address for Giving Notices:

Name: _____

Street: _____

City, State, Zip Code: _____

Phone: _____

Facsimile: _____

E-mail: _____

Designated Representative: _____

License No.: _____
(Where applicable)

(If CONTRACTOR is a corporation, limited liability company, or a partnership, attach evidence of authority to sign.)

INSTRUCTIONS FOR EXECUTING CONTRACT

The full name and business address of CONTRACTOR should be inserted and the Agreement should be signed with CONTRACTOR's official signature. Please have the name of the signing party printed under all signatures to the Agreement.

If CONTRACTOR is operating as a partnership, each partner should sign the Agreement. If the Agreement is not signed by each partner, there should be attached to the Agreement a duly authenticated power of attorney evidencing the signer's (signers') authority to sign such Agreement for and on behalf of the partnership.

If CONTRACTOR is an individual, the trade name (if CONTRACTOR is operating under a trade name) should be indicated in the Agreement and the Agreement should be signed by such individual. If signed by other than CONTRACTOR, there should be attached to the Agreement a duly authenticated power of attorney evidencing the signer's authority to execute such Agreement for and on behalf of CONTRACTOR.

If CONTRACTOR is operating as a limited liability company, and it is member-managed, each member should sign the Agreement, or an authorized member should sign. If the LLC is manager-managed, an authorized manager should sign. If the Agreement is not signed by each member, there should be attached to the Agreement a duly authenticated power of attorney evidencing the signer's (signers') authority to sign such Agreement for and on behalf of the LLC.

If CONTRACTOR is a corporation, the Secretary of the corporation should sign the certificate below. If the Agreement itself is signed by the Secretary of the corporation, the certificate below should be executed by some other officer of the corporation, under the corporate seal. In lieu of the following certificate, there may be attached to the Agreement copies of so much of the records of the corporation which will show the official character and authority of the officers signing, duly certified by the Secretary or Assistant Secretary under the corporate seal to be true copies.

I, _____, certify that I am the _____
(Print Name) (Title of Officer Signing Certificate)

of the corporation named as CONTRACTOR herein above; that _____,
(Print Name of Officer Signing Agreement)

who signed the foregoing Agreement on behalf of CONTRACTOR was then
_____ of said corporation; that said Agreement was duly signed
(Title of Officer Signing Agreement)

for and on behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

(Corporate Seal)

END OF SECTION

SECTION 00550
NOTICE TO PROCEED

Dated _____

TO: _____
(CONTRACTOR)

ADDRESS: _____

PROJECT: _____

OWNER'S CONTRACT NO. _____

CONTRACT FOR _____

(Insert name of Contract as it appears in the Bidding Documents)

You are notified that the Contract Time under the above Contract will commence to run on _____, _____. On or before that date, you are to start performing your obligations under the Contract Documents.

Before you may start any work at the site, Paragraph 2.01.B of the General Conditions provides that you and OWNER must each deliver to each other (with copies to ENGINEER and other identified additional insureds) certificates of insurance, copies of endorsements, and other evidence of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also before you may start any work at the site, you must _____

(Add Other Requirements)

(OWNER)

By: _____
(Authorized Signature)

(Title)

END OF SECTION

SECTION 00551

EROSION CONTROL CERTIFICATION

Dated _____

TO OWNER: _____

ADDRESS: _____

PROJECT: _____

OWNER'S CONTRACT NO. _____

CONTRACT FOR _____

I certify under penalty of law that I understand the terms and conditions of the General National Pollutant Discharge Elimination System (NPDES) Permit that authorizes the stormwater discharges associated with industrial activities from the construction site and as may be detailed in the Contract Documents.

I agree to indemnify and hold OWNER harmless from any claims, demands, suits, causes of action, settlements, fines, or judgments and the costs of litigation, including, but not limited to, reasonable attorneys fees and costs of investigation and arising from a condition, obligation, or requirement assumed or to be performed by CONTRACTOR for storm water pollution and erosion control.

Fines and other costs incurred against OWNER for CONTRACTOR's failure to provide the required erosion control practices will be paid by CONTRACTOR.

(CONTRACTOR)

By: _____
(Authorized Signature)

(Title)

END OF SECTION

SECTION 00600
PERFORMANCE BOND

CONTRACTOR (*Name and Address*): SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONSTRUCTION CONTRACT
Effective Date of Agreement: _____
Amount: _____
Description (*Name and Location*): _____

BOND
Bond Number: _____
Date (*Not earlier than Effective Date of Agreement of the Construction Contract*): _____
Amount: _____

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

SECTION 00600

PAYMENT BOND

CONTRACTOR (*Name and Address*): SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONSTRUCTION CONTRACT

Effective Date of Agreement: _____

Amount: _____

Description (*Name and Location*): _____

BOND

Bond Number: _____

Date (*Not earlier than Effective Date of Agreement of the Construction Contract*): _____

Amount: _____

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1 Claim: A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 7. The total amount of previous payments received by the Claimant; and
 8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
 - 16.2 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

END OF SECTION

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

Copyright © 2007 National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

Associated General Contractors of America
2300 Wilson Boulevard, Suite 400, Arlington, VA 22201-3308
(703) 548-3118
www.agc.org

The copyright for this EJCDC document is owned jointly by the four
EJCDC sponsoring organizations and held in trust for their benefit by NSPE.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1 – Definitions and Terminology	1
1.01 Defined Terms.....	1
1.02 Terminology	5
Article 2 – Preliminary Matters	6
2.01 Delivery of Bonds and Evidence of Insurance	6
2.02 Copies of Documents	6
2.03 Commencement of Contract Times; Notice to Proceed.....	6
2.04 Starting the Work	7
2.05 Before Starting Construction	7
2.06 Preconstruction Conference; Designation of Authorized Representatives	7
2.07 Initial Acceptance of Schedules	7
Article 3 – Contract Documents: Intent, Amending, Reuse	8
3.01 Intent.....	8
3.02 Reference Standards.....	8
3.03 Reporting and Resolving Discrepancies	9
3.04 Amending and Supplementing Contract Documents	9
3.05 Reuse of Documents	10
3.06 Electronic Data.....	10
Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points.....	11
4.01 Availability of Lands.....	11
4.02 Subsurface and Physical Conditions.....	11
4.03 Differing Subsurface or Physical Conditions	12
4.04 Underground Facilities.....	13
4.05 Reference Points.....	14
4.06 Hazardous Environmental Condition at Site	14
Article 5 – Bonds and Insurance.....	16
5.01 Performance, Payment, and Other Bonds.....	16
5.02 Licensed Sureties and Insurers.....	16
5.03 Certificates of Insurance	17
5.04 Contractor’s Insurance	17
5.05 Owner’s Liability Insurance.....	19
5.06 Property Insurance.....	19
5.07 Waiver of Rights	20
5.08 Receipt and Application of Insurance Proceeds	21

5.09	Acceptance of Bonds and Insurance; Option to Replace	21
5.10	Partial Utilization, Acknowledgment of Property Insurer.....	22
Article 6 – Contractor’s Responsibilities		22
6.01	Supervision and Superintendence.....	22
6.02	Labor; Working Hours	22
6.03	Services, Materials, and Equipment	22
6.04	Progress Schedule	23
6.05	Substitutes and “Or-Equals”	23
6.06	Concerning Subcontractors, Suppliers, and Others.....	25
6.07	Patent Fees and Royalties	27
6.08	Permits.....	27
6.09	Laws and Regulations	28
6.10	Taxes	28
6.11	Use of Site and Other Areas.....	28
6.12	Record Documents.....	29
6.13	Safety and Protection	29
6.14	Safety Representative.....	30
6.15	Hazard Communication Programs.....	30
6.16	Emergencies	30
6.17	Shop Drawings and Samples	31
6.18	Continuing the Work.....	32
6.19	Contractor’s General Warranty and Guarantee	33
6.20	Indemnification	33
6.21	Delegation of Professional Design Services.....	34
Article 7 – Other Work at the Site.....		35
7.01	Related Work at Site	35
7.02	Coordination.....	35
7.03	Legal Relationships.....	36
Article 8 – Owner’s Responsibilities.....		36
8.01	Communications to Contractor.....	36
8.02	Replacement of Engineer.....	36
8.03	Furnish Data	36
8.04	Pay When Due.....	36
8.05	Lands and Easements; Reports and Tests.....	36
8.06	Insurance.....	36
8.07	Change Orders.....	37
8.08	Inspections, Tests, and Approvals	37
8.09	Limitations on Owner’s Responsibilities	37
8.10	Undisclosed Hazardous Environmental Condition	37
8.11	Evidence of Financial Arrangements.....	37
8.12	Compliance with Safety Program.....	37
Article 9 – Engineer’s Status During Construction.....		37
9.01	Owner’s Representative	37

9.02	Visits to Site	37
9.03	Project Representative.....	38
9.04	Authorized Variations in Work	38
9.05	Rejecting Defective Work.....	38
9.06	Shop Drawings, Change Orders and Payments.....	39
9.07	Determinations for Unit Price Work	39
9.08	Decisions on Requirements of Contract Documents and Acceptability of Work	39
9.09	Limitations on Engineer's Authority and Responsibilities	39
9.10	Compliance with Safety Program.....	40
Article 10 –	Changes in the Work; Claims	40
10.01	Authorized Changes in the Work	40
10.02	Unauthorized Changes in the Work.....	41
10.03	Execution of Change Orders.....	41
10.04	Notification to Surety.....	41
10.05	Claims.....	41
Article 11 –	Cost of the Work; Allowances; Unit Price Work	42
11.01	Cost of the Work.....	42
11.02	Allowances	45
11.03	Unit Price Work	45
Article 12 –	Change of Contract Price; Change of Contract Times	46
12.01	Change of Contract Price	46
12.02	Change of Contract Times	47
12.03	Delays	47
Article 13 –	Tests and Inspections; Correction, Removal or Acceptance of Defective Work.....	48
13.01	Notice of Defects.....	48
13.02	Access to Work	48
13.03	Tests and Inspections	49
13.04	Uncovering Work.....	49
13.05	Owner May Stop the Work.....	50
13.06	Correction or Removal of Defective Work	50
13.07	Correction Period	50
13.08	Acceptance of Defective Work.....	51
13.09	Owner May Correct Defective Work	52
Article 14 –	Payments to Contractor and Completion	52
14.01	Schedule of Values.....	52
14.02	Progress Payments	52
14.03	Contractor's Warranty of Title.....	55
14.04	Substantial Completion.....	55
14.05	Partial Utilization	56
14.06	Final Inspection	57
14.07	Final Payment.....	57
14.08	Final Completion Delayed	58

14.09 Waiver of Claims	58
Article 15 – Suspension of Work and Termination	59
15.01 Owner May Suspend Work.....	59
15.02 Owner May Terminate for Cause	59
15.03 Owner May Terminate For Convenience	60
15.04 Contractor May Stop Work or Terminate.....	60
Article 16 – Dispute Resolution	61
16.01 Methods and Procedures	61
Article 17 – Miscellaneous	61
17.01 Giving Notice	61
17.02 Computation of Times	62
17.03 Cumulative Remedies	62
17.04 Survival of Obligations	62
17.05 Controlling Law	62
17.06 Headings	62

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on

Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and

shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is

required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
 - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or

continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not

exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of

said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to

the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee*: The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments:

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an

Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or

- involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying

documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when

so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days

to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00800

SUPPLEMENTARY CONDITIONS

A. These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract EJCDC C-700 (2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

B. The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below which are applicable to both the singular and plural thereof.

C. Table of Contents

SC-1.01.A Defined Terms.....	2
SC-1.01.A.17 Drawings	2
SC-1.01.A.51 Work Change Directive.....	2
SC-1.01.A.52 Request for Information	2
SC-2.01 Delivery of Bonds and Evidence of Insurance.....	2
SC-2.02 Copies of Documents.....	3
SC-2.05 Before Starting Construction	3
SC-2.07 Initial Acceptance of Schedules	3
SC-3.03 Reporting Discrepancies	3
SC-4.02 Subsurface and Physical Conditions	4
SC-4.04 Underground Facilities	4
SC-4.05 Reference Points	4
SC-4.06.A Hazardous Environmental Conditions.....	5
SC-5.01 Performance and Payment Bonds	5
SC-5.04 CONTRACTOR's Liability Insurance.....	5
SC-5.04.B Additional Insureds Coverage.....	8
SC-5.06 Property Insurance	8
SC-5.06.A.2 Property Insurance	8
SC-5.06.B Equipment Breakdown and Additional Property Insurance	9
SC-5.06.E Special Insurance.....	9
SC-6.02 and 6.03 Labor, Working Hours, Services, Materials, and Equipment.....	9
SC-6.03.B Materials and Equipment Warranty.....	9
SC-6.06 Concerning Subcontractors, Suppliers and Others	9
SC-6.08 Permits	9
SC-6.09 Laws and Regulations.....	10
SC-6.12 Record Documents	10
SC-6.14 Competent Person.....	10
SC-6.17 Shop Drawings	10
SC-6.20 Indemnification.....	10
SC-6.21 Delegation of Professional Design Services.....	11
SC-8.13 Responsibilities During Construction.....	11
SC-9 ENGINEER's Status During Construction	11
SC-10.04 Notification to Surety.....	12
SC-12.01 Change of Contract Price.....	12
SC-13.02 Access To Work.....	13
SC-13.03.A Tests and Inspections.....	13
SC-13.07.A Correction Period	13

SC-14.02.A Applications for Progress Payment.....	13
SC-14.05 Partial Utilization	14
SC-14.07 Final Application for Payment	15
SC-15.02 OWNER May Terminate for Cause	15
SC-15.03 OWNER May Terminate for Convenience.....	15
SC-16 Dispute Resolution.....	15
SC-16.01 Methods and Procedures	15

SC-1.01.A Defined Terms

Insert in the first sentence after the phrase “printed with initial capital letters” the following phrase:

“or with all capital letters”

SC-1.01.A.17 Drawings

The following Drawings are part of the Contract Documents:

Drawings titled “Twin Lakes Headworks Improvements, Contract 1-2016, Utilities, Inc.,” Sheets Number 1 through Number 14, prepared by Strand Associates, Inc.® and Drawings listed in the table of contents that are bound at the back of these Specifications.

SC-1.01.A.51 Work Change Directive

Amend the phrase “and signed by OWNER” in the first sentence of Paragraph 1.01.A.51 to read as follows:

“and signed by OWNER and CONTRACTOR.”

SC-1.01.A.52 Request for Information

Add the following new paragraph immediately after Paragraph 1.01.A.51:

52. Request for Information:

Written request submitted by CONTRACTOR to ENGINEER on a form supplied by ENGINEER requesting clarification, interpretation, or additional information pertaining to Contract Documents.

SC-2.01 Delivery of Bonds and Evidence of Insurance

Delete Paragraph 2.01.A in its entirety and insert the following in its place:

A. When CONTRACTOR delivers the executed counterparts of the Agreement to OWNER, CONTRACTOR shall also deliver to OWNER such bonds, insurance certificates, insurance endorsements, and other documents as CONTRACTOR may be required to furnish.

Delete Paragraph 2.01.B in its entirety and insert the following in its place:

B. Evidence of Insurance: Before OWNER’s execution of the Contract, CONTRACTOR shall deliver to OWNER with copies to each additional insured or loss payee identified in the Supplementary Conditions OWNER-approved copies of certificates of insurance, copies of endorsements, and other evidence of insurance which either of them or any additional insured or loss payee may reasonably request, which CONTRACTOR is required to purchase and maintain in

accordance with Paragraph 5.04. OWNER shall deliver to CONTRACTOR with copies to each additional insured or loss payee identified in the Supplementary Conditions certificates of insurance, copies of endorsements, and other evidence of insurance which either of them or any additional insured or loss payee may reasonably request, which OWNER is required to purchase and maintain in accordance with Paragraph 5.06.

SC-2.02 Copies of Documents

Delete the first sentence of Paragraph 2.02.A in its entirety and insert the following in its place:

OWNER shall furnish to CONTRACTOR up to four printed or hard copies of the Drawings and Project Manual.

SC-2.05 Before Starting Construction

Add the following subparagraph to Paragraph 2.05.A:

4. a proposed listing of subcontractors and major material and equipment suppliers. The list shall include any proposed substitutions in accordance with Paragraph 6.05.

SC-2.07 Initial Acceptance of Schedules

Add the following language to the end of Paragraph 2.07.A.2:

The schedule for shop drawings shall show all submittals complete before 25% of completion of the Work and the schedule for maintenance manuals shall show all submittals complete before 50% of completion of the Work.

SC-3.03 Reporting Discrepancies

Add the following new paragraphs immediately after Paragraph 3.03.A.3:

4. CONTRACTOR shall report apparent discrepancies to ENGINEER using a Request for Information form on a form supplied by ENGINEER. The Request for Information form shall:
 - a. be submitted by CONTRACTOR only;
 - b. be legible and complete;
 - c. not be used for the purposes of only confirming or verifying issues; and,
 - d. be prioritized by CONTRACTOR in the event that multiple Requests for Information are outstanding.

Requests for Information that are not in conformance with the requirements above shall be returned to CONTRACTOR without response.

5. CONTRACTOR shall not be relieved of its responsibility to coordinate the Work to prevent adverse impacts to CONTRACTOR's Project Schedule while submitting Requests for Information.

6. If CONTRACTOR believes the Scope of Work included in the Request for Information has a cost and/or time impact, CONTRACTOR should submit a claim in accordance with Article 12 of these General Conditions.

7. If CONTRACTOR proceeds with work when CONTRACTOR had actual knowledge or should have known that a conflict, error, ambiguity, or discrepancy existed as indicated above, correction of work constructed without such notification to ENGINEER shall be at CONTRACTOR's expense, (except in an emergency as authorized by Paragraph 6.16.A).

SC-4.02 Subsurface and Physical Conditions

Add the following new paragraph(s) immediately after Paragraph 4.02.B:

C. The following reports of explorations and tests of subsurface conditions at or contiguous to the Site are known to OWNER:

1. Report dated December 29, 2015, prepared by ATC Group Services, LLC, of Highland, Indiana, titled: Report of Geotechnical Exploration, for Utilities, Inc., consisting of 28 pages.

2. Report dated December 29, 2015, prepared by ATEC Associates, LLC, of Crown Point, Indiana, titled: Geotechnical Engineering Investigation, Twin Lakes Utilities W.W.T.P., consisting of 58 pages.

The technical data in the above report, upon which the CONTRACTOR may rely, consists of boring methods, level of subsurface water, boring logs, laboratory test methods and results, and boring locations all as of the date made.

ENGINEER accepts no responsibility for accuracy of the soil data or water level information. Soil information, included with these Contract Documents, was not obtained for the purposes of designing excavations and trenches. Soil information was used by ENGINEER for design purposes only. CONTRACTOR shall assure itself by personal examination as to subsurface conditions and shall provide its own investigations and make its own assumptions to comply with OSHA and any other applicable laws and regulations regarding excavation and trenching requirements.

D. The report identified above is not part of the Contract Documents, but the "technical data" contained therein upon which CONTRACTOR may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference. CONTRACTOR is not entitled to rely upon any other information and data known to or identified by OWNER or ENGINEER.

E. *Drawings:* No drawings of physical conditions relating to existing surface or subsurface structures at the Site are known to OWNER. CONTRACTOR shall conduct its own personal investigation to determine conditions at the site that may affect the Work, including compliance with OSHA excavation and trenching requirements.

SC-4.04 Underground Facilities

Add the following new paragraph immediately after Paragraph 4.04.B:

C. CONTRACTOR is referred to the General Requirements for requirements for keeping records of Underground Facilities and allowing facility owners to inspect.

SC-4.05 Reference Points

Add the following new paragraph immediately after Paragraph 4.05.A:

B. CONTRACTOR is referred to the General Requirements for additional requirements for laying out the work.

SC-4.06.A Hazardous Environmental Conditions

Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions are known to OWNER.
- B. Not Used.

SC-5.01 Performance and Payment Bonds

Add the following new paragraphs immediately after Paragraph 5.01.C:

D. The forms of the performance and payment Bonds attached hereto shall be used for the Contract. Note instructions thereon as to the form applicable. Each form contemplates one corporate surety only. In case co-sureties or individual sureties will be furnished, proper forms therefore shall be obtained. Besides the stipulations of Paragraphs 5.01 through 5.03, the surety on the Bonds shall provide a certificate indicating surety is licensed to underwrite contracts in the jurisdiction of the project location which shall be attached to the Bonds.

E. Every Bond must run to OWNER.

F. If the principal is an individual, his/her full name and residence shall be inserted in the body thereof, and he/she shall sign the Bonds with his/her usual signature on the line opposite the scroll seal. If the principals are partners, their individual names shall appear in the body of the Bonds, with the recital that they are partners comprising a firm, naming it, and all the members of the firm shall execute the Bonds as individuals.

G. The signature of a witness shall appear in the appropriate places, attesting the signatures of each individual party to the Bonds.

H. If the principal is a corporation, the name of the state in which incorporated shall be inserted in the appropriate place in the body of the Bonds, and said instrument shall be executed and attested under the corporate seal as indicated on the form. If the corporation has no seal, the fact shall be stated, in which case a scroll or adhesive seal shall appear following the corporate name. This also applies to execution by surety.

I. The date of the Bonds must not be prior to the date of the Contract for which given.

J. The bond shall be signed by an individual authorized to sign on behalf of the surety and a power of attorney, authorizing the execution of the Bonds by an attorney-in-fact, or agent of the surety, shall be attached to one executed counterpart of the Bonds.

SC-5.04 CONTRACTOR's Liability Insurance

Add the following new paragraphs immediately after Paragraph 5.04.B:

C. The limits of liability for the insurance required by Paragraph 5.04 shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations. The types of insurance and the limits of liability indicated are the minimum required. Neither OWNER nor ENGINEER warrant the adequacy of the types of insurance or the limits of liability required. Any policy exclusions shall be indicated on the insurance certificate. CONTRACTOR shall provide verification of all coverages with or on the insurance certificate.

A.2: 1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and

- a. State: Statutory
- b. Applicable Federal (e.g., Longshoreman's): Statutory
- c. Employer's Liability:

Bodily Injury by Accident:

Each Accident \$ 1,000,000

Bodily Injury by Disease:

Each Employee \$ 1,000,000

Policy Limit \$ 1,000,000

2. CONTRACTOR's General Liability under Paragraphs 5.04.A.3 through A.6 which shall be written on a commercial general liability form and which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of CONTRACTOR:

a. Policy Limits:

- 1) Each Occurrence Limit (Bodily Injury and Property Damage) \$ 1,000,000
- 2) Medical Expense Limit (Any One Person) \$ 10,000
- 3) Personal and Advertising Injury Limit (Per Person/Organization) \$ 1,000,000
- 4) General Aggregate Limit (other than P-CO) \$ 1,000,000
- 5) Products-Completed Operations Aggregate Limit \$ 1,000,000

b. Policy shall include as a minimum the following coverages:

- 1) Broad Form Property Damage Coverage.
- 2) An elimination of the exclusions with respect to property under the care, custody, or control of CONTRACTOR. In lieu of elimination of the exclusion, CONTRACTOR may provide Builder's Risk or Installation Floater coverage for property under the care, custody, or control of CONTRACTOR.
- 3) Explosion, Collapse, and Underground coverages where applicable under Property Damage Liability Insurance.
- 4) Contractual Liability Coverage.

5) Independent Contractor Coverage.

6) General Aggregate Limits specified above shall apply separately to this project by attachment of:

“Amendment of Limits of Insurance—Designated Location(s) General Aggregate Limit Endorsement (ISO Form No. CG 25040509) or “Designated Construction Project(s) General Aggregate Limit” Endorsement (ISO Form CG 25030509) or equivalent endorsement coverage.

3. Commercial Automobile Liability under Paragraph 5.04.A.6:

a. Combined Single Limit \$ 1,000,000
(Bodily Injury and Property Damage)

b. Policy shall include contractual liability coverage and coverage on all owned, nonowned and hired vehicles.

4. Umbrella Coverage:

a. Umbrella policy (pay on behalf form) with limits of \$1,000,000 for bodily injury, personal injury and property damage on a combined basis shall be provided with the stated underlying limits of Paragraphs 5.04.C.1, 5.04.C.2, and 5.04.C.3.

b. Policy shall include OWNER, ENGINEER, and any others required by Paragraph 5.04.B.1 as additional insureds.

c. The stated limits of Paragraphs 5.04.C.1, 5.04.C.2, and 5.04.C.3 can be obtained through individual policies or in conjunction with an umbrella policy (pay on behalf form) to arrive at the total limits requested.

D. Regardless whether or not an Owners’ and Contractors’ Protective (OCP) policy or Project Management Protective Liability (PMPL) policy is furnished, insurance certificates for commercial general, automobile, umbrella, and builders risk shall specifically indicate by name the additional insureds which are to include OWNER and ENGINEER as well as other persons or entities so identified. Certificates shall be Acord 25-S or equivalent.

E. Additional Insured Endorsements/OCP policy/PMPL policy

1. CONTRACTOR shall purchase and maintain liability insurance, as described above, specifically naming as additional insureds OWNER and ENGINEER as well as other individuals or entities so identified (see the Supplementary Conditions), using Additional Insurance Endorsement Form CG 20 26 07 04, CG 81 11 05 06, CG 20 10 07 04, or equivalent form. General liability policies shall also be endorsed with Form CG 20 37 07 04 to include the “products-completed operations coverage.”

2. As an alternative to providing Form CG 20 26 07 04, CG 81 11 05 06, or CG 20 10 07 04, CONTRACTOR may furnish to OWNER an OCP policy or a PMPL policy with OWNER as the named insured and ENGINEER as either an additional insured or a named insured. OCP policy or PMPL policy shall provide for bodily injury and property damage coverage equal to the sum of: the general aggregate limit for commercial general liability plus the amount specified for the umbrella coverage. OCP policy or PMPL policy shall provide coverage arising out of:

- i. operations performed by CONTRACTOR at the project location.
- ii. acts or omissions in connection with the general supervision, inspection and/or coordination of such operations.

If an OCP or PMPL policy is provided, CONTRACTOR shall provide originals of the Final OCP or PMPL to all insured and additional insured parties.

F. Endorsements, OCP policy, PMPL policy, or General Liability policy shall not exclude supervisory or inspection services.

CONTRACTOR shall also provide an Additional Insured Endorsement for the automobile policy. Endorsement form shall be CA 20 48, or equal.

G. The specimen Insurance Certificate bound at the end of this section has been prepared as a guide to assist CONTRACTOR and CONTRACTOR's Insurance Agent when preparing the insurance submittal. This specimen certificate is included as a representation of what acceptable documents will look like. Specific project information must be included when preparing the actual document.

SC-5.04.B Additional Insureds Coverage

5.04.B.1 Additional Insureds

Delete from the first sentence of Paragraph 5.04.B.1 the phrase “(subject to any customary exclusion regarding professional liability).”

Revise the last phrase in Paragraph 5.04.B.1 to read “and the insurance afforded to these additional insureds shall provide primary and noncontributory coverage for all claims covered thereby;”

5.04.B.4 Insurance Policies

Delete the phrase “materially changed” and insert the following in its place:

“materially changed with respect to coverage on the Project.”

5.04.B.6 Products and Completed Operations Insurance

Amend in Paragraph 5.04.B.6 the phrase “completed operations coverage” to read “products and completed operations insurance.”

SC-5.06 Property Insurance

Add the following sentence after the first sentence of Paragraph 5.06:

Insurance is completed value form.

SC-5.06.A.2 Property Insurance

Delete from the first sentence of Paragraph 5.06.A.2, the phrase “All-risk” policy form and insert the following in its place:

“Cause of Loss-Special Form”

Delete from the first sentence of Paragraph 5.06.A.2 of the General Conditions, the phrase “(other than caused by flood)” and insert the following in its place:

“(including that caused by flood and hydrostatic pressure)”

SC-5.06.B Equipment Breakdown and Additional Property Insurance

Delete Paragraph 5.06.B in its entirety.

SC-5.06.E Special Insurance

Add the following to the beginning of Paragraph 5.06.E:

Prior to commencing work, CONTRACTOR shall obtain and review OWNER’s insurance policies and advise OWNER of the adequacy of the policy to meet CONTRACTOR’s requirements.

Add the following to the end of Paragraph 5.06.E:

If CONTRACTOR does not advise OWNER in writing of special insurance needs, CONTRACTOR relinquishes any claim against OWNER for any loss CONTRACTOR may incur during the course of completing the Work.

SC-6.02 and 6.03 Labor, Working Hours, Services, Materials, and Equipment

Add the following new paragraph immediately after Paragraph 6.02.B:

C. See the General Requirements for special requirements concerning working hours, etc..

SC-6.03.B Materials and Equipment Warranty

Add the following to the end of Paragraph 6.03.B:

Suppliers shall be deemed to impliedly warrant that their products and all component materials incorporated into them are suitable and fit for the intended use of such products and shall be free from defect in material, workmanship or design, such warranty to run to the benefit of OWNER and ENGINEER. The foregoing applies whether the products or their component materials are specified in the Contract Documents or are of Supplier’s design.

SC-6.06 Concerning Subcontractors, Suppliers and Others

Add the following new paragraph immediately after Paragraph 6.06.G:

H. OWNER or ENGINEER may furnish to any Subcontractor or Supplier to the extent practicable, information about amounts paid to CONTRACTOR on account of Work performed for CONTRACTOR by a particular Subcontractor or Supplier.

SC-6.08 Permits

Delete last sentence of Paragraph 6.08.A and add the following in its place:

See General Requirements and technical specification sections for utility charge provisions.

Add Paragraph 6.08.B as follows:

B. See General Requirements for additional permit information.

SC-6.09 Laws and Regulations

CONTRACTOR shall comply with the anti-discrimination requirements of IC 5-16-6-1.

SC-6.12 Record Documents

In Paragraph 6.12.A delete last sentence and insert the following:

Upon completion of the Work, these record documents, samples, and shop drawings shall be delivered by CONTRACTOR to OWNER.

SC-6.14 Competent Person

Add the following new paragraph at the end of Paragraph 6.14.A:

B. CONTRACTOR shall keep at the Site at all times during the progress of the Work a competent person to comply with OSHA trenching and excavation requirements. The competent person shall be one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

SC-6.17 Shop Drawings

Add the following new paragraphs immediately after Paragraph 6.17.E:

F. CONTRACTOR shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. ENGINEER will record ENGINEER's time for reviewing subsequent submittals of Shop Drawings, samples or other items requiring approval and CONTRACTOR shall reimburse OWNER for ENGINEER's charges for such time.

G. In the event that CONTRACTOR requests a substitution for a previously approved item, CONTRACTOR shall reimburse OWNER for ENGINEER's charges for its review time unless the need for such change is beyond the control of CONTRACTOR.

SC-6.20 Indemnification

Add the following to the end of Paragraph 6.20.A:

In addition, CONTRACTOR shall indemnify, hold harmless, and pay for the defense of OWNER and ENGINEER from and against claims, losses, or damages in regard to any act or failure to act by OWNER or ENGINEER in connection with general supervision, inspection and/or coordination of CONTRACTOR's operations.

CONTRACTOR shall, at its own expense, appear, defend, and pay all fees of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith; and, if any judgments shall be rendered against any individual or entity indemnified hereunder in any such action, CONTRACTOR shall, at its own expense, satisfy and discharge same. CONTRACTOR expressly understands and agrees that any Letter of Credit or insurance protection required by the Contract, or otherwise provided by CONTRACTOR, shall in no way limit the responsibility to indemnify, keep and, save harmless, and defend any individual or entity indemnified hereunder as herein provided.

Delete Paragraph 6.20.C.1 and 6.20.C.2. Insert new Paragraphs 6.20.C.1 and D:

1. the preparation of Drawings, Specifications, or Property Surveys.

D. For any matter for which OWNER and ENGINEER are indemnified under Paragraph 6.20.A, CONTRACTOR shall pay for OWNER's and ENGINEER's reasonable defense, including, but not limited to, all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs or awards until OWNER or ENGINEER are found negligent. If OWNER or ENGINEER are found negligent, OWNER or ENGINEER shall reimburse CONTRACTOR for the prorata extent of OWNER's or ENGINEER's negligence for the cost of OWNER's or ENGINEER's reasonable defense.

E. In Paragraphs 6.20.A through D as may be amended by the Supplementary Conditions, ENGINEER shall also include Strand Associates, Inc.[®]

SC-6.21 Delegation of Professional Design Services

Add the following immediately after Paragraph 6.21.E:

F. The design professional providing the design calculations and design drawings shall be licensed in the State of the Project.

G. The design calculation and design drawings are not shop drawings, but shall be submitted to ENGINEER separately along with the required shop drawings for the system, material, or equipment specified. These calculations will be forwarded to OWNER for their records.

SC-8.13 Responsibilities During Construction

Add the following new paragraph immediately after Paragraph 8.12.A:

A. OWNER will assume the duties and responsibilities of the Resident Project Representative as defined in Article 9.

SC-9 ENGINEER's Status During Construction

Add the following new paragraphs immediately after Paragraph 9.03.A:

B. Strand Associates, Inc.[®] provided design services for the Project and will assume all duties and responsibilities of ENGINEER under Article 9 with the exception of Paragraph 9.03.

C. OWNER will assume the duties and responsibilities of the resident project representative on the project.

D. The duties and responsibilities of the resident project representative include the following:

1. Review schedules as required in Paragraph 2.05.A of the General Conditions and amendment thereto.
2. Attend conferences and meetings with CONTRACTOR.
3. Serve as liaison between ENGINEER and CONTRACTOR and help ENGINEER serve as liaison between OWNER and CONTRACTOR.
4. Conduct on-site observation of the work.

5. Observe tests, equipment, and system startups.
6. Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed. Consider, evaluate, and report to ENGINEER, CONTRACTOR's requests for modification.
7. Maintain orderly records, keep a daily log (when on a part-time basis, keep log for days visiting site), and furnish periodic reports to ENGINEER of the progress of the Work.
8. Before project completion, prepare final list of items to be completed or corrected and make recommendations to ENGINEER concerning acceptance of the Work.

The resident project representatives shall not:

1. Authorize any deviation from the Contract Documents or substitutions of materials or equipment.
2. Exceed limitations of ENGINEER's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of CONTRACTOR, Subcontractor, Suppliers, or CONTRACTOR's superintendent.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction.
5. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
6. Accept shop drawing or sample submittals from anyone other than CONTRACTOR.
7. Authorize OWNER to occupy the Project in whole or in part.
8. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by ENGINEER.

SC-10.04 Notification to Surety

Add the following language at the end of Paragraph 10.04.A:

CONTRACTOR shall be responsible for notifying the surety of any assignment, modification or change of the Contract, change in the work covered thereby, or extension of time for the completion of the project.

Failure to provide notice to the surety of any such change shall not exonerate the surety from its obligations under the bond.

SC-12.01 Change of Contract Price

Clarification of Paragraph B.2: The overhead and profit allowance for lump sum work shall be in accordance with Paragraph 12.01.C.2 unless OWNER and CONTRACTOR agree that these allowances are not appropriate for the Work involved.

SC-13.02 Access To Work

Add the following paragraph after Paragraph 13.02.A of the General Conditions:

B. Representative of the Indiana Department of Environmental Management shall have access to Work and on-site records at reasonable times for inspection. CONTRACTOR shall allow the IDEM or any authorized representative to have access to any books, documents, plans, reports, papers and other records of CONTRACTOR which are pertinent to the Project for the purpose of making audits, inspections, examinations, excerpts, copies, and transcriptions. CONTRACTOR shall insure that all parties to subagreements will provide the IDEM access to the Project, including sites, documents and records. CONTRACTOR shall provide proper facilities for such access and inspection.

SC-13.03.A Tests and Inspections

Add the following to the beginning of Paragraph 13.03.A:

All Work is subject to testing to indicate compliance with Contract Document requirements. Duplicate copies of test results of all tests required shall be submitted to ENGINEER. Tests and inspection of work may be conducted by OWNER or an independent laboratory employed by OWNER. Tests may also be performed in the field by ENGINEER as a basis for acceptance of the Work.

Add the following to the end of Paragraph 13.03.A:

Samples required for testing shall be furnished by CONTRACTOR at no cost to OWNER. In the event that completed Work does not conform to specification requirements during the initial test, the Work shall be corrected and retested for conformance. The entire cost of retesting completed Work shall be borne by CONTRACTOR. This shall include the extra cost for inspection to OWNER which will be deducted from the final amount due CONTRACTOR.

SC-13.07.A Correction Period

Delete in Paragraph 13.07.A the phrase "If within one year after the date of Substantial Completion" and insert in its place the following:

"If within one year of the date of final payment or from the date established by ENGINEER that the Work or portion thereof began operating or was used in a continuous, satisfactory manner for its intended purpose, whichever is earlier,"

SC-14.02.A Applications for Progress Payment

Add the following paragraph after Paragraph 14.02.A.3 of the General Conditions:

4. CONTRACTOR shall submit with each pay request CONTRACTOR's partial waiver of lien for the full amount of the requested payment. Beginning with the second pay request, and with each succeeding pay request, CONTRACTOR shall submit partial waivers of lien for each Subcontractor and Supplier showing that the amount paid to date to each is at least equivalent to the total value of Subcontractor's or Supplier's work, less retainage, included on the previous pay request. CONTRACTOR shall submit with each pay request a signed Waiver of Lien Log clearly documenting the following:

- a. The names of all Subcontractors/Suppliers on the project.
- b. Contract amounts for each Subcontractor/Supplier.
- c. Amount paid to date to each Subcontractor/Supplier.

- d. Lien waivers provided with current pay application for previous month's payments.
 - e. Amount to be paid to each Subcontractor/Supplier included in the pending pay request.
 - f. Remaining balance for each Subcontractor/Supplier.
5. CONTRACTOR shall submit one original and one copy on 8-1/2 by 11 paper of each lien waiver submitted.
6. CONTRACTOR shall submit five copies of each pay request for approval.
7. No advanced payment for shop drawing preparation will be made. Shop drawing costs will be paid when equipment and materials are delivered and suitably stored on the site.
8. All stored equipment and materials for which payment is requested shall have two copies of invoices included with the pay request. Equipment shall be identified thoroughly on the invoices, including serial numbers.
9. Payment for the stored equipment and material which are on the site shall not exceed the invoiced amount for each item, less the Contract retainage. The overhead and profit for the stored items shall not be invoiced until the item is installed.
10. Payment for off-site storage is normally reserved for sensitive or very large pieces of equipment that in ENGINEER's opinion would not be practical to have stored on the site. Payment for off-site stored items shall be limited to 75% of the invoiced value of the item, less Contract retainage. CONTRACTOR shall reimburse OWNER the cost of inspecting off-site stored items. When off-site storage is approved, CONTRACTOR shall provide Insurance Certificates and Document of Ownership to OWNER.

SC-14.05 Partial Utilization

Add the following new paragraph immediately after Paragraph 14.05.A.3, which is to read as follows:

4. OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any part of the Work although it is not substantially complete. A copy of such request will be sent to ENGINEER, and within a reasonable time thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize the list of items to be completed or corrected and will deliver such lists to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties, and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

Paragraph 14.05.A.4 shall be renumbered to 14.05.A.5.

SC-14.07 Final Application for Payment

Add the following new Paragraph 14.07.A.4 to the General Conditions:

4. In accordance with IC 36-1-12-13.1(d), OWNER will not make final payment to CONTRACTOR until all subcontractors and others supplying materials or services have been paid to CONTRACTOR. For CONTRACTOR to receive final payment, subcontractors and others supplying materials and services to CONTRACTOR must file an invoice with OWNER within 60 days after completion of the Work. OWNER may make final and complete payment to CONTRACTOR after 30 days if OWNER is provided with satisfactory evidence by CONTRACTOR that subcontractors and others supplying materials and supplies have been paid in full.

SC-15.02 OWNER May Terminate for Cause

Replace Paragraph 15.02.B.3 with the following:

3. complete the Work as OWNER may deem expedient at the expense of CONTRACTOR and surety;

Add the following new paragraphs immediately after Paragraph 15.02.B.3:

4. apply the amounts retained from partial payments to the completion of the Work;
and

5. authorize the surety to complete the steps in Paragraphs 15.02.B.1 through 4 above.

SC-15.03 OWNER May Terminate for Convenience

Add the following paragraph after Paragraph 15.03.B:

C. CONTRACTOR shall require similar provisions contained in Paragraph 15.03 in each of its subcontracts to protect CONTRACTOR from claims by Subcontractors arising from OWNER's termination for convenience, or to minimize claims by such subcontractors. The remedy provided to CONTRACTOR under this Paragraph 15.03 shall be CONTRACTOR's sole remedy in the event of termination for convenience by OWNER.

SC-16 Dispute Resolution

Delete Paragraph 16.01 and replace it with the following:

SC-16.01 Methods and Procedures

A. Subject to the provisions of Paragraph 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

END OF SECTION



CERTIFICATE OF LIABILITY INSURANCE

CUII Response to IURC DE #4

Attachment to IURC 4-20

Page 15 of 651

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	PRODUCER CUSTOMER ID #:	
INSURED	INSURER(S) AFFORDING COVERAGE	
	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE	\$
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$
							MED EXP (Any one person)	\$
							PERSONAL & ADV INJURY	\$
							GENERAL AGGREGATE	\$
							PRODUCTS - COMP/OP AGG	\$
								\$
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident)	\$
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
								\$
	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DEDUCTIBLE RETENTION \$						EACH OCCURRENCE	\$
							AGGREGATE	\$
								\$
								\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
							E.L. EACH ACCIDENT	\$
							E.L. DISEASE - EA EMPLOYEE	\$
							E.L. DISEASE - POLICY LIMIT	\$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

© 1988-2009 ACORD CORPORATION. All rights reserved.

SPECIFICATIONS

SECTION 01010

SUMMARY OF WORK

PART 1—GENERAL

1.01 DIVISION ONE

- A. The requirements of Division 1 apply to all sections of the Contract(s).

1.02 PROJECT SCOPE

- A. CONTRACTOR shall provide all items, articles, materials, operations or methods mentioned or scheduled on the Drawings or herein specified: including all labor, supervision, equipment, incidentals, taxes and permits necessary to complete the Work as described within the Contract Documents. CONTRACTOR shall install all items provided by OWNER as mentioned or scheduled on the Drawings or herein specified.

1.03 CONTRACT DOCUMENTS—INTENT AND USE

- A. Intent of Documents:
1. Singular notations and specifications shall be considered plural where application is reasonably inferred.
 2. Mention or indication of extent of work under any division or Specification section is done only for convenience of CONTRACTOR and shall not be construed as describing all work required under that division or section.
 3. Some individual sections may contain a list of related sections. The list of related sections in individual sections is provided for the convenience of CONTRACTOR and is not necessarily all-inclusive. CONTRACTOR may not rely upon this listing for determination of scope of work. Other sections of the Specifications, not referenced in individual sections shall apply as required for proper performance of the Work.
 4. Command type sentences may be used in the Contract Documents. These sentences refer to and are directed to CONTRACTOR.
 5. Symbols for various elements and systems are shown on the Drawings. Should there be any doubt regarding the meaning or intent of the symbols used, a written interpretation shall be obtained from ENGINEER.
- B. Use of Documents:
1. CONTRACTOR shall examine all Specifications and Drawings for the Work, including those that may pertain to Work CONTRACTOR does not normally perform with its own forces.
 2. CONTRACTOR shall use all of the Project Drawings and Specifications:
 - a. For a complete understanding of the Project.
 - b. To determine the type of construction and systems required.
 - c. For coordination with other contractors.
 - d. To determine what other work may be involved in various parts or phases.
 - e. To anticipate and notify others when work by others will be required.
 - f. And all other relevant matters related to the project.
 3. CONTRACTOR is also bound by all requirements of the Contract Documents which are applicable to, pertain to, or affect its Work, as may be shown or inferred by the entire set of Project Drawings and Specifications.

1.04 CONSTRUCTION REQUIREMENTS

A. General Information and Requirements:

1. Currently, wastewater treatment at the Twin Lakes Wastewater Treatment Plant consists of screening, influent flow measurement, and activated sludge aeration followed by final clarification and chlorine disinfection. Waste activated sludge is stabilized in aerobic digesters and trucked directly to farm land for disposal.
2. Wastewater treatment during construction must be continuous and the treatment efficiency must be equal to that achieved prior to the start of construction.
3. It shall be the responsibility of CONTRACTOR to not in any way impair the normal treatment or operating efficiency of the facilities, regardless of the work underway. No bypassing of raw or partially treated wastewater to receiving stream shall occur at any time as a result of construction. In general, this requires that new facilities be complete and ready for service, or that temporary facilities be provided, prior to removing existing units from service for modification or repair. CONTRACTOR shall provide all temporary piping, bypass pumping, and temporary construction required to complete the Work.
4. Operation of existing treatment facilities will be the responsibility of OWNER. CONTRACTOR shall cooperate with OWNER's staff at all times. A minimum of 48 hours prior to making any process or electrical connections to existing facilities or modification or demolition of existing facilities, CONTRACTOR shall notify OWNER in writing. At the time of notification, CONTRACTOR shall submit a schedule for completion of the Work, including a description of measures that will be taken to minimize the impact to existing facilities.
5. Except as specified, OWNER will drain existing tanks to the level of the lowest existing drain line or will remove tank contents using existing piping and pumping equipment. Subsequent cleaning or further draining and/or pumping shall be provided by CONTRACTOR. If there exists sludge, grit, or other residue that cannot be drained or pumped in its present state, it shall be the responsibility of CONTRACTOR to remove and dispose of this material.
6. Access: CONTRACTOR shall maintain roadways open at all times to meet OWNER's requirements, including access for sludge hauling vehicles and chemical deliveries. CONTRACTOR shall be responsible for maintaining roadways in drivable condition, including placement of temporary stone and gravel and providing drainage as necessary. All county-owned roadways around the treatment facility shall be cleaned of construction site materials, soil, and debris as necessary.
7. Unless otherwise specified or shown on the Drawings, new facilities shall be completed and ready for service and placed into successful operation before existing facilities are taken out of service for modification/upgrading. No more than one existing treatment unit may be taken out of service at a time when making piping interconnections, etc., so that the remaining units are available for treatment. CONTRACTOR shall coordinate taking units out of service and placing units back in service with OWNER.
8. CONTRACTOR shall maintain plant site roadways open at all times to meet OWNER's requirements. CONTRACTOR shall be responsible for maintaining roadways in drivable conditions.
9. Outage Plan: CONTRACTOR shall submit for review, a detailed outage plan which includes time scheduled for work activities necessary to remove unit processes, tanks, piping, electrical service, equipment or structure from service. The plan shall be in writing and also in the form a bar graph. The outage plan shall be coordinated with the work construction schedule and shall be updated monthly. The outage plan shall follow the construction sequence specified herein and shall include the length of time required to complete said work. The length of time unit processes are out of service shall be minimized. To that end, all new equipment, tools, materials required for the

Work shall be readily available when outage is implemented to minimize down time of unit processes.

B. Construction Sequence:

1. The following construction sequence is provided as a general guideline for the information and for the benefit of CONTRACTOR. This construction sequence is not intended to dictate means, method of construction or direct construction activities. This construction sequence is a conceptual general construction sequence with minimum recommended outage, shutdowns, and operating units to be maintained in service. The general construction sequence is projected to allow the Work to be completed while maintaining treatment of the wastewater treatment plant. It is not intended to be all inclusive and does not list all work elements or details that are required to complete the Work, complete treatment processes, or place unit processes in service. CONTRACTOR shall be responsible for implementing any additional details required, including temporary piping, bypass pumping, or temporary construction at no additional cost to OWNER.
2. CONTRACTOR may propose alternate sequence or modifications to this sequence. OWNER will review the proposed modification and determine if such modification of the sequence interferes with the proper operation of the treatment activities. Any modifications to this general construction sequence shall be proposed in writing and shall be approved by OWNER prior to their implementations.
3. Construct new Parshall flume, new concrete channels, and tie into existing Junction Box No. 2.
4. Install new slide gates and all new equipment and construct new pole building.
5. Perform bypass pumping to complete construction of Junction Box No. 1 and complete construction at Junction Box No. 2.

1.05 CONTRACTOR USE OF SITE

A. General:

1. The "area of the site" referred to in these Specifications shall be as shown on the Drawings. If the "area of the site" is not shown, OWNER's property lines, the Project right-of-way and/or any easements obtained for the Project shall be considered the "area of the site."
2. Construction activities shall be confined within the "area of the site" limits.
3. From the start of work to completion CONTRACTOR is responsible for the care of the site and the premises which are affected by operations of Work of this Contract.
4. Except for permanent site improvements provided under the Contract, CONTRACTOR shall restore property disturbed during the Work, to the conditions which previously existed.
5. Work in occupied spaces shall be restricted to specified Work and essential activities, such as making necessary connections and extending services or constructing temporary access ways. Such work shall be scheduled in advance with OWNER.

B. Parking and Deliveries:

1. CONTRACTOR is responsible for control of traffic by vehicles and persons within the limits of its operations.
2. Parking for employees, subcontractors, and agents of CONTRACTOR shall be in areas subject to approval of OWNER.
3. Access to the site for delivery of construction material or equipment shall be subject to approval of OWNER.

1.06 EXISTING SERVICES, OVERHEAD UTILITIES, AND UNDERGROUND FACILITIES INCLUDING STRUCTURES

- A. Interruption of existing services and systems including heating, ventilating, air conditioning, water, sanitary, lighting and power, signal and security will not be permitted, unless specifically indicated otherwise. Provide temporary facilities to maintain services.
- B. If deemed necessary by OWNER, such work shall be accomplished after OWNER's normal office hours.
- C. Work shall not commence until all labor, materials and equipment are available so Work can continue without interruption or delay.
- D. Should uncharted or incorrectly charted services or Underground Facilities be encountered during installation, notify OWNER and consult with utility owner immediately.
- E. Cooperate with OWNER and utility companies in keeping respective services and Underground Facilities in operation and repair any damage.
- F. CONTRACTOR shall not interrupt existing services and Underground Facilities occupied and used by OWNER or others, except when permitted in writing by OWNER.
- G. Any accidental interruption of services and Underground Facilities shall be repaired immediately, including provision of temporary facilities until permanent repairs can be made.
- H. Indiana Statute IC 8-1-26 requires, among other provisions, that before excavation or demolition begins reasonable advance notice not less than two working days but not more than twenty calendar days prior to the start of the excavation or demolition of the intent to excavate or demolish and the commencement date be provided to the owners of the Underground Facilities in and near the construction area whose facilities may be affected by the excavation or demolition. As part of this notification requirement, CONTRACTOR shall contact Indiana Underground Plant Protection Service (IUPPS) (811). CONTRACTOR shall be aware that not all owners participate in the Indiana Underground Plant Protection Service (IUPPS) program. A call to this agency shall not absolve CONTRACTOR of the requirements of this statute. CONTRACTOR shall comply with all other provisions of the statute though not enumerated herein.
- I. Locations and elevations of services and Underground Facilities as shown on the Drawings are approximate. It shall be CONTRACTOR's responsibility to determine their exact location when in their vicinity. To this end, CONTRACTOR shall proceed with caution in the excavation and preparation of the Site so the exact location of services and Underground Facilities can be determined. CONTRACTOR shall include in the Contract Price any costs for temporary or permanent relocations of such services and Underground Facilities required to complete the Work unless specifically indicated otherwise in the Specifications.
- J. Where potential grade conflicts might occur with existing services and Underground Facilities, CONTRACTOR shall uncover such services and Underground Facilities sufficiently in advance of construction so that elevations may be determined to allow any necessary adjustments to be made.

- K. CONTRACTOR shall coordinate with overhead utility companies prior to the Work. CONTRACTOR shall provide all necessary temporary and permanent support relocation or temporary and permanent restraint to maintain overhead utilities in service.
- L. CONTRACTOR shall keep an accurate and complete record of all such services and Underground Facilities encountered and shall provide OWNER a copy of this record. The record shall include a description of the item encountered, opinion as to conditions, and adequate measurements and depths so that the item can be located in the future.
- M. CONTRACTOR shall inspect all services and Underground Facilities for condition and soundness. Unsound conditions shall be reported to OWNER immediately after exposing. CONTRACTOR shall not proceed with the Work until the service or facility owner has been notified. Service or facility owner shall then be given time to inspect and correct, if required, the service or Underground Facility. CONTRACTOR may make claim under the provisions of Articles 11 and 12 of the General Conditions should CONTRACTOR feel a price or time adjustment is justified.
- N. Any additional costs incurred because of failure of CONTRACTOR to report the condition of any and all existing services and Underground Facility encountered shall be paid for by CONTRACTOR.
- O. Whenever ENGINEER feels it is necessary to explore and excavate to determine the location of existing services and Underground Facilities, CONTRACTOR shall make explorations and excavations for such purposes. If CONTRACTOR is required to perform additional Work in making the explorations and excavations, extra compensation will be allowed as provided for in the General Conditions.

1.07 PROTECTION OF WORK AND IMPROVEMENTS

- A. CONTRACTOR shall protect the property of OWNER, existing improvements, and the Work installed by CONTRACTOR and others from abuse, damage, dust, debris, and other objectionable materials resulting from construction activities.
- B. CONTRACTOR shall provide suitable covers, partitions, or other dust and fume containment devices to suit construction operations.
- C. CONTRACTOR shall keep property, existing improvements and the Work, including structures, mains, fittings and accessories free from dirt and foreign matter at all times.
- D. CONTRACTOR shall provide temporary plugging of openings, holes and pipe ends that are existing or that CONTRACTOR has installed.
- E. Property, improvements and Work damaged by CONTRACTOR shall be repaired or replaced by CONTRACTOR to the satisfaction of OWNER.

1.08 AVAILABILITY OF LANDS

- A. Easements were not obtained for this Project. CONTRACTOR shall confine its operations, equipment and storage areas to the lands and rights-of-way in which the Project is to be located. CONTRACTOR may enter into written agreements with property owners for use of other lands during construction. Copies of such agreements shall be provided to OWNER.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01019

CONTRACT CONSIDERATIONS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Cash Allowances.
 - 2. Measurement and Payment—Unit Prices.
 - 3. Measurement and Payment—Lump Sum.

1.02 CASH ALLOWANCES

- A. See Paragraph 11.02 of the General Conditions for costs to be included in allowances.
- B. Refer to sections of the specifications identified in the Bid Form for specific information on use of cash allowances.
- C. The Bid shall include the amount equal to the specified quantity times the unit price.

1.03 MEASUREMENT AND PAYMENT—UNIT PRICES

- A. Measurement methods are delineated in the individual Specification sections.
- B. CONTRACTOR shall take measurements and compute quantities. ENGINEER will check measurements and quantities.
- B. Incidental Items of Work: Any items of Work shown on the Drawings or called for in the Specifications, but not included in the Bid Form, shall be considered incidental items of Work. The cost of incidental items of Work shall be included in the prices bid for adjacent Work.

1.04 MEASUREMENT AND PAYMENT—LUMP SUM

- A. Payment for Lump Sum projects will be based on the accepted schedule of values for the project.
- B. An acceptable schedule of values will include the following features:
 - 1. Schedule shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction. Schedule shall be subdivided as necessary by specification section and work area.
 - 2. Identify each line item with the number and title of the respective Specification Section.
 - 3. For each major line item list sub-values of major products or operations under the item.
 - 4. For the various portions of the work:
 - a. Each item shall include a directly proportional amount of CONTRACTOR's overhead and profit.

- b. For items on which progress payments will be requested for stored materials, break down the value into:
 - (1) The cost of the materials, delivered and unloaded, with taxes paid. Paid invoices are required for materials upon request by ENGINEER.
 - (2) The total installed value.
- 5. The sum of all values listed in the schedule shall equal the total Contract Sum.
- 6. Schedule shall include a separate listing of general items such as bonds, insurance, mobilization, demobilization, field supervision, and record documents.
- C. Once a schedule of values is accepted, it shall not be revised, except for changes associated with subsequently executed change orders.
- D. No separate measurement for payment will be performed for Lump Sum Work.
- E. CONTRACTOR shall estimate percentage of Work completed. ENGINEER will review CONTRACTOR's estimate of quantity of Work completed.
- F. Payment will be made based on the percentage of the Contract completed less retainage and/or liquidated damages.
- G. Unless noted otherwise, all Work described in the Specifications and/or shown on the Drawings shall be included in the Lump Sum Bid.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01039

COORDINATION, FIELD ENGINEERING, AND MEETINGS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Coordination.
 - 2. Field engineering.
 - 3. Progress meetings.

1.02 COORDINATION

- A. CONTRACTOR shall coordinate scheduling, submittals, and work of the various sections of the work to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later. See Section 01010—Summary of Work for specific construction sequence.
- B. CONTRACTOR shall verify utility requirements and characteristics of operating equipment are compatible with building utilities and coordinate Work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. CONTRACTOR shall coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on the Drawings and shall follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, except as otherwise indicated, CONTRACTOR shall conceal pipes, ducts, and wiring within the construction and coordinate locations of fixtures and outlets with finish elements.
- E. CONTRACTOR shall coordinate completion and cleanup of Work of separate sections in preparation for substantial completion and for portions of Work designated for OWNER's occupancy.
- F. After OWNER occupancy of premises, CONTRACTOR shall coordinate access to Site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of OWNER's activities.

1.03 FIELD ENGINEERING

- A. CONTRACTOR shall locate and protect property stakes, legal survey monuments, benchmarks, and survey control and reference points. CONTRACTOR shall pay for replacement of disturbed property stakes and legal survey monuments by a Registered Land Surveyor acceptable to OWNER and for replacement of benchmarks and survey control and reference points provided by ENGINEER.
- B. CONTRACTOR shall provide field engineering services as required to establish elevations, lines, and levels, utilizing recognized engineering survey practices.

- C. CONTRACTOR shall furnish all required plummets and graduated poles to check all Work.
- D. If stakes and boards have to be reset because of negligence of CONTRACTOR, CONTRACTOR shall bear the cost of such work.
- E. If laser beam is used, CONTRACTOR shall check its Work against intermediate grade stakes provided between manholes. Prior to initial use of the laser, CONTRACTOR shall set up laser on ground surface and check line and gradient controls. Lasers not functioning properly shall be immediately removed.
- F. If existing property stakes, not within the limits of the trench, are removed or damaged by CONTRACTOR, CONTRACTOR shall bear the cost of replacement. Replacement shall be made by a legal survey performed by a licensed Land Surveyor hired by OWNER. Cost for survey shall be deducted from the Contract Price.
- G. CONTRACTOR shall be responsible for all lines, elevations, and measurements of buildings, structures, piping, utilities, and other work executed by CONTRACTOR under the Contract. CONTRACTOR must exercise proper precaution to verify figures before laying out the Work, and will be held responsible for any error resulting from its failure to exercise such precaution.

1.04 PROGRESS MEETINGS

- A. Progress meetings will be held throughout progress of the Work at intervals agreed to by OWNER, ENGINEER, and CONTRACTOR. Interval will generally be monthly.
- B. CONTRACTOR's project manager, job superintendent, major subcontractors and suppliers shall attend as appropriate to address agenda topics for each meeting. CONTRACTOR's representatives shall have authority to bind CONTRACTOR to decisions at the meetings.
- C. The project schedule shall be updated monthly and shall be reviewed at each progress meeting. CONTRACTOR shall provide the following information in written form at each meeting.
 - 1. Construction progress, including:
 - a. Activities completed this reporting period.
 - b. Activities in progress this reporting period.
 - c. Activities scheduled to commence this reporting period.
 - 2. Description of problem areas.
 - 3. Current and anticipated delays.
 - a. Cause of the delay.
 - b. Corrective action and schedule adjustments to correct the delay.
 - c. Impact of the delay on other activities, on milestones, and on completion dates.
 - 4. Changes in construction sequence.
- D. ENGINEER will prepare and distribute minutes to all attending parties.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01045

CUTTING, PATCHING, AND ALTERATIONS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: CONTRACTOR shall be responsible for all cutting, fitting, patching, and other alterations required to complete the Work as specified herein or to:
 - 1. Make its several parts fit together properly.
 - 2. Uncover portions of the Work to install improperly sequenced Work.
 - 3. Remove and replace defective Work.
 - 4. Remove and replace Work not conforming to requirements of the Contract Documents.
 - 5. Remove samples of installed Work as specified for testing.
 - 6. Provide penetrations of surfaces for installation of piping and electrical conduit.
 - 7. Rehabilitate or renovate existing spaces.

1.02 REFERENCES

- A. ANSI A10 Safety Requirements for Construction and Demolition.

1.03 QUALITY ASSURANCE

- A. CONTRACTOR shall perform all cutting, patching, and alterations in strict accordance with pertinent requirements of these Specifications.
- B. Except as modified by governing codes, CONTRACTOR shall comply with the applicable provision and recommendations of ANSI A10.

1.04 SUBMITTALS

- A. CONTRACTOR shall submit a written request to OWNER well in advance of executing any cutting or alteration which affects the following:
 - 1. Work of OWNER or any separate contractor.
 - 2. Structural value or integrity of any element of the Project.
 - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 4. Efficiency, operational life, maintenance, or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. The request shall include:
 - 1. Description of affected work.
 - 2. The necessity for cutting, patching, or alteration.
 - 3. Effect on work of OWNER or any separate contractor, or on the structural or weather-proof integrity of the Project.
 - 4. Description of proposed work to include:
 - a. Scope of cutting, patching, or alteration.
 - b. Trades who will execute the work.
 - c. Products proposed to be used.
 - d. Extent of refinishing to be done.

- 5. Alternatives to cutting and patching.
 - 6. Written permission of any separate contractor whose work will be affected.
- C. Submit written notice to OWNER designating the date and the time the Work will be uncovered or executed.

1.05 SCHEDULING AND COORDINATION

- A. All work under this section shall be coordinated with OWNER's work forces and those of other contractors and shall be accomplished at times acceptable to OWNER.
- B. Before starting any work relating to existing utilities (electrical, sewer, water, heat, gas, fire lines, etc.) that will temporarily discontinue or disrupt service, notify ENGINEER and OWNER 72 hours in advance and obtain OWNER's approval before proceeding with this phase of the work. Temporary facilities, if required, shall be in place prior to disruption of service.

PART 2-PRODUCTS

2.01 NEW MATERIALS

- A. For replacement of work removed, CONTRACTOR shall use materials which comply with the pertinent sections of these Specifications.
- B. All new materials for patching and extending work shall match existing products and work.
- C. CONTRACTOR shall determine type and quality of existing products by inspection and any necessary testing, and workmanship by use of existing as the standard.

2.02 SALVAGEABLE MATERIAL

- A. Materials or items designated to be reinstalled or to become the property of OWNER shall be as specified or as shown on the Drawings.
- B. CONTRACTOR shall remove such items with care under the supervision of the trade responsible for reinstallation.
- C. CONTRACTOR shall store these materials (off-site if necessary) and protect from damage until they are incorporated into the new work.
- D. Items which are not to be reinstalled but are to become the property of OWNER shall be removed by CONTRACTOR with care, cleaned, and stored in a location at the Site to be approved by OWNER.
- E. Materials or items damaged in its removal shall be replaced by CONTRACTOR with similar new material at no additional cost to OWNER.

2.03 UNSALVAGEABLE MATERIALS

- A. Materials or items demolished and not designated to become the property of OWNER or not designated to be reinstalled shall become the property of CONTRACTOR and shall be removed from the site and legally and properly disposed of by CONTRACTOR.
- B. Materials shall be removed by CONTRACTOR in a manner that will avoid damage to materials or equipment to remain.

PART 3-EXECUTION

3.01 INSPECTION

- A. CONTRACTOR shall inspect existing conditions including elements subject to movement or damage during cutting, patching, and other alterations.
- B. After uncovering the work, CONTRACTOR shall inspect conditions affecting installation of new products or performance of new work.
- C. CONTRACTOR shall report unsatisfactory or questionable conditions to ENGINEER in writing.
- D. CONTRACTOR shall not proceed with work until unsatisfactory or questionable conditions are resolved.
- E. Beginning of cutting, patching, and alterations work means acceptance of existing conditions by CONTRACTOR.

3.02 PREPARATION AND PROTECTION

- A. CONTRACTOR shall provide temporary bracing, shoring, needling, and support of the structure during alterations work as necessary to prevent collapse, settling, or deflection and to protect persons and property from injury or damage.
- B. Temporary supports must adequately carry all existing and imposed load.
- C. CONTRACTOR shall provide and maintain temporary protection of surface finishes, equipment, and adjacent work designated to remain where demolition, removal, and new work is being done, connections are being made, materials are being handled, or equipment is being removed.
- D. CONTRACTOR shall provide temporary partitions or barriers to contain all dust, dirt and debris from entering into finished areas or areas where OWNER is operating, storing, or manufacturing products.
- E. CONTRACTOR shall provide adequate fire protection in accordance with local Fire Department requirements.
- F. CONTRACTOR shall provide waterproofing, weather protection, heat, and other facilities for that portion of the work which may be exposed by cutting and patching, demolition, or other alterations.

- G. CONTRACTOR shall cut, move, or remove items as necessary for access to alterations and renovations work and replace and restore at completion of work.
- H. CONTRACTOR shall prepare surfaces and remove surface finishes to provide for proper installation of new work and new finishes.
- I. CONTRACTOR shall be responsible for any damage to the existing structure or its contents directly or indirectly by its crews or those of its subcontractors.

3.03 PERFORMANCE

- A. CONTRACTOR shall accomplish all work of cutting, removal, demolition, patching or other alterations using only persons skilled in the appropriate trade.
- B. CONTRACTOR shall execute the work in a careful and orderly manner, with the least possible disturbance to the occupants of the building.
- C. CONTRACTOR shall execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- D. CONTRACTOR shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
- E. CONTRACTOR shall fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. CONTRACTOR shall thoroughly clean and prepare all surfaces to receive new finish or covering to completely remove all dirt, dust, grease, oil, paint, loose materials, and soil.
- G. CONTRACTOR shall refinish entire surface as necessary to provide an even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

3.04 DEMOLITION, CUTTING, AND REMOVAL

- A. Cutting and removal of construction shall be performed by CONTRACTOR so as not to cut or remove more than is necessary and so as not to damage adjacent work.
- B. CONTRACTOR shall cut out embedded anchorages and attachment items as required to properly provide for patching and repair of the respective finishes.
- C. CONTRACTOR shall not cut structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio.
- D. CONTRACTOR shall not cut operational elements and safety components in a manner resulting in decreased performance, shortened useful life, or increased maintenance.
- E. CONTRACTOR shall not cut work exposed to view (exterior or interior) in a manner resulting in noticeable reduction of visual qualities as determined by OWNER.

- F. Construction that is to remain which is loosened, cracked, or otherwise damaged or defaced as a result of careless cutting or demolition and is unsuitable for use intended shall be removed and replaced at no additional cost to OWNER.
- G. CONTRACTOR shall clean demolished areas and remove debris, waste, and rubbish from the building at the conclusion of each day's work.
- H. CONTRACTOR shall not let piled waste material endanger the structure.

3.05 PATCHING, EXTENDING, AND MATCHING

- A. Patching work shall conform to the standards of the Specifications where applicable and where not specified, work shall conform to the highest standards of the applicable trade.
- B. CONTRACTOR shall patch construction to match adjacent work unless noted otherwise.
- C. Patching or restoration shall be carried to natural breaks (e.g., corners) wherever possible.
- D. CONTRACTOR shall provide adequate support to substrate for patching finishes.
- E. At locations in existing areas where partitions are removed, CONTRACTOR shall patch floors, walls, and ceiling with finish material to match adjacent surfaces.
- F. Transitions:
 - 1. Where new work abuts or finishes flush with existing work, CONTRACTOR shall make the transition as smooth as possible.
 - 2. Patched work shall match adjacent work in texture and appearance so as to make the patch or transition invisible to the eye at a distance of 3 feet.
 - 3. Where masonry, tile, plaster, metal or other finished surface is cut in such a way that a smooth transition is not possible, CONTRACTOR shall terminate the existing surface in a neat fashion along a straight line at a natural line of division and provide trim appropriate to the finished surface.
 - 4. Where two or more spaces are indicated to become one space, CONTRACTOR shall rework floors and ceilings so that horizontal planes are without breaks, steps, or bulkheads, unless shown otherwise.
 - 5. In case of extreme level changes (3 inches or more) review condition with ENGINEER prior to making transition.
 - 6. CONTRACTOR shall restore existing work that is damaged during patching operations to a condition equal to its construction at the time of the start of work.

3.06 UNANTICIPATED MECHANICAL AND ELECTRICAL WORK EXPOSED

- A. Where unanticipated mechanical piping or electrical conduit is exposed during removal of partitions or walls, removal or rerouting shall be accomplished by CONTRACTOR as applicable.
 - 1. Rerouted piping shall be located and shall be connected to maintain all functions in proper operations.
 - 2. Abandoned piping may be left in place where it is buried in floors or walls, providing that it is completely disconnected from its source.
 - 3. There shall be no "dead end" gas, water, sewer, or vent piping existing in the completed work.

4. Unless otherwise shown, abandoned piping, ductwork, conduit, or other mechanical or electrical items in chases, vertical enclosures, or concealed above ceilings shall be completely removed.
- B. Removals, capping, or otherwise terminating services which are abandoned shall be accomplished without additional cost to OWNER.
- C. Relocation of services resulting from unanticipated conflicts of new and existing work in concealed spaces shall be paid for in accordance with the General Conditions.

END OF SECTION

SECTION 01060

REGULATORY REQUIREMENTS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. OSHA Requirements.
 - 2. Roadway Limits.
 - 3. Permits.

1.02 OSHA REQUIREMENTS

- A. All work including site safety, equipment, materials, and fabricated items provided under the Contract shall comply with the provisions of the "Occupational Safety and Health Act."
- B. CONTRACTOR shall comply with IOSHA regulations 29CFR 1926 Subpart P. Cost of complying with trench safety systems shall be incorporated into the principal items of associated Work.

1.03 ROADWAY LIMITS

- A. CONTRACTOR shall comply with roadway weight restrictions including seasonal weight restrictions.

1.04 PERMITS

- A. The Indiana Department of Environmental Management Construction Permit was obtained by OWNER and it is available from OWNER. CONTRACTOR shall comply with all provisions of this permit and shall be responsible for notifications as required by this permit. CONTRACTOR shall obtain all other permits required for the Work. Where the requirements of any permit is more restrictive than the Drawings or the Specifications, the permit requirements shall govern.
- B. A building permit will be required from Lake County, Indiana. CONTRACTOR shall comply with all provisions of this permit and shall be responsible for notifications as required by this permit. CONTRACTOR shall obtain all other permits required for the Work. Where the requirements of any permit is more restrictive than the Drawings or the Specifications, the permit requirements shall govern.
- C. Any permits required for dewatering operations shall be obtained and paid for by CONTRACTOR.

PART 2—PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01090

REFERENCE STANDARDS AND DEFINITIONS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Reference Standards:
 - a. Throughout the Contract Documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics.
 - b. Where materials or workmanship are required by these Contract Documents to meet or exceed the specifically named code or standard, it is CONTRACTOR's responsibility to provide materials and workmanship which meet or exceed that specifically named code or standard.
 - c. It is also CONTRACTOR's responsibility, when so required by the Contract Documents, to deliver to ENGINEER all required proof that the material or workmanship, or both, meet or exceed the requirements of the specifically named code or standard.
 - 2. Definitions:
 - a. A substantial amount of specification language constitutes definitions for terms found in other Contract Documents, including the Drawings which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon.
 - b. Certain terms used in the Contract Documents are defined generally in this section to supplement definitions of the Agreement, General Conditions, Supplementary Conditions, and other general contract documents.
 - c. Definitions and explanations of this section are not necessarily either complete or exclusive, but are general for the Work.
- B. Related Work Described Elsewhere: The specific naming of codes or standards occurs on the Drawings and in other sections of these Specifications.

1.02 QUALITY ASSURANCE

- A. Familiarity with Pertinent Codes and Standards:
 - 1. It is CONTRACTOR's responsibility to verify the requirements of the specifically named codes and standards and to verify that the items procured for use in this Work meet or exceed the specified requirements.
 - 2. When required by individual sections of these specifications, CONTRACTOR shall obtain a copy of each pertinent code or standard and maintain the copies at the job site during submittals, planning, and progress of the Work until Substantial Completion of the Work is attained.
- B. Overlapping or Conflicting Requirements:
 - 1. Where compliance with two or more industry standards or sets of requirements are specified, and the overlapping of those standards or requirements establishes different or conflicting minimums or levels of quality, the most stringent requirement (which is generally recognized to be also most costly) is intended and will be enforced, unless

more detailed language written directly into Contract Documents clearly indicates that a less stringent requirement is acceptable.

2. Refer all uncertainties to ENGINEER for decision before proceeding.

1.03 REFERENCE STANDARDS

- A. Applicable standards of the construction industry are made a part of the Contract Documents by reference as if copied directly into the Contract Documents, or as if published copies were bound herewith. See Article 3.02 of the General Conditions for additional provisions regarding references.
- B. Standards referenced directly in the Contract Documents or by governing regulation, have precedence over nonreferenced standards which are recognized in industry for applicability to the Work.
- C. Nonreference standards are hereby defined to have no particular applicability to the work except as a general measurement of whether the Work complies with standards recognized in the construction industry.
- D. Reference standards and codes listed in these specifications may include, but are not necessarily limited to, standards or codes published by the following agencies and organizations:

1. AA Aluminum Association
 1525 Wilson Boulevard, Arlington, VA 22209
2. AAMA American Architectural Manufacturer's Association
 1827 Walden Office Square Suite 550, Schaumburg, IL 60173-4268
3. AASHTO American Association of State Highway & Transportation Officials
 444 North Capitol Street NW Suite 249, Washington, DC 20001
4. ACI American Concrete Institute
 38800 Country Club Drive, Farmington Hills, MI 48331-3439
5. AI Asphalt Institute
 2696 Research Park Drive, Lexington, KY 40511-8480
6. AISC American Institute of Steel Construction
 One East Wacker Drive Suite 700, Chicago, IL 60601-1802
7. AISI American Iron and Steel Institute
 25 Massachusetts Avenue NW Suite 800, Washington, DC 20001
8. ANSI American National Standards Institute
 25 West 43rd Street, New York, NY 10036
9. APA American Plywood Association
 7011 South 19th, Tacoma, WA 98466-5333

10. API American Petroleum Institute
1220 L Street NW, Washington, DC 20005-4070
11. ARI Air-Conditioning & Refrigeration Institute
4100 North Fairfax Drive Suite 200, Arlington, VA 22203
12. ASHRAE American Society of Heating, Refrigerating, and Air Conditioning Engineers
1791 Tullie Circle NE, Atlanta, GA 30329
13. ASME American Society of Mechanical Engineers
Two Park Avenue, New York, NY 10016-5990
14. ASSE American Society of Sanitary Engineering
901 Canterbury Suite A, Westlake, OH 44145
15. ASTM ASTM International
100 Barr Harbor Drive, West Conshohocken, PA 19428-2959
16. AWI Architectural Woodwork Institute
46179 Westlake Drive Suite 120, Potomac Falls, VA 20165-5874
17. AWPAA American Wood Protection Association
P.O. Box 361784, Birmingham, AL 35236-1784
18. AWS American Welding Society
8669 Doral Boulevard Suite 130, Doral, FL 33166
19. AWWA American Water Works Association
6666 West Quincy Avenue, Denver, CO 80235
20. BHMA Builder's Hardware Manufacturers Association
355 Lexington Avenue 15th floor, New York, NY 10017
21. BIA Brick Industry Association
1850 Centennial Park Drive Suite 301, Reston, VA 20191
22. CRSI Concrete Reinforcing Steel Institute
9333 North Plum Grove Road, Schaumburg, IL 60173
23. EJMA Expansion Joint Manufacturers Association
25 North Broadway, Tarrytown, NY 10591
24. FM FM Global
FM Global Corporate Offices, 270 Central Avenue, Johnston, RI 02919
25. FTI Facing Tile Institute
Box 8880, Canton, OH 44711

- 26. GA Gypsum Association
6525 Belcrest Road Suite 480, Hyattsville, MD 20782

- 27. GANA Glass Association of North America
800 SW Jackson Street Suite 1500, Topeka, KS 66612-1200

- 28. ICC International Code Council
500 New Jersey Avenue NW 6th Floor, Washington, DC 20001

- 29. IES Illuminating Engineering Society
120 Wall Street, Floor 17, New York, NY 10005-4001

- 30. MIL Military Specifications
Naval Publications and Forms Center
5801 Tabor Avenue, Philadelphia, PA 19120

- 31. NAAMM National Association of Architectural Metal Manufacturers
800 Roosevelt Road Building C Suite 312, Glen Ellyn, IL 60137

- 32. NCMA National Concrete Masonry Association
13750 Sunrise Valley Drive, Herndon, VA 20171-4662

- 33. NECA NECA
National Electrical Contractors Association
3 Bethesda Metro Center Suite 1100, Bethesda, MD 20814

- 34. NEMA National Electrical Manufacturers Association
1300 North 17th Street Suite 1752, Rosslyn, VA 22209

- 35. NFPA National Fire Protection Association
1 Batterymarch Park, Quincy, MA 02169-7471

- 36. NIST National Institute of Standards and Technology
(U.S. Department of Commerce), 100 Bureau Drive, Stop 1070
Gaithersburg, MD 20899-1070

- 37. NRCA National Roofing Contractors Association
10255 West Higgins Road Suite 600, Rosemont, IL 60018-5607

- 38. NSF National Sanitation Foundation International
P.O. Box 130140, 789 North Dixboro Road, Ann Arbor, MI 48113-0140

- 39. OSHA Occupational Safety & Health Administration
200 Constitution Avenue NW, Washington, DC 20210

- 40. PCA Portland Cement Association
5420 Old Orchard Road, Skokie, IL 60077

- 41. PCI Prestressed Concrete Institute
200 West Adams Street Suite 2100, Chicago, IL 60606

- 42. SAE Society of Automotive Engineers
SAE World Headquarters
400 Commonwealth Drive, Warrendale, PA 15096-0001
- 43. SDI Steel Deck Institute
P.O. Box 25, Fox River Grove, IL 60021
- 44. SDI Steel Door Institute
30200 Detroit Road, Westlake, OH 44145-1987
- 45. SIGMA Sealed Insulating Glass Manufacturers Assoc.
401 North Michigan Avenue Suite 2400, Chicago, IL 60611
- 46. SJI Steel Joist Institute
234 Cheves Street, Florence, SC 29501
- 47. SMACNA Sheet Metal and Air Conditioning
Contractor's National Association
4201 Lafayette Center Drive, Chantilly, VA 20151-1219
- 48. SSPC Society for Protective Coatings
40 24th Street 6th Floor, Pittsburgh, PA 15222-4656
- 49. TCA Tile Council of America
100 Clemson Research Boulevard, Anderson, SC 29625
- 50. UL Underwriters Laboratories
333 Pfingston Road; Northbrook, IL 60062

1.04 SUBMITTALS

- A. For OWNER's records, CONTRACTOR shall submit copies of permits, licenses, certifications, inspection reports, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

1.05 DEFINITIONS

- A. Indicated:
 - 1. The term "indicated" is a cross-reference to details, notes, or schedules on the drawings, to other paragraphs or schedules in the specifications and to similar means of recording requirements in the Contract Documents.
 - 2. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated", it is for the purpose of helping the reader locate cross-reference, and no limitation is intended except as specifically noted.
- B. Approve (or Words of Similar Nature):
 - 1. Where used in conjunction with ENGINEER's response to submittals, requests, applications, inquiries, reports, and claims by CONTRACTOR, the meaning of the term "approve" will be held to the limitation of ENGINEER's responsibilities and duties as specified in Paragraph 1.02.B.1. of the General Conditions.

2. In no case will "approval" by ENGINEER be interpreted as a release of CONTRACTOR from responsibility to fulfill requirements of the Contract Documents.
- C. Minimum Requirements:
1. Indicated requirements are for a specific minimum acceptable level of quality or quantity, as recognized in the industry.
 2. Actual work must comply with (or within specified tolerances) or exceed minimums.
 3. CONTRACTOR shall refer uncertainties to ENGINEER before proceeding.
- D. Abbreviations: Abbreviations, where not defined in the Contract Documents, will be interpreted to mean the normal construction industry terminology.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Whenever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined either by manufacturer's name and catalog number or by reference to recognized industry standards.
 - 2. To facilitate CONTRACTOR's understanding of the design intent, procedures have been established for advance submittal of design data and for its review or rejection by ENGINEER.
 - 3. The type of submittal requirements specified in this section include progress schedule, shop drawings, product data, samples, and other miscellaneous work related submittals.
- B. Related work described elsewhere: More detailed requirements for submittals are described in other sections of these specifications for some materials and equipment. They are to be considered additional requirements to supplement the requirements specified in this section. Submittals shall conform to Article 6 of the General Conditions.
- C. Definitions: "Electronic Submittal" is defined as any submittal transmitted electronically to ENGINEER for review.

1.02 IDENTIFICATION OF SUBMITTALS

- A. CONTRACTOR shall completely identify each submittal and resubmittal by showing at least the following information:
 - 1. Name and address of submitter, plus name and telephone number of the individual who may be contacted for further information.
 - 2. Name and location of project and identification number.
 - 3. Drawing number and specifications section number to which the submittal applies.
 - 4. Include the date of each submittal or resubmittal.

1.03 GROUPING OF SUBMITTALS

- A. Unless otherwise specifically permitted by ENGINEER, CONTRACTOR shall make all submittals in groups containing all associated items so that information is available for checking each item when it is received.
- B. Partial submittals may be rejected as not complying with the provisions of the Contract Documents.

1.04 TIMING OF SUBMITTALS

- A. CONTRACTOR shall make all submittals far enough in advance of scheduled dates of installation to provide required time for reviews, for securing necessary approval, for possible revision and resubmittal, and for placing orders and securing delivery.

- B. The review period for submittals that are received after 3 P.M. shall commence on the following business day.

1.05 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit initial schedule in duplicate within 10 days after date of OWNER-CONTRACTOR Agreement.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a horizontal bar chart with separate line for each major portion of Work or operation, identifying first workday of each week.
- E. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates.

1.06 SHOP DRAWINGS

- A. Shop drawings shall include specially prepared technical data for this project including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements, and similar information not in standard printed form for general application to a range of similar projects. Shop drawings shall be submitted for all manufactured or fabricated items. See individual technical sections for special requirements.
- B. CONTRACTOR shall make all shop drawings accurately to scale and sufficiently large to show all pertinent aspects of the item and its method of connection to the work.
- C. Shop drawings shall be checked, approved, and stamped by CONTRACTOR in accordance with the General Conditions before transmittal to ENGINEER for review and approval.
- D. Complete shop drawings and descriptive data shall be submitted on all manufactured or fabricated items prior to 25% completion of the Work. Applications for payment beyond 25% of the Contract amount will not be recommended for payment until all shop drawings are submitted, including the required hard copies, or a revised schedule for any remaining submittals is agreed to by OWNER and ENGINEER.
- E. CONTRACTOR shall submit shop drawings following the electronic submittal procedure described below. If electronic submittal is impossible, CONTRACTOR may request ENGINEER to review hard copy submittals on a limited basis. ENGINEER may request to review hard copy submittals on a limited basis for submittals that are over 100 pages in length. If ENGINEER agrees to or requests hard copy submittal review, CONTRACTOR shall submit six color copies of shop drawings and descriptive data to ENGINEER for

approval. Three copies of these will be returned to CONTRACTOR if approved. If shop drawings are not approved or if they are stamped "Approved as Noted-Resubmit," two corrected copies will be returned to CONTRACTOR for use in resubmittal. If CONTRACTOR desires more than three approved copies, submitted quantity shall be increased accordingly.

- F. Hard copy shop drawings shall be submitted in 3-ring binders or 3-tab report covers.
- G. Shop drawings submitted to ENGINEER will be reviewed and stamped "Approved," "Approved as Noted," "Approved as Noted-Resubmit," or "Not Approved." CONTRACTOR shall resubmit the above number of corrected shop drawings for all shop drawings stamped "Approved as Noted-Resubmit" and "Not Approved" and will continue this process until shop drawings are stamped "Approved" or "Approved as Noted." If drawings are stamped "Approved as Noted-Resubmit," fabrication may proceed in accordance with the marked-up shop drawings. Installation shall not proceed until shop drawings have been resubmitted and stamped "Approved" or "Approved as Noted."
- H. If shop drawings are stamped "Approved as Noted" or "Approved as Noted-Resubmit" and CONTRACTOR does not agree with revisions or cannot conform with revisions, fabrication shall not proceed and shop drawings shall be resubmitted with explanation of CONTRACTOR's position.
- I. All shop drawings used for construction site activities shall bear the "Approved" or "Approved as Noted" stamp of ENGINEER.
- J. Arrangements may be made between CONTRACTOR and ENGINEER to provide additional copies of "Approved" shop drawings for field activity purposes.
- K. Electronic Submittal Procedures:
 - 1. Summary:
 - a. Shop drawing and product data submittals shall be transmitted to ENGINEER in electronic (PDF) format using Submittal Exchange, or equal, a website service designed specifically for transmitting submittals between construction team members, or equal.
 - b. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
 - c. The electronic submittal process is not intended for color samples, color charts, or physical material samples.
 - 2. Procedures:
 - a. Submittal Preparation—CONTRACTOR may use any or all of the following options:
 - (1) Subcontractors and Suppliers provide electronic (PDF) submittals to CONTRACTOR via the Submittal Exchange website, or equal.
 - (2) Subcontractors and Suppliers provide paper submittals to CONTRACTOR who electronically scans and converts to PDF format.
 - (3) Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to PDF format.
 - b. CONTRACTOR shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer/product, dimensions and coordination of information with other parts of the work.
 - c. CONTRACTOR shall transmit each submittal to ENGINEER using the Submittal Exchange website, www.submittalexchange.com, or equal.

- d. ENGINEER review comments will be made available on the Submittal Exchange website for downloading. CONTRACTOR will receive email notice of completed review.
 - e. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of CONTRACTOR.
 - f. Electronically submitted shop drawings shall follow the following format:
 - (1) Filenames for the shop drawing submittals shall follow a XXXXX.YYY-Z. Description convention where XXXXX is the specification section number, YYY is the submittal number, .Z is the resubmittal number, and description is a short description of what the submittal includes. Submittals shall be consecutively numbered in direct sequence of submittal. Resubmittals shall be consecutively numbered with the first submittal numbered with an -0 and the first resubmittal numbered with a -1.
 - (a) Example file name: 03200.016-1. Structure 10 Concrete Reinforcement. This would be the first revision of the sixteenth submittal and contain information on concrete reinforcement.
 - (2) All files shall be delivered in PDF format with a minimum resolution of 300 dpi unless otherwise requested by ENGINEER. Scanned in material shall be scanned in color and any markings by CONTRACTOR shall be made in red. Pages shall be rotated to the appropriate position for easy reading on a computer monitor such that the majority of text is vertical.
 - (3) Files shall be delivered without security features activated.
 - (4) Shop Drawings shall be uploaded as individual files. Files combined into a zip drive are not acceptable. All pages of one submittal should be contained in one file.
 - (5) The file shall open to a cover page containing, at a minimum, the following information:
 - (a) CONTRACTOR's stamp.
 - (b) Name, e-mail, and telephone number of the individual who may be contacted for further information.
 - (c) Project number.
 - (d) Submittal number.
 - (e) Submission date, if resubmittal, all previous submission dates.
 - (f) Index detailing contents and the total number of pages in the submittal.
 - g. Once a shop drawing has been "Approved" or "Approved as Noted," CONTRACTOR shall provide three hard color copies of the "Approved" or "Approved as Noted," shop drawings to ENGINEER. CONTRACTOR is responsible for the hard copy color replication of ENGINEER's "Approved" or "Approved as Noted," shop drawings for use by CONTRACTOR. Hard copy shop drawings shall be submitted in 3-ring binders or 3-tab report covers.
3. Costs:
- a. CONTRACTOR shall include the full cost of Submittal Exchange, or equal, project subscription in their proposal. This cost shall be included in the Contract amount. Contact Submittal Exchange at 1-800-714-0024 to verify cost prior to Bid.
 - b. At CONTRACTOR's option, training is available from Submittal Exchange regarding use of website and PDF submittals. Contact Submittal Exchange at 1-800-714-0024.
 - c. Internet Service and Equipment Requirements:
 - (1) Email address and Internet access at CONTRACTOR's main office.
 - (2) Adobe Acrobat (www.adobe.com), Bluebeam PDF Revu (www.bluebeam.com), or other similar PDF review software for applying electronic stamps and comments.

- L. CONTRACTOR is fully responsible for obtaining any and all copyright permission associated with conversion of shop drawing information to electronic format.

1.07 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically described in the Contract Documents, whenever a choice of color or pattern is available in a specified product, CONTRACTOR shall submit accurate color charts and pattern charts to ENGINEER for OWNER's review and selection.
- B. Unless all available colors and patterns have identical wearing capabilities and are identically suited for the installation, CONTRACTOR shall completely describe the relative capabilities of each.

1.08 SAMPLES AND FIELD MOCKUPS

- A. CONTRACTOR shall provide samples and field mockups where noted or specified.
- B. Samples are physical examples which illustrate materials, equipment, or workmanship and establish standards by which the work will be judged.
- C. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of the product and full range of color, texture, and pattern.
- D. Samples shall have labels firmly attached, bearing the following information:
 - 1. Name of project.
 - 2. Description of product and finish.
 - 3. Name of CONTRACTOR.
 - 4. Trade name and number of product.
 - 5. Standards met by the product.
- E. Approval of samples must be obtained prior to proceeding with any work affected by material requiring sample approval.
- F. Samples, unless otherwise noted, become the property of OWNER.
- G. In situations specifically approved by ENGINEER, the retained sample may be used in the construction as one of the installed items.
- H. Field Mockups:
 - 1. CONTRACTOR shall erect field mockups at the project site in a location acceptable to ENGINEER and OWNER.
 - 2. When accepted by ENGINEER, the mockup will become the basis for comparison of the actual work.
 - 3. Remove mockup at conclusion of the work if it was not incorporated into the work.

1.09 PRODUCT DATA

- A. CONTRACTOR shall provide product data as required to supplement shop drawings.

- B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by CONTRACTOR to illustrate a material, product, or system for some portion of the work.
- C. CONTRACTOR shall collect required product data into one submittal for each unit of work or system.
- D. CONTRACTOR shall include manufacturer's standard printed recommendations for application and use, compliance with standards, performance characteristics, wiring and piping diagrams and controls, component parts, finishes, dimensions, required clearances, and other special coordination requirements.
- E. CONTRACTOR shall mark each copy of standard printed data to identify pertinent products, models, options, and other data.
- F. CONTRACTOR shall supplement manufacturer's standard data to provide information unique to the work.

1.10 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by ENGINEER.
- B. Shop Drawings and Product Data:
 - 1. Revise initial drawings or data and resubmit as specified for initial submittal.
 - 2. Itemize in a cover letter any changes which have been made other than those requested by ENGINEER.
- C. Electronic shop drawing resubmissions shall follow the nomenclature described in Section 1.06.L.2.f.
- D. See SC-6.17 for additional information regarding resubmittals.

1.11 MANUFACTURER'S DIRECTIONS

- A. Manufactured articles, materials, and equipment shall be stored, commissioned, operated, applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, unless specified to the contrary.
- B. Wherever specifications call for work to be performed or materials to be installed in accordance with the manufacturer's printed instructions or directions, CONTRACTOR shall furnish copies as required for shop drawings of those instructions or directions to ENGINEER before installing the material or performing the work.

1.12 MAINTENANCE MANUAL

- A. Prior to 50% completion of the Contract or at a minimum of 45 days prior to the scheduled start-up date of any individual item of equipment, whichever is earlier, CONTRACTOR shall furnish to ENGINEER four complete copies of a maintenance manual for all equipment furnished and an electronic format compact disk of the maintenance manual in the most recent version of Adobe (.pdf) format identical to the hard copy. Applications for payment beyond 50% of the contract amount will not be recommended for payment until all maintenance manuals are submitted or a revised schedule for remaining maintenance manuals is agreed to by OWNER and ENGINEER.

- B. CONTRACTOR is responsible for producing an electronic version of the Equipment Operations and Maintenance (O&M) Manuals Manual. The Electronic Equipment O&M Manual shall be delivered in Portable Document Format (PDF). The entire manual may be converted to PDF via scanning or other method of conversion. Drawings or other graphics must be converted to PDF format and made part of the PDF document. The CONTRACTOR shall provide all Equipment O&M Manuals in the electronic format as defined below.
- C. The filename for the Equipment O&M Manual submittal will be provided with the request for final Equipment O&M Manuals. Filenames use the "eight dot three" convention (XXXXX_YY.PDF) where XXXXX is the specification section number and YY is an ID number. No one file shall be larger than 10 MB. If technical problems require that the submittal be divided into more than one file, a letter extension shall be added to the end of each filename.
- D. (Example: 19876_01a.pdf). The number of files shall be kept to a minimum. Equipment O&M Manuals that span more than one file shall have the final Bookmark "Return to Table of Contents" which shall take the User to the first file on the Equipment O&M Manual.
- E. All text (word processed), spreadsheets, and electronic graphics shall be delivered in portable document format (*.PDF). The resolution of all scanned images shall be a minimum of 300 dpi unless otherwise requested by ENGINEER. Scanned images shall be processed with the "original image with hidden text" option (Adobe Acrobat 6 or higher). This results in a clear image and provides for optical character recognition (OCR) and word search functionality. Graphical files shall be fully searchable. All submittals must be indexed with the Adobe Catalog feature. Placement and structure of index files shall be in accordance with Adobe's recommendations to minimize problems when transferring files. Successful searches for words or strings in the PDF document shall demonstrate proof of OCR.
- F. Rotate pages viewed in landscape to the appropriate position for easy reading on a computer monitor.
- G. Bookmarks shall be created in the navigation frame for each entry in the Table of Contents. Three levels deep is usually enough (i.e., "Chapter", "Section", "Subsection"); however, complex submittals like instrumentation and electrical may be required at the discretion of ENGINEER. When setting bookmarks for Chapter level heading, the page shall be displayed at Full Page. Section and Subsection level heading pages shall be displayed as a magnified view. Bookmarks shall be displayed as subordinate (to other bookmarks in their hierarchy set so that only the Chapter level headings are displayed.
- H. Thumbnails shall be generated and embedded in each PDF file.
- I. Files shall be delivered without Security features activated. Password protected files will be unacceptable.
- J. The opening view for PDF files shall be set as follows:
 - 1. Initial View: Bookmarks and Page
 - 2. Magnification: Fit In Window
 - 3. Page Layout: Single Page

- K. The file shall open to the cover page of the Equipment O&M Manual with bookmarks to the left. The first bookmark shall be the name of Equipment O&M Manual.
- L. The submittal shall be delivered on CD after all Equipment O&M Manuals have been received and reviewed. Each CD shall be labeled, at a minimum, as follows, including:
1) CD-ROM disks, 2) jewel cases, and 3) hard copies.
- M. Manufacturer name, point of contact, telephone number, facsimile number, and e-mail address as appropriate.
- N. Equipment name and/or O&M title spelled out in complete words.

Example "Operations and Maintenance Manual"
 "Horizontal Centrifugal Nonclog Pump"
- O. Specifications section number.
- P. Project name.
- Q. Date and File Name: Example "12-20-07", "19876_01.pdf"
- R. CONTRACTOR shall reprocess any portion of the document that does not view or print to OWNER's satisfaction.
- S. CONTRACTOR is fully responsible for obtaining any and all copyright permissions associated with conversion of this information to electronic format.
- T. The manuals shall include manufacturer's instructions for maintenance and operation for each item of mechanical and electrical equipment. Manuals shall be specific for the equipment as installed; provide project specific inserts as required. Manuals shall contain: operation instructions, lubrication schedules, types and quantities, preventive maintenance program, spare parts list, parts lists, I.D. No. and exploded views, assembly instructions, parts supplier location, trouble shooting and start-up procedures and, where applicable, test data and curves. All sheets shall have reduced dimensions as described for shop Drawings. Only one copy shall be submitted in a 3-ring binder or 3-tab report cover, and the remaining copies shall be furnished in 3-tab report covers, binder clips, or large envelopes.
- U. Each maintenance manual shall include a completed equipment maintenance summary form for each type and size of equipment being furnished that requires power, lubrication, or maintenance. Equipment Summary forms are located at the end of this section.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

EQUIPMENT MAINTENANCE SUMMARY FORM⁽¹⁾

Equipment No.: _____

Specification Section: _____
Equipment Name: _____
Building Name: _____ Room No.: _____
Plant Location: _____
Manufacturer: _____
Address: _____
Phone: _____
Service Representative: _____
Address: _____
Phone: _____ Fax: _____
Make: _____ Model: _____
Serial No.: _____ Type: _____
Size: _____
Equipment Speed: _____
Capacity: _____
Operating Range: _____
Material: _____
Alarms: _____

Drive Ratio: _____
Motor Speed: _____ Service Factor: _____
Volts: _____ Phase: _____ hp: _____ Efficiency: _____
Motor Type: _____
Motor Sensors: _____
Motor Manufacturer: _____
Model: _____ Motor Frame: _____
Insulation Class: _____ FLA: _____ LRA: _____

(1) Complete as applicable; attach supplementary pages as necessary.

Maintenance Requirements
(Use additional sheets if more space is needed.)

LUBRICATION

<u>Item</u>	<u>Generic Type of Lubricant</u>	<u>Supplier</u>	<u>Estimated Frequency</u>	<u>Annual Quantity</u>
-------------	--------------------------------------	-----------------	--------------------------------	----------------------------

PREVENTIVE MAINTENANCE

<u>Item</u>	<u>Action</u>	<u>Frequency</u>	<u>Reference</u>
-------------	---------------	------------------	------------------

SUGGESTED MINIMUM SPARE PARTS LIST

<u>Manufacturer</u>	<u>Part No.</u>	<u>Quantity Unit</u>	<u>Description</u>
---------------------	-----------------	----------------------	--------------------

The following information is included in O&M Manual:

Check or mark N/A

- | | | |
|----|---|-------|
| 1. | Recommended installation, adjustment, calibration, and troubleshooting. | _____ |
| 2. | Complete internal and connection wiring diagrams. | _____ |
| 3. | Complete parts lists, by generic title and identification number, with exploded views of each assembly. | _____ |
| 4. | Disassembly, overhaul, and reassembly instructions. | _____ |
| 5. | Recommended prestart checks. | _____ |
| 6. | Recommended start procedure. | _____ |
| 7. | Recommended shutdown procedure for both short and long term. | _____ |
| 8. | Recommended operating precautions that include safety for personnel and equipment. | _____ |
| 9. | Recommended standing maintenance procedure. | _____ |

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1—GENERAL

1.01 SUMMARY

- A. Work Includes:
 - 1. Quality Assurance—Control of Installation.
 - 2. Tolerances.
 - 3. Manufacturers' Field Services and Reports.

1.02 QUALITY ASSURANCE—CONTROL OF INSTALLATION

- A. CONTRACTOR shall monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. CONTRACTOR shall comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, CONTRACTOR shall request clarification from ENGINEER before proceeding.
- D. CONTRACTOR shall comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Work shall be performed by persons qualified to produce workmanship of specified quality.
- F. CONTRACTOR shall secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES

- A. CONTRACTOR shall monitor tolerance control of installed products to produce acceptable work and shall not permit tolerances to accumulate.
- B. CONTRACTOR shall comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from ENGINEER before proceeding.
- C. CONTRACTOR shall adjust products to appropriate dimensions; position before securing products in place.

1.04 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. When specified in individual specification sections or when requested by ENGINEER, CONTRACTOR shall require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, and quality of workmanship.

- B. CONTRACTOR shall submit qualifications of observer to ENGINEER 30 days in advance of required observations.
- C. CONTRACTOR shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. CONTRACTOR shall submit report in duplicate within 30 days of observation to ENGINEER for information.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES

PART 1-GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Temporary utilities.
 - 2. Temporary stairs and access.
 - 3. Temporary support facilities.
 - 4. Removal of temporary facilities.
- B. CONTRACTOR shall arrange for and provide temporary facilities as required for proper and expeditious prosecution of the Work.
- C. CONTRACTOR shall pay all costs, except as otherwise specified, until final acceptance of the Work unless OWNER makes arrangements for use of completed portions of the Work after substantial completion in accordance with the provisions of the General Conditions.
- D. CONTRACTOR shall make all temporary connections to utilities and services in locations acceptable to OWNER and local authorities having appropriate jurisdiction.
 - 1. Furnish all necessary labor and materials.
 - 2. Make all installations in a manner subject to the acceptance of such authorities and OWNER.
 - 3. Maintain such connections.
 - 4. Remove temporary installation and connection when no longer required.
 - 5. Restore services and sources of supply to proper operating conditions.

1.02 TEMPORARY UTILITIES

- A. Temporary Toilets: CONTRACTOR shall provide and maintain sanitary temporary chemical toilets located where approved by OWNER and in sufficient number required for the work force employed by CONTRACTOR.
- B. Temporary Electrical Services:
 - 1. CONTRACTOR shall make all necessary arrangements, furnish, install, and maintain necessary temporary electrical services at the Site. CONTRACTOR shall remove all temporary services when Project is complete.
 - 2. All utility charges for installation of the temporary services shall be paid for by CONTRACTOR. All metering installation charges and all energy charges for electric current used for temporary lighting and power are to be paid by CONTRACTOR.
 - 3. No permanent electrical equipment or wiring shall be used without express written permission of OWNER. Such approval, if given, shall not affect guarantee period. If OWNER authorizes use of permanent service facilities, CONTRACTOR shall pay all metering costs until acceptance or occupancy (whichever occurs first) of building by OWNER.
- C. Weather Protection and Temporary Heat:
 - 1. CONTRACTOR shall provide weather protection to protect the Work from damage because of freezing, rain, snow, and other inclement weather.

2. CONTRACTOR shall provide temporary heat within buildings, without cost to OWNER, from the time the buildings or portions thereof are enclosed until the Project is accepted or occupied by OWNER, whichever occurs first. The building work is to be heated during construction so a minimum temperature of 50°F is maintained at all times. Temporary heating equipment shall be properly vented.
 3. No permanent heating equipment shall be used on a temporary basis without express written permission by OWNER. Such approval, if given, shall not affect the guarantee period. If OWNER authorizes use of permanent heating equipment, CONTRACTOR shall pay all related energy costs until acceptance or occupancy (whichever occurs first) of the building by OWNER.
- D. Temporary Water: CONTRACTOR shall supply its own water during construction. CONTRACTOR shall also provide its own piping, valves, and appurtenances for its requirements. Connection to the existing water system shall be coordinated with OWNER and shall meet all code requirements including disinfection and backflow prevention.
- E. Temporary Fire Protection: CONTRACTOR and Subcontractor(s) who maintain or provide an enclosed shed or trailer shall provide and maintain in operating order in each shed or trailer a minimum of one fire extinguisher. More extinguishers shall be provided as necessary. Fire extinguishers shall be minimum dry chemical, nonfreezing-type, UL rating 2A-30BC, with 10-pound capacity for Class A, B, and C fires.

1.03 TEMPORARY STAIRS AND ACCESS

- A. CONTRACTOR shall provide and maintain all equipment such as temporary stairs, ladders, ramps, runways, chutes, and so on as required for proper execution of the Work. CONTRACTOR shall be responsible for providing its own scaffolds, hoists, etc.
- B. All such apparatus, equipment, and construction shall meet all requirements of OSHA, the labor laws, and other applicable State and local laws. Provide stairs with handrails. As soon as possible and where applicable, permanent stairs shall be installed.
- C. As soon as permanent stairs are created, provide temporary protective treads, handrails, and shaft protection.
- D. Provide barricades at hazardous locations, complete with signs, temporary general lighting, warning lights, and similar devices as required.

1.04 TEMPORARY SUPPORT FACILITIES

- A. CONTRACTOR shall provide whatever facilities and services which may be needed to properly support primary construction process and meet compliance requirements and governing regulations.
- B. CONTRACTOR shall not use permanent facilities except as otherwise indicated, unless authorized by OWNER.

1.05 REMOVAL OF TEMPORARY FACILITIES

- A. Remove temporary materials, equipment, services, and construction as soon as practicable but no later than just prior to substantial completion inspection.

- B. Clean and repair damage caused by installation or use of temporary facilities and restore existing facilities used during construction to specified, or to original, condition.
- C. Minor temporary facilities which interfere with OWNER's operations shall be removed at the end of each Work period.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01560

TEMPORARY CONTROLS

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Dust Control.
 - 2. Water, Erosion, and Sediment Control.
 - 3. Noise Control.
 - 4. Traffic Control.
 - 5. Site Security.
 - 6. Daily Cleanup.

PART 2–PRODUCTS

NOT APPLICABLE

PART 3–EXECUTION

3.01 DUST CONTROL

- A. CONTRACTOR shall execute the Work by methods to minimize raising dust from construction operations.
- B. CONTRACTOR shall provide positive means to prevent air-borne dust from dispersing into atmosphere.
- C. CONTRACTOR shall provide partitions, enclosures, etc., within buildings as necessary to confine dust and protect adjacent areas.

3.02 WATER, EROSION, AND SEDIMENT CONTROL

- A. CONTRACTOR shall grade site to drain and shall maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. CONTRACTOR shall protect Site from puddling or running water.
- C. CONTRACTOR shall provide erosion control measures as necessary to control discharge of sediment laden water to surface waters and wetlands.
- D. Except as provided for in the document, overland discharge of water from dewatering operations shall not be allowed. Depending on water quality, such water shall either be piped directly to the surface water or shall be directed to sedimentation basins or other such structures or features prior to discharge to surface waters so as not to cause damage to existing ground and improvements, erosion, or deposition in the discharge area.

- E. CONTRACTOR shall use jute or synthetic netting, silt fences, straw bales, dikes, channels, and other applicable measures to prevent erosion of soils disturbed by its construction operation.
- F. Restoration of the Site shall proceed concurrently with the construction operation. See Drawings and Specifications for erosion control measures in addition to that which may be required above.
- G. Erosion control measures shall comply with 327 IAC 15-5.

3.03 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

3.04 TRAFFIC CONTROL

- A. CONTRACTOR shall be responsible for providing all signs, barricades, flagmen and other traffic control devices in the construction zone.
- B. All traffic control measures shall meet the requirements of the Manual on Uniform Traffic Control Devices of the State of Indiana.
- C. Do not close or obstruct roadways without approval of OWNER.
- D. Maintain two-way traffic on streets at all times.
- E. Conduct operations with minimum interference to roadways.

3.05 SITE SECURITY

- A. CONTRACTOR shall have the sole responsibility of safeguarding the Site perimeter to prevent unauthorized entry to the Site throughout the duration of the Project. CONTRACTOR shall at all times provide such permanent and temporary fencing or barricades or other measures as may be necessary to restrict unauthorized entry to its construction area including construction in public rights-of-way or easements. Site security measures shall include safeguards against attractive nuisance hazards as a result of construction activity.
- B. CONTRACTOR shall at all times be responsible for the security of the Work including materials and equipment. OWNER will not take any responsibility for missing or damaged equipment, tools, or personal belongings. CONTRACTOR shall have the sole responsibility of safeguarding the Work and the Site throughout the duration of the Project.

3.06 DAILY CLEANUP

- A. CONTRACTOR shall clean up the Site and remove all rubbish on a daily basis.
- B. CONTRACTOR shall clean up public streets and highways and remove any dirt, mud or other materials due to project traffic on daily basis and shall comply with all local and state ordinances and permit requirements.

END OF SECTION

SECTION 01590

FIELD OFFICES AND SHEDS

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Materials, equipment, and furnishings.
 - 2. Construction.
 - 3. Environmental control.
 - 4. CONTRACTOR office and facilities.
 - 5. Storage areas and sheds.
 - 6. Preparation.
 - 7. Maintenance and cleaning.
 - 8. Removal.

PART 2–PRODUCTS

2.01 MATERIALS, EQUIPMENT, AND FURNISHINGS

- A. Materials, equipment and furnishings shall be serviceable, new or used, and adequate for required purpose.

2.02 CONSTRUCTION

- A. Portable or mobile buildings, or buildings shall be constructed with floors raised above ground, securely fixed to foundations, with steps and landings at entrance doors.
- B. CONTRACTOR shall provide structurally sound, secure, weathertight enclosures for office and storage spaces.
- C. Temperature transmission resistance of floors, walls, and ceilings shall be compatible with occupancy and storage requirements.
- D. Exterior materials shall be weather resistant.
- E. Interior materials in offices shall consist of sheet type materials for walls and ceilings, pre-finished or painted; resilient floors and bases.
- F. Lighting for offices shall be 50-foot candles minimum at desk top height, with exterior lighting at entrance doors.
- G. Provide appropriate type fire extinguisher at each office and each storage area.
- H. Interior materials in storage sheds shall be as required to provide specified conditions for storage of products.

2.03 ENVIRONMENTAL CONTROL

- A. Heating, cooling, and ventilating for offices shall consist of automatic equipment to maintain comfort conditions; 70°F heating and 78°F cooling.
- B. Heating and ventilation for storage spaces shall be as needed to maintain products in accordance with Contract Documents and to provide adequate lighting for maintenance and observation of products.

2.04 CONTRACTOR OFFICE AND FACILITIES

- A. CONTRACTOR shall provide facilities to meet CONTRACTOR's needs and to provide space for Project meetings.
- B. Provide telephone as required for CONTRACTOR's needs.
- C. Provide furnishings in meeting area. As a minimum, provide conference table and chairs to seat at least eight persons; racks and files for Contract Documents, submittals, and project record documents.

2.05 STORAGE AREAS AND SHEDS

- A. Provide storage areas and sheds of size to meet storage requirements for products of individual sections, allowing for access and orderly provision for maintenance and for observation of products to meet requirements of Section 01600–Materials and Equipment.

PART 3–EXECUTION

3.01 PREPARATION

- A. CONTRACTOR shall fill and grade sites for temporary structures to provide drainage away from buildings.

3.02 MAINTENANCE AND CLEANING

- A. CONTRACTOR shall maintain approach walks free of mud, water, and snow.

3.03 REMOVAL

- A. Upon final acceptance and completion of the Work, CONTRACTOR shall remove field offices, foundations, utility services, and debris, and shall restore areas.

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: CONTRACTOR shall be responsible for the delivery, handling, storage and protection of all material and equipment required to complete the Work as specified herein.
- B. Related Sections and Divisions: Specific requirements for the handling and storage of material and equipment are described in other sections of these Specifications.

1.02 PRODUCTS

- A. Components required to be supplied in quantity within a Specification section shall be the same, and shall be interchangeable.
- B. CONTRACTOR shall not use materials and equipment removed from existing construction, except as specifically required, or allowed, by the Contract Documents.
- C. When any construction deviations from the Drawings and/or Specifications necessary to accommodate equipment supplied by CONTRACTOR, result in additional costs to CONTRACTOR or other contractors, such additional costs shall be borne by CONTRACTOR. CONTRACTOR shall also pay any additional costs necessary for revisions of Drawings and/or Specifications by ENGINEER.
- D. Each major component of equipment shall bear a nameplate giving the name and address of the manufacturer and the catalogue number or designation.

1.03 TRANSPORTATION AND HANDLING

- A. Materials, products and equipment shall be properly containerized, packaged, boxed, and protected to prevent damage during transportation and handling.
- B. CONTRACTOR shall not overload any portion of the structure in the transporting or storage of materials.
- C. CONTRACTOR shall not damage other construction by careless transportation, handling, spillage, staining or impact of materials.
- D. CONTRACTOR shall provide equipment and personnel to handle products, including those provided by OWNER, by methods to prevent soiling and damage.
- E. CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.
- F. CONTRACTOR shall handle product by methods to avoid bending or overstressing. Lift large and heavy components only at designated lift points.

1.04 DELIVERY AND RECEIVING

- A. CONTRACTOR shall arrange deliveries of products in accordance with the Progress Schedule, allowing time for observation prior to installation.
- B. CONTRACTOR shall coordinate deliveries to avoid conflict with the Work and conditions at the Site; work activities of OWNER; limitations on storage space; availability of personnel and handling equipment and OWNER's use of premises.
- C. CONTRACTOR shall deliver products in undamaged, dry condition, in original unopened containers or packaging with identifying labels intact and legible.
- D. CONTRACTOR shall clearly mark partial deliveries of component parts of equipment to identify equipment and contents to permit easy accumulation of parts and to facilitate assembly.
- E. Immediately on delivery, CONTRACTOR shall inspect shipment to assure:
 - 1. Product complies with requirements of Contract Documents and reviewed submittals.
 - 2. Quantities are correct.
 - 3. Accessories and installation hardware are correct.
 - 4. Containers and packages are intact and labels legible.
 - 5. Products are protected and undamaged.

1.05 STORAGE AND PROTECTION

- A. General:
 - 1. CONTRACTOR shall store products, immediately on delivery, in accordance with manufacturer's instructions, with all seals and labels intact and legible.
 - 2. Available storage space at the Site is limited. Any additional off-site space required shall be arranged by CONTRACTOR.
 - 3. CONTRACTOR shall allocate the available storage areas and coordinate their use by the trades on the job.
 - 4. CONTRACTOR shall arrange storage in a manner to provide access for maintenance of stored items and for observation.
- B. In enclosed storage, CONTRACTOR shall:
 - 1. Provide suitable temporary weather tight storage facilities as may be required for materials that will be damaged by storage in the open.
 - 2. Maintain temperature and humidity within ranges stated in manufacturer's instructions.
 - 3. Provide ventilation for sensitive products as required by manufacturer's instructions.
 - 4. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.
 - 5. Store solid materials such as insulation, tile, mechanical and electrical equipment, fittings, and fixtures under shelter, in original packages, away from dampness and other hazards.
 - 6. Store liquid materials away from fire or intense heat and protect from freezing.
- C. At exterior storage, CONTRACTOR shall:
 - 1. Store unit materials such as concrete block, brick, steel, pipe, conduit, door frames, and lumber off ground, out of reach of dirt, water, mud and splashing.
 - 2. Store tools or equipment that carry dirt outside.
 - 3. Store large equipment so as not to damage the Work or present a fire hazard.

4. Cover products subject to discoloration or deterioration from exposure to the elements, with impervious sheet material and provide ventilation to avoid condensation.
5. Completely cover and protect any equipment or material which is prime coated or finish painted with secured plastic or cloth tarps. Store out of reach of dirt, water, mud and splashing.
6. Store loose granular materials on clean, solid surfaces such as pavement, or on rigid sheet materials, to prevent mixing with foreign matter.
7. Provide surface drainage to prevent erosion and ponding of water.
8. Prevent mixing of refuse or chemically injurious materials or liquids.
9. Cover aggregates such as sand and gravel in cold wet weather.
10. Remove all traces of piled bulk materials at completion of work and return site to original or indicated condition.

1.06 MAINTENANCE OF STORAGE

- A. CONTRACTOR shall periodically inspect stored products on a scheduled basis.
- B. CONTRACTOR shall verify that storage facilities comply with manufacturer's product storage requirements, and verify that manufacturer required environmental conditions are maintained continually.
- C. CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes is acceptable under requirements of Contract Documents.
- D. CONTRACTOR shall perform scheduled maintenance of equipment in storage as recommended by the manufacturer. A record of the maintenance shall be kept and turned over to ENGINEER when the equipment is installed.

1.07 INSTALLATION REQUIREMENTS

- A. Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the respective manufacturers, unless otherwise specified.
- B. After installation, CONTRACTOR shall protect all materials and equipment against weather, dust, moisture, and mechanical damage.
- C. CONTRACTOR shall be responsible for all damages that occur in connection with the care and protection of all materials and equipment until completion and final acceptance of the Work by OWNER. Damaged material and equipment shall be immediately removed from the Site.

1.08 EQUIPMENT WARRANTIES

- A. Warranties shall be nonprorated, include all parts and labor, and be in written form. Warranties shall specifically exclude buyer's indemnification language. Warranty language shall not eliminate manufacturer's responsibility for sizing of the equipment. During warranty period, manufacturer shall be responsible for any travel expenses, outside contractor fees, and rental equipment fees associated with providing warranty service. Warranties shall not exclude normal wear items. Manufacturer shall pay expenses incurred for repairs and parts replacement not made by manufacturer if manufacturer's response is

not within 72 hours of notification by OWNER. Warranty language shall be provided with the shop drawings.

1.09 CONCRETE EQUIPMENT BASE

- A. Cast-in-place concrete equipment bases shall be provided for all new and relocated equipment including electrical control panels, motor control centers, switchgear, etc. Concrete equipment bases shall be provided by CONTRACTOR except where specifically noted to be provided by others. Bases shall be 3 1/2-inch minimum height and shall be a minimum of 3 inches larger than equipment being supported. Grouting of equipment bases shall be as recommended by equipment manufacturer.
- B. Concrete and grout shall meet applicable sections of the specifications.
- C. Provide all anchor bolts, metal shapes and templates to be cast in concrete or used to form concrete for support of equipment.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 01650

STARTING OF SYSTEMS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. General.
 - 2. Equipment and System Installation.
 - 3. Starting Equipment and Systems.
 - 4. Demonstration, Instructions, and Operator Training.
 - 5. Start-up and Testing.
 - 6. Equipment Systems Requiring Certification of Proper Installation.
- B. CONTRACTOR shall perform the Work described in the following subsections.

1.02 GENERAL

- A. The number of days for manufacturer's services stated in the Specifications shall be considered as the minimum number of days. Should additional time be required for services because of equipment malfunction or other problem, such time shall be at the expense of CONTRACTOR, with no change in Contract Price.
- B. "Days" specified shall consist of 8-hour days on-site, excluding travel time.
- C. CONTRACTOR shall designate and provide one person to be responsible for scheduling, coordinating, and expediting the specified services. Scheduling the services shall be done in cooperation with, and with the prior approval of ENGINEER and OWNER. Such schedule shall be arranged with the appropriate subcontractors, manufacturers, and suppliers with sufficient time to allow their compliance with the service requirements.
- D. CONTRACTOR shall manage equipment checkout such that checkout has been completed and deficiencies addressed prior to demonstration and training. Scheduling training prior to checkout may result in cancellation when checkout cannot be completed prior to training.

1.03 EQUIPMENT AND SYSTEM INSTALLATION

- A. Competent and experienced technical personnel shall represent the manufacturers of all equipment and systems for as many days as may be necessary to provide proper installation and to resolve assembly or installation problems at the site that are attributable to, or associated with, the equipment furnished. This requirement applies to manufacturers for all equipment furnished, whether or not specifically set forth in the Specifications.
- B. Where a manufacturer's certificate is called for in this Specification Section, the manufacturer's representative shall provide the attached certificate stating that the equipment or system has been installed in accordance with the manufacturer's instructions and has been inspected by a manufacturer's authorized representative, that it has been serviced with the proper initial lubricants, that applicable safety equipment has been

properly installed, that the proper electrical and mechanical connections have been made, and that any other manufacturer requirements have been met. This certification shall be provided to ENGINEER and OWNER prior to the start-up. This certificate is in addition to the manufacturer's standard startup reports, checklists, and other pertinent information.

- C. Functional (or run) testing is required for all equipment and systems. The manufacturer's representative shall supervise the functional test, which shall include checking for proper rotation, alignment, speed, excessive vibration, and noisy operation. The Manufacturer's Certificate of Proper Installation shall state that proper adjustments have been made and that the equipment or system is ready for start-up.
- D. Manufacturer shall demonstrate, using laser alignment equipment, if appropriate, that the installed equipment has been aligned properly. Final acceptance of equipment will not be granted until manufacturer has demonstrated to ENGINEER that acceptable alignment to tolerances have been achieved. For pumps with motors 7.5 hp and larger, the acceptable shaft alignment tolerances shall be as recommended in the pump manufacturer's written instructions and shall include parallel offset and angular gap measurements.

1.04 STARTING EQUIPMENT AND SYSTEMS

- A. For all mechanical equipment and systems and where called for in the Specifications, or when technical assistance is necessary as a result of any malfunction of the equipment or system furnished, the manufacturer's representative shall provide such services.
- B. Refer to the Specifications for additional training requirements.
- C. Manufacturer's representative shall also conduct and/or assist with performance testing, as required by the Specifications. These services shall continue until such times as the applicable equipment or system has been successfully tested for performance and has been accepted by OWNER for full-time operation.
- D. Coordinate schedule for start-up of various equipment and systems. Coordination includes, but is not limited to, communication with subcontractors, suppliers, OWNER, and ENGINEER. CONTRACTOR shall confirm that all necessary work is complete and that the equipment and systems can be operated in conjunction with all associated processes.
- E. Notify ENGINEER and OWNER a minimum of 7 days prior to start-up of each item using the attached Equipment Startup and O&M Training Scheduling form. CONTRACTOR shall submit form to ENGINEER.
- F. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or for other conditions that may cause damage.
- G. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

- H. Verify wiring and support components for equipment are complete and tested.
- I. Execute start-up under supervision of applicable manufacturer's representative and CONTRACTOR's personnel in accordance with manufacturers' instructions.
- J. Require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up and to supervise placing equipment or system in operation.
- K. Equipment manufacturer shall provide a written report covering checkout, testing, inspections, and start-up and shall identify any deficiencies noted. Report shall be submitted to ENGINEER. CONTRACTOR shall be responsible for correcting all deficiencies noted in report. In addition, CONTRACTOR shall submit a fully executed Certificate of Proper Installation form if required in Paragraph 3.01 of this section.

1.05 DEMONSTRATION, INSTRUCTIONS, AND OPERATOR TRAINING

- A. For all mechanical equipment and systems and where called for in the Specifications, provide a qualified technical representative to provide detailed instructions to OWNER's personnel for operation and maintenance of equipment and associated instrumentation. Training services shall include pre-start-up classroom instruction and start-up on-site instruction, as stated in the Specifications.
- B. Refer to the Specifications for additional training requirements.
- C. CONTRACTOR shall coordinate the pre-start-up training periods with OWNER's operating personnel and manufacturers' representatives.
 - 1. Schedule training dates and times with OWNER, that are acceptable to the OWNER, using equipment, startup, and O&M training form. Normal hours available for training are between 7:30 A.M. to 3 P.M., Monday through Friday, except for holidays.
 - 2. Submit outline and presentation to ENGINEER at least 7 days in advance of training.
 - 3. Provide name, contact information, and brief synopsis of qualifications of the trainer.
 - 4. If materials above are not provided at least 7 days in advance, training may be canceled.
 - 5. Failure of supplier's or manufacturer's representative to appear for scheduled training, failure to notify OWNER 24 hours in advance of need to cancel scheduled training or failure to arrive within 30 minutes of start of scheduled training shall result in reimbursement to OWNER for time lost by OWNER's personnel in waiting for arrival of manufacturer's representative. Except in case of failure to arrive on time, time will not exceed 1 hour for each employee scheduled to receive training. Failure to arrive on time will be reimbursed by actual time late, up to 1 hour, after 1 hour, training will be rescheduled. CONTRACTOR shall reimburse OWNER via a change order.
 - 6. During the training, instructor will dedicate its time solely to training and not start-up services.
 - 7. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with OWNER's personnel in detail to explain all aspects of operation and maintenance.
 - 8. Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment.

9. Prepare and insert additional data in operation and maintenance manuals when need for additional data becomes apparent during instruction.
 10. OWNER may videotape the training for future internal use. Provide to OWNER paper and electronic copies of any media used as part of training.
 11. Provide training handouts for each of OWNER's personnel present.
- D. CONTRACTOR shall provide attached Certificate of Operator Training cosigned by OWNER and supplier's representative verifying training was accomplished to satisfaction of all parties.
- E. Operation and maintenance manual submitted in accordance with Section 01300—Submittals shall be provided prior to operator training.
- F. Final payment for various items of equipment will not be made by OWNER until the equipment is operating to OWNER's satisfaction.
- G. Where items of equipment are placed into service at different times or sequence, manufacturer's services for start-up, field testing, and supervision shall be provided for each time or sequence. Training shall be provided prior to or at the time the first similar item of equipment is placed in service.

1.06 START-UP AND TESTING

- A. Prior to acceptance of any portion of the Work, start-up and testing of all equipment and testing of all materials furnished on the Project by CONTRACTOR shall have been conducted in the presence of representatives of CONTRACTOR, OWNER, and ENGINEER and also manufacturer if requested by OWNER or ENGINEER.
- B. CONTRACTOR shall provide whatever temporary installations and conditions are necessary in order to perform start-up and testing operations on all equipment and materials furnished under the Contract. Temporary connections and equipment necessary during start-up and testing operations shall include, but not be limited to, temporary piping and electrical power and control equipment and devices, temporary connection from various parts of the systems and any other labor, materials, fuel, devices, or items that may be required for start-up and testing operations. Temporary conditions shall include filling with water, if necessary, to check equipment and materials.
- C. All temporary installations and conditions shall be removed by CONTRACTOR upon completion of start-up and testing.

PART 2—PRODUCTS

NOT APPLICABLE

PART 3–EXECUTION

3.01 EQUIPMENT SYSTEMS REQUIRING CERTIFICATION OF PROPER INSTALLATION.

- A. 05502–Slide Gates.
- B. All equipment and controls specified in Division 11.
- C. All Special Structures specified in Division 13.
- D. All space and process related heating and ventilation equipment and systems specified in Division 15.

END OF SECTION

TS No. _____

EQUIPMENT START-UP AND O&M TRAINING SCHEDULING FORM
STRAND ASSOCIATES, INC.®

PROJECT _____ CLIENT _____

CONTRACT _____

CONTRACTOR _____ Date: _____

The following equipment is scheduled for start-up on _____

EQUIPMENT NAME: _____ SPECIFICATION SECTION: _____

MANUFACTURER: _____ MINIMUM HOURS OF TRAINING: _____

DATE O&M MANUALS SUBMITTED: _____

Specification Section 01650 requires that start-up and operation and training be conducted by a qualified manufacturer's representative prior to placing equipment in operation. Review Specification Sections 01300 and 01400 and the individual equipment sections for start-up and training requirements. OWNER may find it necessary to propose alternate dates for training based on conflicts with other training and staff availability. The Operation and Maintenance Manuals must be submitted prior to training.

After the equipment or system has been properly installed and is functioning correctly, submit a written report in accordance with Specification Section 01400.

Submit the completed form to ENGINEER and OWNER at least 7 days prior to start-up and training.

Proposed Training Date: _____ Time of Training: _____

Factory-trained representative giving training:

Name(s): _____

Company: _____

Address: _____

Phone: _____

Fax: _____

E-mail: _____

CERTIFICATE OF PROPER INSTALLATION

Project_____

Equipment_____

Specification Section_____

Contract_____

I hereby certify the equipment supplier/manufacturer has inspected this equipment and that it has been properly installed, adjusted, and calibrated. I further certify this equipment may now be operated for test purposes and/or normal use.

MANUFACTURER'S REPRESENTATIVE

Signature_____Date_____

Name (print)_____

Title_____

Representing_____

CONTRACTOR

Signature_____Date_____

Name (print)_____

Title_____

This form shall be completed and submitted to ENGINEER prior to OWNER training.

CERTIFICATE OF OPERATOR TRAINING

Project_____

Equipment_____

Specification Section_____

Contract_____

I hereby certify the equipment supplier/manufacturer has instructed OWNER's personnel in the start-up operation and maintenance of this equipment as required in the Specifications.

MANUFACTURER'S REPRESENTATIVE

Signature_____Date_____

Name (print)_____

Title_____

Representing_____

CONTRACTOR

Signature_____Date_____

Name (print)_____

Title_____

OWNER

I hereby certify that my operating personnel received instruction for start-up, operation, and maintenance of this equipment.

Signature_____Date_____

Name (print)_____

Title_____

END SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Closeout procedures.
 - 2. Final cleaning.
 - 3. Adjusting.
 - 4. Project record documents.
 - 5. Warranties.
 - 6. Spare parts and maintenance materials.

1.02 CLOSEOUT PROCEDURES

- A. CONTRACTOR shall provide submittals to ENGINEER that are required by governing or other authorities.
- B. CONTRACTOR shall comply with General Conditions and Supplementary Conditions and complete the following before requesting ENGINEER's observation of the Work, or designated portion thereof, for substantial completion.
 - 1. Submit executed warranties, workmanship bonds, maintenance agreements, inspection certificates, and similar required documentation for specific units of Work, enabling OWNER's unrestricted occupancy and use.
 - 2. Submit record documentation, maintenance manuals, tools, spare parts, keys, and similar operational items.
 - 3. Submit consent of surety (if surety required in Contract).
 - 4. Complete final cleaning, touch-up work of marred surfaces, and remove temporary facilities and tools.

1.03 FINAL CLEANING

- A. It is CONTRACTOR's responsibility to completely clean up the inside and outside of all buildings and the construction site at the completion of the Work.
- B. CONTRACTOR shall clean areas of the building in which painting and finishing work is to be performed just prior to the start of this work, and maintain these areas in satisfactory condition for painting and finishing. This cleaning includes:
 - 1. Removal of trash and rubbish from these areas.
 - 2. Broom cleaning of floors.
 - 3. Removal of any plaster, mortar, dust, and other extraneous materials from finish surfaces, including but not limited to exposed structural steel, miscellaneous metal, masonry, concrete, mechanical equipment, piping, and electrical equipment.
- C. In addition to the cleaning specified above and the more specific cleaning that may be required in various technical sections of the Specifications, CONTRACTOR shall prepare the Project for occupancy by a thorough cleaning throughout, which shall include the following:

1. Clean interior and exterior glass surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
2. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
3. Replace filters of operating equipment.
4. Clean debris from roofs, gutters, downspouts, and drainage systems.
5. Clean site; sweep paved areas, rake clean landscaped surfaces.
6. Remove waste and surplus materials, rubbish, and construction facilities from the Site.

1.04 ADJUSTING

- A. CONTRACTOR shall adjust operating products and equipment to ensure smooth and unhindered operation.

1.05 PROJECT RECORD DOCUMENTS

- A. CONTRACTOR shall maintain on Site, one set of the following record documents to record actual revisions to the Work:
 1. Drawings.
 2. Specifications.
 3. Addenda.
 4. Change orders and other modifications to the Contract.
 5. Reviewed shop drawings, product data, and samples.
 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. CONTRACTOR shall ensure entries are complete and accurate, enabling future reference by OWNER.
- C. CONTRACTOR shall store record documents separate from documents used for construction.
- D. CONTRACTOR shall record information concurrent with construction progress.
- E. Specifications: CONTRACTOR shall legibly mark and record at each Product section description of actual products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by addenda and modifications.
- F. Record Drawings: CONTRACTOR shall legibly mark each item to record actual construction including:
 1. Measured depths of foundations in relation to finish floor datum.
 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract drawings.

1.06 WARRANTIES

- A. CONTRACTOR shall provide warranties beyond project one year warranty as required by technical sections and as follows.
- B. Submit warranty information as follows:
 - 1. Provide notarized copies.
 - 2. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers, and provide Table of Contents and assemble in three ring binder with durable cover.
 - 3. Submit with request for certificate of Substantial Completion.
 - 4. For items of work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS

- A. CONTRACTOR shall provide spare parts, maintenance, and extra materials in quantities specified in individual specification sections.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 02050

DEMOLITION

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: All demolition, removal, and salvage work as shown on the drawings or specified herein to include, but not necessarily limited to the following:
 - 1. Existing Parshall flume.
 - 2. Sidewalk.
 - 3. Existing influent sampler.
 - 4. Existing odor control equipment.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this Section.

1.02 SUBMITTALS

- A. CONTRACTOR shall submit permits and notices, if required, authorizing building demolition.

1.03 QUALITY ASSURANCE

- A. CONTRACTOR shall perform demolition, removal, and salvage in conformity with applicable federal, state, and local safety practices and code requirements.
- B. CONTRACTOR shall contact all public utilities and shall shut off, cut and cap all utility services in accordance with utility requirements, codes, rules and regulations.
- C. Obtain and pay for all necessary permits, licenses and certificates required.

1.04 SEQUENCE

- A. No demolition, removal, or salvage work shall commence until approval to proceed has been granted by OWNER. Such work shall be completed in accordance with the construction sequence included in Division 1 of these specifications and in accordance with the construction phases of this project and work to be done by other contractors.

PART 2–PRODUCTS

2.01 GENERAL

- A. Compacted fill shall meet the requirements of Section 02222–Excavation, Fill, Backfill and Grading.
- B. Pipe fittings and materials shall meet the requirements of Section 02600–Buried Piping and Appurtenances and Section 15050–Piping and Appurtenances.

PART 3-EXECUTION

3.01 BREAKING DOWN AND REMOVING STRUCTURES

A. General:

1. All existing structures, with all attached parts and connections, shown on the drawings or specified to be removed or that interfere with the new construction, shall be entirely removed within the limits shown or specified, unless otherwise provided.
2. When a portion of an existing structure is to be retained, CONTRACTOR shall take care during construction operations so as not to impair the value of the retained portion.
 - a. Complete all operations necessary for the removal of any existing structure which might endanger the new construction prior to the construction of the new work.
 - b. Do not use any equipment or devices which might damage structures, facilities, or property which are to be preserved and retained.
3. When existing reinforcing is exposed at the surface of removal areas, CONTRACTOR shall burn back the reinforcing bars 2 inches and patch with nonshrink grout unless noted otherwise.

B. Pavement, Curb, Gutter, Sidewalk, Driveways, Crosswalk, and Similar Structures:

1. Where portions of the existing structure are to be left in the surface of the finished work, CONTRACTOR shall remove the structure to an existing joint, or saw and chip the structure to a true line.
2. Sufficient removal shall be made to provide for proper grades and connections in the new work.

3.02 EQUIPMENT

A. CONTRACTOR shall remove all equipment specified herein or indicated.

B. CONTRACTOR shall remove associated exposed conduit, power wiring, controls, switches, instrumentation, control wiring, control boxes, appurtenances, and their supports serving equipment to be removed. Electrical items shall be removed to their junction with motor control center, control panel, or their junction with conduit serving other equipment that is to remain.

C. CONTRACTOR shall remove all piping and appurtenances and their supports serving equipment indicated to be removed. Piping shall be removed to its junction with the main service header serving other equipment that is to remain or new equipment as indicated. Remaining piping and tubing shall be fitted with an appropriate blind flange or plug and insulated as required.

D. CONTRACTOR shall remove equipment bases, anchor bolts, and other supports serving equipment to be removed. Concrete bases shall be removed to 1 inch below floor elevation and repaired with nonshrink grout plus surfacing to match existing.

E. CONTRACTOR shall patch floors, walls, and ceilings as required to match existing or as indicated where equipment, piping, electrical, bases, or supports are removed.

F. CONTRACTOR shall remove the following major equipment items or systems. The following list is not intended to be all-inclusive. CONTRACTOR shall remove all items

indicated or specified to be removed, including existing Parshall flume and associated level sensing equipment.

3.03 SALVAGE

- A. OWNER has first right of refusal to all material, piping, and equipment removed.
- B. All equipment, material, and piping, except as specified hereinafter, within the buildings and structures to be demolished and additional items as noted shall be removed by CONTRACTOR. CONTRACTOR shall inspect each structure and determine the type and amount of equipment, materials, and piping to be removed.
- C. All equipment, material, and piping, except as specified hereinafter, within the limits of the demolition and additional items noted to be removed, will become the property of CONTRACTOR if OWNER does not claim under first right of refusal and shall be removed from the project site. Comply with State and local ordinances and regulations for disposing of materials.
- D. The following equipment and materials shall be removed and reused in the new facilities:
 - 1. Existing influent sampler.
 - 2. Existing odor control equipment.
 - 3. Existing wooden cover on Junction Box No. 2.

3.04 BACKFILL

- A. CONTRACTOR shall fill all abandoned structures and excavations resulting from removal of structures and utilities with compacted fill. See Section 02222–Excavation, Fill, Backfill, and Grading for required degree of compaction.

END OF SECTION

SECTION 02110

SITE CLEARING AND STRIPPING

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Removal of surface debris.
 - 2. Removal of paving, curbs, and sidewalks.
 - 3. Removal of trees, shrubs, and other plant life.
 - 4. Strip and stockpile topsoil.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this Section.

PART 2—PRODUCTS

NOT APPLICABLE

PART 3—EXECUTION

3.01 PREPARATION

- A. CONTRACTOR shall identify existing plant life to remain and shall tag accordingly.

3.02 PROTECTION

- A. CONTRACTOR shall protect from damage utilities and structures that are to remain.
- B. CONTRACTOR shall protect trees, plant growth, and features designated to remain as final landscaping.
- C. See Division 1 for protection of survey monumentation.

3.03 CLEARING AND GRUBBING

- A. Clearing and grubbing shall consist of cutting and disposing of trees, brush, windfalls, logs, and other vegetation, and the removing and disposing of roots, stumps, stubs, grubs, logs, and other timber from within the clearing limits as defined on the drawings, designated to be removed on the drawings or in the specifications, or fall within the excavation, embankment, or improved areas of the site.
- B. All roots and stumps shall be removed to a depth of not less than 12 inches below the original ground surface in embankment areas. In cut areas, such material shall be removed to a depth of not less than 12 inches below the subgrade.

3.04 REMOVALS

- A. CONTRACTOR shall remove from the site all trees, brush, and other vegetation, debris, and rocks that fall within the excavation and grading limits, as well as any paving, curb and gutter, and sidewalks shown on the drawings to be removed.

3.05 STRIPPING

- A. Excavate topsoil from areas to be built upon, cut or filled, or to have surface improvements, including roadways and walks.
- B. Stockpile topsoil on site and protect from erosion. CONTRACTOR shall provide additional topsoil as required.
- C. Excess topsoil, if any, shall be removed from the site and disposed of at CONTRACTOR's expense.

END OF SECTION

SECTION 02140

DEWATERING

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Removal of groundwater to allow below grade construction.
 - 2. Site grading to prevent surface water from entering the excavation.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.
- C. Payment:
 - 1. The expense for making all extra excavations necessary to prevent water from interfering with the proper construction of the work and for forming all dams or diversions, digging of sumps or pump wells, bailing, and installation and pumping of wells shall be borne by CONTRACTOR.
 - 2. The cost for removal of groundwater and surface water shall be included in the prices bid for the work. No separate payment will be made for dewatering whether accomplished by use of sumps and pumps, well point systems, deep wells, or any other method.

1.02 REFERENCES

- A. See Division 1, Regulatory Requirements for permit requirements and water, erosion, and sediment control.

1.03 SYSTEM REQUIREMENTS

- A. CONTRACTOR shall, at its own expense, keep the excavation clear of water while structures, mains, and appurtenances are being built, utilities are being installed, and fill and backfill are being compacted. Under no conditions shall the work be laid in or under water. No water shall flow over the work until the joints are complete or the concrete has set.
- B. Dewatering shall be sufficient to lower the piezometric level to at least 2 feet below the bottom of the excavation. Additional lowering shall be provided as necessary to create a stable subgrade.
- C. In areas where rock is encountered, the water level shall be kept at or below top of rock, but at least 6 inches below bottom of concrete. Additional rock shall be removed as needed to provide clearances.
- D. The control of groundwater shall be such that softening or heaving of the bottom of excavations or formation of "quick" conditions or "boils" shall be prevented.
- E. Dewatering systems shall be designed and operated so as to prevent the migration or removal of soils.

1.04 QUALITY ASSURANCE

- A. All dewatering shall be done in accordance with applicable federal, state, and local code requirements.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

3.01 DEWATERING

- A. Dewatering shall be started, and the water level shall be lowered as specified herein prior to beginning excavation and shall be continued until structure, main, or appurtenance has been completed and fill has been placed and compacted to final grade.
- B. CONTRACTOR shall provide all necessary materials and equipment to keep the excavation free from water during construction. CONTRACTOR shall at all times have on hand sufficient pumping equipment and machinery in good working condition for all ordinary emergencies, including power outages, and shall have available at all times competent workers for the operation of the pumping equipment. The dewatering systems shall not be shut down between shifts, on holidays or weekends, or during the work stoppages.
- C. The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted fill or backfill, and prevent floatation or movement of all structures and pipelines.

3.02 PROTECTION

- A. CONTRACTOR shall take all necessary precautions during the dewatering operation to protect adjacent structures against subsidence, flooding, or other damage. The dewatering system shall be installed and operated so that the groundwater level outside the excavation is not reduced to the extent that would damage or endanger adjacent structures or property. Any such facilities and structures damaged shall be repaired or replaced to the satisfaction of their owner.
- B. Prior to dewatering, CONTRACTOR shall take into account the effect of its proposed dewatering operation on existing private water supply systems and shall make arrangements with property owners for protecting their supplies or providing alternative means of supply.
- C. In the event that CONTRACTOR's dewatering operation adversely affects private water supply systems, CONTRACTOR shall provide property owners with alternative potable and nonpotable supplies until dewatering operations are ceased and groundwater levels return to normal. If the water in private water supply wells is contaminated, through no fault of CONTRACTOR, after restoration of original groundwater levels, OWNER will provide

measures to restore water potability. CONTRACTOR is responsible for restoration of the water supply, not its potability after restoration.

- D. In areas where continuous operation of dewatering pumps is required, CONTRACTOR shall avoid noise disturbance to nearby residences to the greatest extent possible by using electric-driven pumps, or intake and exhaust silencers or housing to minimize noise from engine-driven generators or engine-driven pumps.

END OF SECTION

SECTION 02222

EXCAVATION, FILL, BACKFILL, AND GRADING

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Excavating, filling, backfilling, and grading for this work includes, but is not necessarily limited to:
 - 1. Excavating for footings, foundations, roads, and utilities.
 - 2. Placing and compacting all fill and backfill.
 - 3. Placement of granular mat vapor barrier and granular cushion below interior slabs on grade.
 - 4. Placement of crushed stone mat below tank, slabs, channel, and junction box, or other structures where required.
 - 5. Rough and finish grading prior to paving, seeding, etc.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this Section.
- C. Allowances: CONTRACTOR shall INCLUDE in the Bid the cost of replacing 100 cubic yards of unsuitable foundation material for structures and roads as defined in this section. The unit price shall include the cost of dewatering and slope stabilization and other incidental items associated with this work. Payment to CONTRACTOR for unsuitable foundation material for structures and roads will be adjusted, add or deduct, based upon the actual unsuitable material excavated (more or less than 100 cubic yards) and the unit price for replacing unsuitable foundation material. Volume shall be as measured in the ground. Extra payment will not be made for specified undercutting and filling or gravel bedding material required for placing concrete above water level as required under the concrete specifications. The Bid shall include any removal and replacement of excavated material so indicated on the drawings or specified herein.
- D. Payment:
 - 1. General excavation shall include all excavation specified, undercutting, fill, backfill and grading, including rock excavation but not including unsuitable foundation material, as hereinafter described.
 - 2. All general excavation shall be included in the Lump Sum Bid. Changes which require additions to or deductions from the excavation will be adjusted on the basis of the unit price for changes contained in the Contract.

1.02 REFERENCES

- A. ASTM D698—Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
- B. ASTM D1557—Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- C. Standard Specifications: Unless otherwise indicated, Standard Specifications within this section shall refer to the *State of Indiana Department of Transportation, Standard Specifications, Latest Edition*, including all issued Supplemental Specifications.

1.03 SUBMITTALS

- A. CONTRACTOR shall submit samples of materials proposed for use as fill to soils testing laboratory for analysis of their suitability and for recommendations on moisture content during compaction, compaction methods, or other appropriate information.
- B. CONTRACTOR shall submit sufficient samples of each different type or classification of soil to obtain representative values.

1.04 JOB CONDITIONS

- A. The elevations shown for existing work and ground are reasonably correct, but are not guaranteed to be absolutely accurate. No extras will be allowed because of variations between drawings and actual grades.
- B. Soil borings were made and the soils information is included in an appendix to these specifications. The information contained is not guaranteed to be indicative of conditions to be encountered during construction. It is CONTRACTOR's responsibility to make its own investigations to determine physical conditions at the site, which may affect the work.

PART 2-PRODUCTS

2.01 COMPACTED FILL

- A. All fill and backfill material designated to be compacted fill shall meet the following criteria:
 - 1. Organic content less than 5% by dry weight of soil.
 - 2. Liquid Limit less than 50 and Plasticity Index less than 30.
 - 3. Free of large rock fragments (no particles larger than 3 inches in diameter), debris, roots, rubble, wood, or any other deleterious materials.
 - 4. The amount retained on a 3/4-inch sieve should be less than 30%.
 - 5. The maximum dry density (ASTM D-698) should be at least 100 pcf.
 - 6. The soil fill should meet the requirements of the Unified Soil Classification System (USCS) (ASTM D-2487) as either CL, CL-ML, SM, SC, SP, SW, SP-SM, SC-SM, SP-SC, SW-SM, SW-SC, GW, CW-GM, or GW-GC.
 - 7. Use of an essentially one-size material will not be permitted.
- B. Native material may be used as compacted fill if it meets the above specification. CONTRACTOR shall determine whether native material meets the above specification. CONTRACTOR shall provide all needed fill material whether from on-site or off-site at no additional cost to OWNER.

2.02 CRUSHED STONE MAT

- A. Crushed stone mat below tank, slabs, channels, and junction box shall be 3/4-inch clear crushed stone and shall meet all requirements of ASTM C33 size No. 67.

2.03 GRANULAR CUSHION

- A. Granular cushion beneath floor slabs-on-grade shall meet requirements of Size No. 53 of Section 904.

2.04 EMBANKMENT FILL

- A. Embankment fill shall contain no stumps, brush, rubbish, or other perishable material. The top 12 inches of the earth embankment shall be earthy material free from large stones.

2.05 CONCRETE FILL

- A. Concrete fill shall be Class X concrete as defined in Section 03300, Cast-In-Place Concrete, or flowable fill as defined in this section.

2.06 CLAY FILL

- A. Clay fill shall contain at least 25% clay minerals (material finer than 0.002 mm).

2.07 FLOWABLE FILL

- A. Flowable fill shall be a self-compacting, self-leveling, material consisting of a mixture of fine aggregate and filler (as needed), water, and cementitious materials (Portland cement, fly ash, granulated blast furnace slag) that is in a flowable state at the time of placement meeting the requirements of the National Ready Mixed Concrete Association Guide Specification for Controlled Low Strength Materials (CLSM). The flowable fill shall be proportioned by the ready mixed concrete supplier on the basis of field experience and/or laboratory trial mixtures to produce a cohesive and nonsegregating mixture which has the following properties:
 - 1. Minimum compressive strength: 50 psi.
 - 2. Maximum compressive strength: 150 psi.
- B. CONTRACTOR shall submit the following information well in advance of fill placement to avoid any delay in construction:
 - 1. Gradation of fine aggregate.
 - 2. Design mix.
 - 3. Previous test results with 7- and 28-day compressive strengths.
 - 4. Certified mill test results for cement identifying brand, type, and chemistry of cement to be used.
 - 5. Brand, type, principle ingredient, and amount of each admixture if used.

PART 3-EXECUTION

3.01 GENERAL

- A. Prior to all excavating, CONTRACTOR shall become thoroughly familiar with the site and site conditions.

3.02 PROTECTION

- A. CONTRACTOR shall provide all necessary sheeting, shoring, or other soil retention systems including all labor, material, equipment, and tools required, or as necessary to maintain the excavation in a condition to provide safe working conditions, to permit the safe and efficient installation of all items of Contract work, and to protect adjacent property. CONTRACTOR shall be held liable for any damage which may result to property from excavation or construction operations. Sheeting, shoring, and other soil retainage systems

shall be withdrawn or removed in a manner so as to prevent subsequent settlement of structures, utilities, and other improvements.

- B. Design of sheet piling and other soil retaining systems shall be the sole responsibility of CONTRACTOR. Where such systems are shown on the drawings, no parameters such as embedment depth, section profile, presence or lack of walers, etc., or system type or suitability shall be inferred. CONTRACTOR is responsible for designing and providing a fully functional system compatible with construction and site requirements.
- C. Nothing in this specification shall be deemed to allow the use of protective systems less effective than those required by the Occupational Safety and Health Administration (OSHA) and other applicable code requirements.

3.03 UTILITIES

- A. Before starting excavations, CONTRACTOR shall locate existing underground utilities in all areas of the work.
- B. If utilities are to remain in place, CONTRACTOR shall provide adequate means of protection during earthwork operations.
- C. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult utility owner immediately for directions.
- D. Cooperate with OWNER and utility companies in keeping respective services and facilities in operation, and repair any damaged utilities to satisfaction of utility owner.
- E. CONTRACTOR shall not interrupt existing utilities serving facilities occupied and used by OWNER or others except when permitted in writing by OWNER.
- F. CONTRACTOR shall demolish and completely remove from the site existing underground utilities indicated to be removed after utility has been capped and sealed.
- G. CONTRACTOR shall accurately locate and record abandoned and active utility lines rerouted or extended on project record drawings.

3.04 FINISH ELEVATIONS AND LINES

- A. CONTRACTOR is responsible for setting and establishing finish elevations and lines.

3.05 EXCAVATION

- A. After the site has been cleared and stripped, the site shall be cut and filled to the indicated subgrade as shown or specified.
- B. All excavated material that does not meet the specification for compacted fill or embankment fill, or meets the specification but is not required for backfill or fill, shall be classified as excess material and shall be removed from the site and disposed of at CONTRACTOR's expense.
- C. All material other than suitable bearing soil or bedrock, as determined by the Project Soils Engineer, shall be removed from under concrete to be poured on ground.

- D. Excavation for all footings, foundation walls, pits, etc., shall be large enough to provide adequate clearance for the proper execution for the work within them.
- E. Excavations scheduled to extend below groundwater shall not be started until the area has been dewatered. See Section 02140–Dewatering.
- F. No footings or slabs shall bear on the top 2 feet of existing soil. Where planned subgrade is within 2 feet of existing grade, remove soils to 2 feet below existing grade and backfill with compacted fill up to subgrade elevation.
- G. When excavations reach subgrade elevations as shown on the drawings, or as specified herein, the Project Soils Engineer will observe the bottom material. Where, in the opinion of the Project Soils Engineer, unsuitable foundation material is found at the level of the subgrade, original material below the excavation necessary for construction according to grades shown or specified, shall be removed and replaced with material and placing methods as specified under compacted fill and backfill.
- H. Excavations that are undercut beneath the foundation shall extend beyond the perimeter of the foundation 1 foot plus a distance at least equal to the depth of undercut below footing grade.
- I. CONTRACTOR shall backfill and compact all overexcavated areas.

3.06 PREPARATION OF SUBGRADE

- A. After the site has been cleared, stripped, and excavated to subgrade, thoroughly compact subgrade to the requirements specified for compacted fill below. Scarify and moisture condition the subgrade as recommended by the Project Soils Engineer.
- B. Remove all ruts, hummocks, and other uneven surfaces by surface grading prior to placement of fill.
- C. All slab-on-grade and road subgrades shall be proofrolled in two perpendicular directions with a heavy rubber-tired construction vehicle (such as a fully loaded tandem-axle dump truck) in the presence of the Project Soils Engineer.

3.07 COMPACTED FILL AND BACKFILL

- A. All fill and backfill, except as otherwise specified, shall be compacted fill placed to within 4 inches of the bottom of the topsoil or to the bottom of the structure or other improvement.
- B. Unless otherwise noted, structures with a top slab shall not be backfilled until the slab is in place and has reached its specified 28-day strength.
- C. In fill areas above existing grade around structures, compacted fill shall be placed within a minimum of 10 feet from the structure.
- D. No fill shall be placed under water or over unsuitable subgrade conditions.

- E. All fill and backfill, except embankment fill and clay fill, shall be compacted as follows:
 - 1. Class 1 Compaction: This class of compaction shall apply to all fill areas under buildings, structures, piping, bituminous roadway and parking areas, curb and gutter, and backfill within 10 feet of structure walls. All compacted material shall be placed in uniform layers not exceeding 8 inches in loose thickness prior to compaction. Each layer shall be uniformly compacted at moisture contents within 3% of the optimum moisture content as determined by a laboratory compaction test (ASTM Test Designation D1557). Compaction shall be obtained by compaction equipment appropriate for the conditions.
 - 2. Class 2 Compaction: This class of compaction shall be used in excavated areas beyond 10 feet of structures without any piping or adjacent foundations. Material for backfill shall be granular material as specified above. The material shall be deposited, spread, and leveled in layers generally not exceeding 12 inches in thickness before compaction. Each layer of the fill shall be compacted to at least 90% of the maximum dry density (testing same as Class 1). Compaction shall be obtained by compaction equipment appropriate for the conditions.
- F. No frozen material shall be placed nor shall any material be placed on frozen ground.
- G. Four inches of clay fill shall be placed and compacted to at least a firm consistency in areas to be seeded or sodded prior to placement of topsoil.

3.08 EMBANKMENT FILL

- A. Embankment fill may be placed in fill areas to be seeded or sodded if no piping exists in the fill and the areas are at least 10 feet from any structure.
- B. Embankment fill shall be deposited, spread, and leveled in layers generally not exceeding 12 inches in thickness before compaction. Each layer shall be compacted to the degree that no further appreciable consolidation is evidenced under the action of the compaction equipment. The required compaction shall be obtained for each layer before any material for a succeeding layer is placed thereon. Compaction shall be obtained using the hauling and leveling equipment, and in addition, tamping rollers, pneumatic-tired rollers, vibratory rollers, or other types of equipment required to produce the desired results.

3.09 CONCRETE FILL

- A. In areas where there is inadequate room for compaction equipment and in other areas as shown or specified, flowable fill shall be used as fill material.

3.10 GRADING

- A. CONTRACTOR shall perform all rough and finish grading required to attain the elevations shown on the drawings.
- B. Grading Tolerances:
 - 1. Rough Grade: Buildings, parking areas, and sidewalks: ± 0.1 feet.
 - 2. Finish Grade: Granular cushion or crushed stone mat under concrete slabs: ± 0.03 feet.
 - 3. Lawn areas away from buildings, parking areas, and sidewalks: ± 0.25 feet.

3.11 PLACING GRANULAR CUSHION AND VAPOR BARRIER

- A. When subgrade is prepared for slab-on-grade areas, CONTRACTOR shall place the vapor barrier.
- B. A 6-inch layer of granular cushion shall then be placed, compacted, and finish graded.

3.12 PLACING CRUSHED STONE AND GEOTEXTILE FABRIC

- A. The same day that the subgrade is exposed, place geotextile fabric on subgrade, and place 12 inches of crushed stone mat below tank, slabs, channel, and junction box. Compact in place.
- B. Geotechnical fabric shall extend up the side edge of the stone mat and extend across the top of the stone to a minimum of 12 inches past the edge of base slab.

3.13 COMPACTION TESTING

- A. Compaction tests shall be done by the Project Soils Engineer. Location and frequency of the tests shall be as recommended by the Project Soils Engineer and paid for by OWNER.

END OF SECTION

SECTION 02231

AGGREGATE BASE COURSE

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Aggregate base course for roads and parking areas.
 - 2. Gravel roads.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.
- C. Repair or replacement of aggregate base course shall be considered incidental and included in the price bid.
- D. CONTRACTOR is cautioned that existing private and public roads and shoulders may not hold up to typical construction traffic or activities. CONTRACTOR shall repair all roads, shoulders, and gravel areas damaged in accordance with this section. All paved areas shall also be repaired in accordance with Section 02510—Hot Mix Asphalt Paving.

1.02 REFERENCES

- A. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the *State of Indiana Department of Transportation, Standard Specifications, Latest Edition*, including all issued supplemental specifications.

1.03 DEFINITIONS

- A. Street or road shall include streets, roads, driveways, and parking lots.

1.04 SUBMITTALS

- A. Submit sieve analysis for proposed materials in accordance with Section 01300—Submittals.

1.05 DRAINAGE DURING CONSTRUCTION

- A. CONTRACTOR shall comply with the provisions of Section 203 of the Standard Specifications.

PART 2—PRODUCTS

2.01 AGGREGATES FOR BASE COURSE FOR ROADS AND PARKING AREAS

- A. Aggregates for base course shall meet the requirements of Section 301 of the Standard Specifications.

- B. Base course shall be uniformly graded and shall conform to the requirements of Section 300. Base course shall be Type 53. All remaining base course shall be Type 53.

2.02 AGGREGATES FOR GRAVEL ROADS

- A. Aggregates for base course shall meet the requirements of Section 303 of the Standard Specifications.
- B. Base course shall be uniformly graded and shall conform to the requirements of Section 300. The top 3 inches of base course shall be Type 73. All remaining base course shall be Type 53.
- C. Material for top layer of shoulders shall meet the requirements of Type 73.

PART 3-EXECUTION

3.01 PREPARATION

- A. The subgrade shall be graded and rolled to provide uniform density and shall comply with the profile and cross sections contained in the drawings. All street subgrade in cut areas and all areas to receive fill shall be proof-rolled in the presence of OWNER or ENGINEER with a heavily-loaded triaxle dump truck, or similar equipment prior to the placement of any fill materials or base course. The subgrade shall be prepared in accordance with Section 207 of the Standard Specifications.

3.02 CONSTRUCTION

- A. Base course grade shall be set to allow placement of thickness of asphaltic pavement shown or specified.
- B. Depth of base course shall be the existing depth or 9 inches, whichever is greater.
- C. Each layer of base course shall be wetted and rolled to provide maximum compaction in accordance with Section 300 of the Standard Specifications.
- D. The finished base course shall be fine-graded in preparation for paving.
- E. After final grading, CONTRACTOR shall maintain the base course until asphaltic paving work has been completed.
- F. All gravel surfaces damaged during construction shall be replaced. The depth of aggregate shall match existing or 9 inches, whichever is greater.

END OF SECTION

SECTION 02240

GEOTEXTILES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: Geotextiles for areas below structures.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 2–PRODUCTS

2.01 MATERIALS

- A. Geotextile for areas below structures shall be Mirafi 140N, or equal.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Geotextile shall be installed in accordance with manufacturer's recommendations.
- B. Geotextile shall be lapped a minimum of 24 inches.
- C. CONTRACTOR shall protect the construction fabric from exposure to the sun until installation. Construction fabric shall be covered with stone or soil immediately upon placement.

END OF SECTION

SECTION 02270

SLOPE PROTECTION AND EROSION CONTROL

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: Erosion control devices.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 PAYMENT

- A. All costs associated with slope protection and erosion control shall be included in CONTRACTOR's bid. This work shall include, but is not limited to, erecting fence, excavation, placing posts, backfilling, attaching woven wire and geotextile fabric; placing ditch checks; installing sediment traps; removing the fence at completion of project; cleaning and repairing; removing or spreading accumulated sediment to form a surface suitable for seeding; replacing silt fence and damages caused by overloading of sediment material or ponding of water adjacent to silt fence; and furnishing labor, tools, equipment, and incidentals necessary to complete the work in accordance with the Contract.

1.03 REFERENCES

- A. Indiana Department of Environmental Management requirements as outlined in 327 IAC 15.

1.04 REGULATORY REQUIREMENTS

- A. Land disturbance less than one acre. Where land disturbance activities do not exceed 1 acre, CONTRACTOR shall maintain site conditions where erosion and pollution are controlled.

1.05 QUALITY CONTROL

- A. Construct and maintain erosion sediment control measures in accordance with IDEM and the reviewing agency requirements.
- B. Check facilities weekly and after any rainfall event, and make needed repairs within 24 hours.

PART 2–PRODUCTS

2.01 EROSION MATS

- A. Uniform web of interlocking wood excelsior fibers, with a net backing on one side. The wood from which the blanket is produced shall have been properly cured to achieve adequately curled and barbed fibers. The blanket shall be of uniform thickness with the

wood fibers evenly distributed over the entire area of the blanket. The blanket shall be furnished in rolled strips. The width of the strips shall be 48 inches, ± 1 inch. Weight of blanket measured under average atmospheric conditions shall be 78 pounds per 80 square yards, $\pm 10\%$. Net backing shall have mesh size not exceeding 1 1/2 by 3 inches and may be woven from twisted paper, cotton cord, a biodegradable plastic, or other alternate method. The blanket shall be nontoxic to vegetation.

2.02 SILT FENCE

- A. Use geotextile fabric consisting of either woven or nonwoven polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride with the following requirements. Fabric shall have the minimum strength values in the weakest principal direction. Nonwoven fabric may be needle punched, heat bonded, resin bonded, or combination thereof.

VALUE MINIMUM REQUIREMENTS⁽¹⁾

Test	Method	Silty Soils ⁽⁴⁾	Sandy Soils ⁽⁵⁾
Grab Tensile-strength	ASTM D-5034, D5035 ⁽²⁾	100	100
Mullen Burst strength (psi)	ASTM D-3786	200	200
Equivalent Opening Size	CW-02215-77	50-140	20-50
U.S. Standard sieve	Corps of Engineers		
Water Flow Rate (gal/min/ft. ² at 50 MM Constant head)	ASTM D-4491 ⁽³⁾	10	10
Ultra Violet Radiation Stability (percent)	ASTM D-4355	90	90

- (1) All numerical values represent minimum average roll values (i.e., the average of test results on any roll in a lot should meet or exceed the minimum values in the table).
 (2) ASTM D-1682 Grab Test, Method 16, using a 4-inch by 8-inch sample, 3-inch gauge length clamped in 1-inch by 2-inch long grip, tested at a strain rate of 12 inches per minute.
 (3) Water Flow Rate in gal/min/ft shall be determined by multiplying Permittivity in sec. as determined by ASTM D-4491 by a conversion factor of 74.
 (4) Silty Soil: More than 15% by weight passing No. 200 sieve.
 (5) Sandy Soil: Less than 15% by weight passing No. 200 sieve.

- B. Furnish geotextile fabric in a wrapping which will protect the fabric from ultraviolet radiation and from abrasion because of shipping and handling. Keep geotextile dry until installed.

2.03 GEOTEXTILE FABRIC

- A. See Section 02240—Geotextiles for fabric under riprap.

2.04 STRAW BALE BARRIERS

- A. Provide per INDOT Standard Specifications.

PART 3-EXECUTION

3.01 GENERAL

- A. Install devices before construction activities begin.
- B. Proceed carefully with construction adjacent to stream channels to avoid washing, sloughing, or deposition of materials into the stream. If possible, the work area should be diked off and the volume and velocity of water that crosses disturbed areas be reduced by means of planned engineering works (diversion, detention basins, berms).
- C. Unless noted on drawings, do not remove trees and surface vegetation.
- D. Expose the smallest practical area of soil at any given time through construction scheduling. Make the duration of such exposure before application of temporary erosion control measures or final revegetation as short as practicable.

3.02 EROSION MAT INSTALLATION

- A. Place erosion mat immediately after seeding or sodding operations have been completed. Before mat placement, remove all material or clods over 1 1/2 inches in diameter and all organic material or other foreign material which interfere with the mat bearing completely on the soil or sod.
- B. Any small stones or clods which prevent contact of the mats with the soil shall be pressed in the soil with a small lawn-type roller or by other effective means. The mat shall have its lateral edge so impressed in the soil as to permit runoff water to flow over it.
- C. The matting strips shall be rolled on or laid in direction of flow. Spread mat evenly, smoothly, in a natural position without stretching and with all parts bearing on soil, and place blanket with netting on top. Overlap adjacent strips at least 4 inches. Overlap strip ends at least 10 inches. Make overlaps with the upgrade section on top.
- D. Bury upgrade end of each strip of fabric or blanket at least 6 inches in a vertical slot cut in the soil and press soil firmly against the embedded fabric or blanket.
- E. Anchor mats in place with vertically-driven staples, driven until their tops are flush with the soil. Space staples at 3-foot centers along mat edges and stagger space at 3-foot centers through the center. Place staples at 10-inch centers at end or junction slots.
- F. Reseed areas damaged or destroyed during erosion mat placing operations as specified for original seeding.
- G. Dispose of surplus excavated materials and all stones, clods, or other foreign material removed in the preparation of the seeded soil or sodded surface before placing mat.
- H. Following mat placement, uniformly apply water to the area to moisten seedbed to 2-inch depth and in a manner to avoid erosion.
- I. Maintain erosion mat and make satisfactory repairs of damage from erosion, traffic, fires or other causes until work acceptance.

3.03 GEOTEXTILE FABRIC

- A. Before placing fabric, grade area smooth and remove stones, organic matter, or other foreign material which would interfere with fabric being completely in contact with soil.
- B. Place fabric loosely and lay parallel to direction of water movement. Pinning or stapling is acceptable to hold geotextile in place. Overlap or sew together separate pieces of fabric. Overlap joints a minimum 24 inches in the flow direction. After placement, do not expose fabric more than 48 hours before covering.
- C. Cover damaged areas with a patch of fabric using a 3-foot overlap in all directions.

3.04 SILT FENCE INSTALLATION

- A. Erect silt fence before starting construction operations which might cause sedimentation or siltation at site of proposed silt fence.
- B. Construct silt fence in an arc or horseshoe shape with ends pointing up slope. Construct silt fence to the dimensions and details shown on drawings. Remove silt fences after slopes and ditches have been stabilized and turf developed to the extent that future erosion is unlikely. Dispose of materials remaining after removal.
- C. Inspect all silt fences immediately after each rainfall and at least daily. Correct deficiencies immediately. Where construction activity changes the earth contour and drainage runoff, make a daily review to ensure that silt fences are properly located for effectiveness. Where deficiencies exist, install additional silt fences.
- D. Remove and dispose of sediment deposits. Sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform with the existing grade and the area topsoiled, fertilized, and seeded as required.

3.05 STRAW BALE BARRIERS

- A. Provide as necessary on ditch lines and other drainageways to minimize construction sediment laden runoff to downstream ditches and channels and into streams.
- B. Inspect all barriers immediately after each rainfall and at least daily. Correct deficiencies immediately. Where construction activity changes the earth contour and drainage runoff, make a daily review to ensure that barriers are properly located for effectiveness. Where deficiencies exist, install additional straw bales.
- C. Remove and dispose of sediment deposits. Sediment deposits remaining in place after the barrier is no longer required shall be dressed to conform with the existing grade and the area topsoiled, fertilized, and seeded as required.

END OF SECTION

SECTION 02510

HOT MIX ASPHALT PAVING

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes Hot Mix Asphalt (HMA) paving, tack coat, and casting adjustments.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.
- C. CONTRACTOR is cautioned that existing private and public roads and shoulders may not hold up to typical construction traffic or activities. CONTRACTOR shall replace all roads, shoulders, and paved areas damaged during the project in accordance with this section. Gravel shoulders, gravel roads, and parking areas shall be repaired in accordance with Section 02231—Aggregate Base Course.
- D. Payment: Payment for HMA paving shall be considered incidental to the project and included in the Lump Sum Bid.

1.02 REFERENCES

- A. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the *State of Indiana Department of Transportation, Standard Specifications, Latest Edition* including all issued supplemental specifications.

1.03 DEFINITIONS

- A. Street or road shall include streets, roads, driveways, and parking lots.

1.04 SUBMITTALS

- A. Prior to the commencement of paving, mix designs and aggregate sieve analysis shall be submitted to ENGINEER for approval in accordance with Section 01300—Submittals.

PART 2—PRODUCTS

2.01 HMA PAVEMENT

- A. Asphaltic pavement shall be Section 402 HMA Type B. Asphaltic binder for lower course and upper course shall be PG 64-22 per Section 902.
- B. Aggregate shall conform to the requirements of Section 904. Aggregate for the intermediate course shall be nominal size of 3/4 inch. Aggregate for the surface course shall be nominal size of 1/2 inch.
- C. Replacement of paved surfaces shall be 4 inches in thickness or existing thickness, whichever is greater. Lower layer shall be 2 1/4 inches minimum. Upper layer shall be 1 3/4 inches minimum.

- D. Materials for tack coat shall conform to the requirements of Section 406.

PART 3-EXECUTION

3.01 ALLOWABLE REMOVAL OF PAVEMENT

- A. CONTRACTOR shall remove asphalt pavement and road surface as a part of the general excavation. The width of pavement removed shall be the minimum possible and acceptable for convenient and safe installation of structures, utilities, and appurtenances.
- B. All asphalt pavement shall be cut on neat, straight lines and shall not be damaged beyond the limits of the excavation. Should the cut edge be damaged, a new cut shall be made in neat, straight lines parallel to the original cut encompassing all damaged areas. Pavement removal shall be extended to a seam or joint if seam or joint is within 3 feet of damaged pavement.

3.02 TACK COAT

- A. All work shall be in accordance with the Standard Specifications.
- B. If asphaltic upper course is applied to an existing street or is not applied the same day as intermediate course, the existing street or intermediate course shall be tack coated prior to surface paving. Prior to placement of tack coat, the streets shall be thoroughly cleaned and broomed. Tack coat shall be applied at a rate of 0.10 gallons per square yard immediately prior to placement of asphaltic surface course.
- C. In situations where traffic must be maintained, tack coat shall not be placed on the traveled half of the street until traffic can be switched to the new pavement.

3.03 JOINTS

- A. Joints between old and new pavements or between successive day's work shall be constructed and treated as to insure thorough and continuous bond between the old and new mixtures. Transverse construction joints shall be constructed by cutting the material back for its full depth so as to expose the full depth of the course. Where a header is used, the cutting may be omitted provided the joint conforms to the specified thickness. These joints shall be treated with tack coat material applied with a hose and spray nozzle attachment to fully coat the joint surface.
- B. The longitudinal joint shall be made by overlapping the screed on the previously laid material for a width of not more than 2 inches and depositing a sufficient amount of asphaltic mixture so that the finished joint will be smooth and tight. Longitudinal joints in the surface course shall at no time be placed immediately over similar joints in the intermediate course beneath. A minimum distance of 12 inches shall be permitted between the location of the joints in the intermediate course and the location of similar joints in the surface course above.
- C. All costs for furnishing and applying tack coat to butt joints as specified above shall be considered incidental.

3.04 FINISHING ROADWAY

- A. The finished base course shall be fine-graded in preparation for HMA paving. Base course ramps at all existing pavement shall be removed to provide a full depth butt joint. Base course around manhole castings and valve boxes shall be hand-trimmed and compacted with a vibratory plate compactor.
- B. This item shall include all of the following preparatory and finishing items and any other incidental items of work required for construction. Asphaltic ramps around manholes on existing intermediate course to receive surface course shall be removed. Asphaltic ramps shall be installed on all manholes and at all butt joints in areas to receive intermediate course only.
- C. Finishing roadway shall be considered incidental to HMA paving.

3.05 TESTING HOT MIX ASPHALT

- A. ENGINEER may require samples of HMA pavement for testing. CONTRACTOR shall cut samples from the finished pavement where marked by ENGINEER and patch the sample area. Samples for sieve analysis and asphalt content will be taken by ENGINEER prior to placement.

3.06 HOT MIX ASPHALT PAVING

- A. HMA paving work shall include the construction of plant-mixed hot mix asphalt pavement in the areas damaged by CONTRACTOR. All work shall be performed in accordance with Section 402 of the Standard Specifications.
- B. Prior to commencement of paving operations, CONTRACTOR shall examine the finished road bed. CONTRACTOR shall notify ENGINEER of any areas of suspected instability.
- C. The pavement structure for new roads shall be determined from the standard cross sections provided on the drawings.

END OF SECTION

SECTION 02600

BURIED PIPING AND APPURTENANCES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. All underground piping and valves of every description.
 - 2. Excavation, dewatering, and backfilling for all work under this section unless otherwise noted.
 - 3. Concrete foundations and anchor bolts for all equipment furnished under this section.
 - 4. Underground piping connections to all equipment, whether furnished under this section or not.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. Ten State Standards.

1.03 CODES AND STANDARDS

- A. ENGINEER and OWNER reserve the right to test the work of any welder employed on the project, at CONTRACTOR's expense. If the work of the welder is found to be unsatisfactory, the welder shall be prevented from doing further welding on the project.

1.04 SUBMITTALS

- A. Shop Drawings:
 - 1. See Section 01300–Submittals for shop drawing submittal procedures.
 - 2. General arrangement drawings of 3 inches or larger exterior (belowground) ductile iron piping shall be submitted to ENGINEER for approval. Drawings shall include proposed materials, length, location, and elevation of pipe, fittings, pipe restraint, valves, and appurtenances.

PART 2–PRODUCTS

2.01 MATERIALS OF CONSTRUCTION

- A. All materials used in the manufacture, assembly, and painting of piping and valves in contact with water shall be compatible with potable water supplies and in contact with chemical feed systems shall be compatible with the chemicals being used. All glues, solvents, solders, etc., shall likewise be compatible. For instance, no lead-base solders shall be used. All materials in contact with water to be used for potable water supplies shall be National Sanitation Foundation (NSF)-approved.

- B. Size and Type:
1. All materials shall conform to the size and type shown on the drawings or called for in the specifications.
 2. In joining two dissimilar types of pipe, standard fittings shall be used when available. In the event standard fittings are not available, the method of joining shall be standard selected by CONTRACTOR and submitted for review by ENGINEER.
- C. Piping appurtenances shall be made of the materials specified. All appurtenances not designated as to type shall be selected by CONTRACTOR and submitted for review by ENGINEER.

2.02 UNDERGROUND UTILITY STRUCTURES

- A. General: All provisions of Drawing 01-975-43A, enclosed in these specifications, except those contrary to provisions delineated herein or on the drawings shall apply. For purposes of this specification, Junction Box No. 1 and Junction Box No. 2 are defined as underground utility structures.
- B. Frames and Covers:
1. Frames and covers shall be provided for the openings indicated on the drawings.
 2. For standard manholes, frames shall be Neenah R-1550, or equal, with Type B lid, with two concealed pickholes equipped with self-sealing gaskets. Frames for valve manholes shall be Neenah R-6065 with Type B lid with two concealed pickholes equipped with self-sealing gaskets, or equal.

2.03 BURIED PIPING

- A. Ductile Iron Piping and Ductile Iron Fittings:
1. Unless otherwise shown or specified, all underground piping 3 inches in diameter or larger shall be ductile iron conforming to AWWA C151/A21.51 with mechanical joints or push-on joints. Unless otherwise shown or specified, all piping shall be minimum Special Thickness Class 53 with a minimum rated working pressure of 250 psi. Pipe wall thickness shall be furnished as required by AWWA C150 for buried piping with the depth of cover as shown on the drawings for laying condition 4 Special Thickness Class 53 minimum, unless otherwise shown or specified.

Pipe Size (Inches)	Special Thickness (Class)	Pressure Class
3	53	---
4	53	---
6	53	---
8	53	---
10	53	---
12	53	---
14	52	---
16	52	---
18	52	---

2. The words "Ductile Iron" and the weight and class of pipe shall be plainly marked on each piece of pipe.
3. Except as otherwise specified, underground pipe shall have mechanical joints or push-on joints conforming to AWWA C110 and C111 with vulcanized styrene butadiene

rubber gaskets conforming to AWWA C111. Gaskets that include metal locking segments vulcanized into the gasket to grip the pipe and provide joint restraint are not acceptable. Bolts on exterior joints shall be high-strength low-alloy steel (Corten, or equal), conforming to AWWA C111. Certificate to that effect shall be provided.

4. Restrained joints shall be provided in accordance with Part 3-Execution. Mechanical joints shall be restrained with MEGALUG® Series 1100, by EBAA Iron Sales, Inc., UNIFLANGE Series 1400 by Ford Meter Box Co., Inc., or equal, restraint. Push-on joints for ductile iron piping shall be restrained with MEGALUG® Series 1700, by EBAA Iron Sales, Inc., UNIFLANGE Series 1450 by Ford Meter Box Co., Inc., Flex-Ring or Lok-Ring by American Cast Iron Pipe Company, TR Flex by U.S. Pipe Company, or equal.
5. Joint restraint is not required for gravity sewers, drains, and those pipes designated in Paragraph 1. of 3.02.G. Infiltration/Exfiltration Tests.
6. Underground pipe shall have mechanical joint ductile iron fittings conforming to AWWA C110 and C111 with a minimum rated working pressure of 150 psi. Gaskets for fittings shall be as specified for underground piping.
7. All ductile iron fittings shall be American, Clow, Griffin, Tyler, U.S. Pipe, or equal.
8. Ductile iron wall pipes shall be provided as shown on the drawings. For piping over 24 inches that does not require restraints, wall pipes shall be provided with push-on joint connection at exterior end of wall pipe. For piping over 24 inches that requires restraint, wall pipes shall be provided with Lok-Ring by American Ductile Iron Pipe Company, TR-Flex by U.S. Pipe Company, or equal, connection. For piping over 24 inches, wall pipes may also be provided with mechanical joint connection at exterior end of wall pipe. For piping that requires restraint, mechanical joint connections at exterior end of wall pipe shall be restrained as specified for mechanical joints.
9. Unless otherwise specified, all ductile iron piping and fittings shall be cement-mortar lined and asphaltic-coated inside. Unless otherwise specified, underground piping and fittings shall be asphaltic-coated outside. Cement-mortar lining shall be in accordance with AWWA C104. Asphaltic coating shall conform to applicable standards herein for the pipe and fittings.
10. Drainage Piping: All process drain piping and all underground piping designated as drain (D) shall be ductile iron. All underground drainage piping more than 2 feet from building walls shall be ductile iron as specified. Connections to drainage piping from buildings shall be made within 2 feet from the building wall and shall be made with a Fernco, or equal, flexible coupling.

B. Copper Piping:

1. Copper piping shall conform to the requirements of ASTM B88.
2. All underground water supply piping 2 inches and smaller shall be Type K soft copper with compression fittings. Joints shall not be used under floor slabs.
3. Shutoff valves shall be placed on each branch for all underground piping.

2.04 CONCRETE

- A. All concrete poured under this Contract, unless shown or specified otherwise, shall conform to the requirements of Division 3.

PART 3-EXECUTION

3.01 INSTALLATION

A. Underground Piping:

1. Except where noted or specified, all ductile iron underground piping shall be laid in accordance with AWWA C600 with the conditions that (a) blocking shall not be used to support pipe and (b) all bends and fittings shall be restrained as specified below, and pipe joints shall be restrained in all directions from all bends and fittings to the length as specified below.
2. CONTRACTOR shall excavate and lay all pipe to the line and grade shown on the drawings with bell ends uphill wherever possible. If not possible, CONTRACTOR shall excavate and lay pipe to the line and grade shown on the drawings with bell ends in the direction of laying. Grade stakes will be required for all lines. Water piping and chemical solution piping shall have a minimum of 5 feet of cover. Unless shown otherwise, drainage piping shall clear floor slabs or footings by a minimum of 6 inches.
3. Where piping is laid in native soil, the width of trench below the top of the pipe shall not exceed the nominal diameter of the pipe plus 2 feet for all pipelines. Where the maximum trench width is exceeded, the pipe shall be placed in a concrete cradle or a stronger pipe used. If the maximum trench width is exceeded for any reason other than as otherwise specified, the concrete cradle or the stronger pipe shall be placed at CONTRACTOR's expense, unless CONTRACTOR can demonstrate that the pipe to be used is compatible with the resulting load applied.
4. Except as otherwise specified, all underground pipe shall be bedded in crushed stone or crushed gravel aggregate. Copper piping shall be bedded in compacted sand. Ductile iron piping, except as otherwise specified, shall be placed using Class "C" Bedding Details as shown on Drawing 01-975-43A. All other piping shall be placed using Class "B" Bedding Details as shown on Drawing 01-975-43A. CONTRACTOR shall perform all necessary excavation and shall provide all required materials to provide this bedding. Bedding material shall conform to the requirements of ASTM C33. The material shall be hard, tough, and durable and shall meet the following gradation requirements:

PERCENTAGE BY WEIGHT PASSING

	Crushed Stone Aggregate	Crushed Stone Chips	Crushed Gravel Aggregate	Bedding Sand
1 inch	100	---	100	---
3/4 inch	90 to 100	---	90 to 100	---
1/2 inch	---	100	---	---
3/8 inch	20 to 55	90 to 100	20 to 55	100
No. 4	0 to 10	---	0 to 10	95 to 100
No. 8	0 to 5	0 to 15	0 to 5	80 to 100
No. 30	---	0 to 5	---	25 to 60
No. 100	---	---	---	5 to 20
Passing No. 200	---	---	---	2 to 10

5. No materials native to the trench shall be used as bedding material unless they meet the above specifications. Native material may be used for ductile iron piping and for PVC sanitary force main if it consists mostly of sand and contains no stones larger than 3/4 inch.

6. Immediately before placing the pipe, bedding shall be shaped by hand to fit the entire bottom quadrant of the pipe between bell holes. Bell holes shall be large enough to permit proper making of the joint but not larger than necessary to make the joint. All adjustments to line and grade must be done by scraping away or filling in bedding under the body of the pipe. Bedding must be tamped into place. If necessary to obtain uniform contact of the pipe with the bedding, a template shall be used.
7. All bends, plugs, and caps on pipes under pressure shall be securely blocked and wedged to solid earth and poured concrete. If adequate support cannot be obtained, CONTRACTOR shall provide tie rods or restraining joints. Any pipe or fittings cracked in cutting or handling or otherwise not free from defects shall not be used. Pipe must be kept clean of mortar, cement, clay, sand, or other material. When PVC piping is installed during hot weather, it shall be laid in the trench with slack or permitted to cool to ground temperature before it is cut to length for making final connections. PVC expansion joints shall be provided where needed.
8. Trenches shall be kept water-free and dry during bedding, laying, and jointing. CONTRACTOR shall provide, operate, and maintain all pumps or other equipment necessary to drain and keep all excavation pits and trenches and the entire subgrade area free from water under any and all circumstances that may arise.
9. Material that is to be placed from the bedding material around and to 1 foot above the top of all pipes shall be termed cover material. Except as otherwise specified,
 - (a) cover material shall consist of durable granular particles ranging in size from fine to coarse in a substantially uniform combination, (b) unwashed bank-run sand and crushed bank-run gravel will be considered generally acceptable for cover material, (c) no stones larger than 3/4 inch in their greatest dimension shall be allowed in the cover material, and (d) native materials may be used if they conform to the above specifications. Cover material for copper piping shall be sand.
10. Cover material shall be deposited in the trench for its full width on each side of the pipe, fittings, and appurtenances simultaneously. Cover material shall be placed over the top of the pipe to the height as shown on Drawing 01-975-43A for Class "B" (minimum 12 inches) or Class "C" (minimum 6 inches) Bedding. This backfill shall be placed by hand in 6-inch layers and shall be compacted using hand tamping bars and/or mechanical tampers. If bedding material conforming to any of the above three crushed stone or crushed gravel gradations is used as cover material, it need not be tamped. The remaining 6 inches to make up the required 1 foot of select cover material for Class "C" Bedding shall be granular material specified previously with no stones larger than 3/4 inch.
11. All cover material shall be placed in maximum 6-inch layers and compacted by hand tamping. Compaction shall be equivalent to that described under "Compacted Fill and Backfill" as specified in Section 02222-Excavation, Fill, Backfill and Grading.
12. Except as otherwise specified, all backfill above 1 foot above the pipe shall be "Compacted Fill and Backfill" as specified in Section 02222-Excavation, Fill, Backfill and Grading.
13. The locations and elevations of existing piping and manholes are approximate. Where necessary, existing piping shall be exposed by CONTRACTOR to confirm location and elevation before installing new piping. Any changes in pipe location or elevation shall be approved by OWNER.
14. General Excavation:
 - a. CONTRACTOR shall do all excavation, undercutting, dewatering, and backfilling necessary for work under this contract unless otherwise noted. All trees, shrubs, and improved areas outside the excavation shall be protected from damage.
 - b. Work shall conform to other sections of Division 2, except where modified by this section.

- c. Pipe shall be placed only on dry foundations. No extra payment will be made to CONTRACTOR for dewatering.
 - d. Excavation shall include all necessary clearing of excavated areas, tree removal, all grubbing, all wet, dry, fill, and rock excavation, the removal of pavement, filling, and all incidental work such as tunneling, sheet piling, shoring, underpinning, pumping, bailing, transportation, and all fill and backfilling. All above work shall be included in the Lump Sum Bid.
 - e. CONTRACTOR shall excavate whatever materials are encountered as required to place at the elevations shown, all pipe, manholes, and other work as required to complete the project as shown. The bottom of the excavation shall be leveled off, all loose and disturbed soil shall be removed, and it shall be hand-tamped prior to pipe, manhole, etc., installation. Where requested by ENGINEER, original material below the excavation necessary for construction according to grades shown or specified shall be removed and replaced in accordance with Section 02222–Excavation, Fill, Backfill and Grading. Payment will also be in accordance with Section 02222–Excavation, Fill, Backfill and Grading.
 - f. The excavation at the crossing of all underground utility services in place shall be as narrow as practicable. All underground services shall be protected from damage and maintained in service at their original location and grade during the process of the work. Any damage to underground services shall be replaced or repaired at no cost to OWNER or to the owner of the service. The present underground services shown on the drawings are located in accordance with available data. Encountering these services at a different location or encountering services not shown shall not release CONTRACTOR from the above-stated conditions.
 - g. Excavated native material that is unsuitable or not required for filling shall be removed from the site. Materials to be used for fill and suitable for this purpose shall be deposited where required except that no fill shall be placed where trenches for sewers, water lines, or other services will be located until after the trench work is completed.
 - h. CONTRACTOR shall provide adequate shoring, sheet piling, and bracing to prevent earth from caving or washing into the excavation and shall do all shoring and underpinning necessary to properly support adjacent or adjoining structures. All shoring, sheet piling, and underpinning must be maintained until permanent support is provided.
 - i. Any water, drainage, gas, sewer, or electric lines encountered in the excavation that are not to be disturbed shall be properly underpinned and supported. Any service connections encountered that are to be removed shall be cut off at limits of the excavation and capped in accordance with the requirements of or permits governing such removals. Any permits required for this work will be obtained by OWNER upon request of CONTRACTOR.
15. Valve Boxes: The valve box shall be centered and plumb over the wrench nut of the valve with the box cover flush with the finished ground elevation. Solid 4-inch concrete blocks shall be placed under the base of valve boxes so that the bottom of the base is about 2 inches away from contact with the valve bonnet. The valve box shall not transmit shock or stress to the valve.

3.02 FIELD QUALITY CONTROL

- A. CONTRACTOR shall include the cost of all testing, cleaning, and disinfection in the price bid.

- B. All work shall be inspected, tested, and approved in accordance with federal, state, and local rules and regulations. All work shall also be tested as specified in this section. Unless indicated in writing before testing begins, all tests shall be witnessed by ENGINEER and others as necessary. Test results shall be recorded and reports or appropriate certificates shall be submitted to ENGINEER in triplicate.
- C. All piping shall be tested. All underground piping shall be backfilled or properly secured to avoid damage during testing. Should underground piping fail test, CONTRACTOR shall be responsible for removal and replacement of backfill. All piping, interior or exposed, shall be subject to test before being covered with insulation or paint. All piping and appurtenances shall be watertight or airtight and free from visible leaks.
- D. All piping shall be flushed or blown out after installation prior to testing. CONTRACTOR shall provide all necessary piping connections, water, air, test pumping equipment, water meter, bulkheads, valves, pressure gauge and other equipment, materials, and facilities necessary to complete the specified tests. CONTRACTOR shall provide all temporary sectionalizing devices and vents for testing.
- E. Pressure Tests:
1. Pressure tests shall be performed as required by AWWA C600, unless otherwise noted herein.
 2. When test medium for piping is water, all air shall be removed from piping by flushing, opening vents, loosening flanges, utilizing equipment vents and/or installation of corporations at high points in system. Presence or absence of air will be determined during pressurization of the piping system.
 3. The test pressure in all lines shall be held for one hour during which time the leakage allowance shall not exceed that specified. In case repairs are required, the pressure test shall be repeated until the pipeline installation conforms to the specified requirements. Pumps, air compressors, instrumentation, and similar equipment shall not be subjected to the pressure tests.

Fluid Abbreviation or Name	Minimum Test Pressure in psi	Test Medium	Leakage Allowance Designation
NPW	50	Water	"A"

- (1) Leakage allowance designation "A" shall mean not more than 0.002 gallons per hour per inch diameter per 100 feet of buried pipe for all piping except buried mechanical joint or push-on joint pipe. Buried mechanical and push-on joint pipe shall meet the leakage specifications of AWWA C600.
- (2) Leakage allowance Designation "B" shall mean a loss of pressure of not more than 5% during the test period.
- F. Prior to making final connection between new and existing piping, new piping shall be tested as specified above.
- G. Infiltration/Exfiltration Tests:
1. Infiltration/exfiltration tests for all gravity sewers, drains, and those pipes designated as D (other than building drains) will be as follows. If groundwater is above the pipe, measurements shall be taken to determine the rate of infiltration into the pipe. If groundwater is below the pipe, the stretch of pipe shall be plugged at its downstream end and water shall be placed inside the pipe to fill the pipe. Measurements shall then

be taken to determine the rate of leakage out of the pipe by filling the pipe. Concrete pipe shall be filled with water at least 8 hours before measurements are taken. CONTRACTOR shall furnish all labor, water, and materials necessary for making the tests. The rate of infiltration or leakage shall not exceed 100 gallons per inch diameter per mile per day for any stretch of pipe measured. CONTRACTOR shall immediately make all necessary repairs to bring infiltration or leakage within the above acceptable limits.

2. Air test procedure may be used, when allowed by ENGINEER, for the above-listed pipe designations and shall be conducted as follows:
 - a. Clean pipe to be tested.
 - b. Plug all pipe outlets with suitable test plugs. Brace each plug securely. Add air slowly to the portion of the pipe installation under test until the internal air pressure is raised to 4.0 psig.
 - c. After an internal pressure of 4.0 psig is obtained, allow at least 2 minutes for air temperature to stabilize, adding only the amount of air required to maintain pressure.
 - d. When pressure decreases to 3.5 psig, start stopwatch. Determine the time in seconds that is required for the internal air pressure to reach 2.5 psig. Minimum permissible pressure holding times for runs of single pipe diameter and for systems of 4-inch, 6-inch, or 8-inch laterals in combination with trunk lines shall be as recommended by National Clay Pipe Institute.
 - e. If the pipe to be tested is submerged in groundwater, determine the height of groundwater above the crown of the sewer. This is the pressure head of water above the pipe because of groundwater submergence over the sewer. All gauge pressures in the test should be increased by the pressure head of water above the pipe.
 - f. ENGINEER may elect to test sewers in groundwater by measuring the infiltration through the use of a weir provided in the manhole at the downstream end of the sewer being tested.
 - g. The air test may be dangerous if a line is improperly prepared. It is extremely important that the various plugs be installed and braced in such a way as to prevent blowouts. Inasmuch as a force of 250 pounds is exerted on an 8-inch plug by an internal pipe pressure of 5 psi, it should be realized that sudden expulsion of a poorly installed plug or of a plug that is partially deflated before the pipe pressure is released can be dangerous.
 - h. As a safety precaution, pressurizing equipment should include a regulator set at 10 psi to avoid overpressurizing and damaging an otherwise acceptable line. No one shall be allowed in the manholes during testing.

3.03 CLEANING AND DISINFECTION

- A. All equipment and materials shall be clean before installation. CONTRACTOR shall disinfect and flush the potable water system before it is put online. Water main shall be disinfected according to AWWA C651.

3.04 REPAIR AND RESTORATION

- A. Cleanup:
 1. Upon completion of the work, all improvements disturbed by CONTRACTOR's operations shall be repaired or replaced. Broken concrete, rubble fill, and other excess material shall be removed from the site and wasted.

2. All areas used for the storage of materials or the temporary deposit of excavated earth shall be leveled off and cleaned up. All surplus material, tools, and equipment shall be removed, and the premises shall be left free of everything of the kind.
3. All pipes and manholes shall be flushed until clean, and all debris and mud shall be removed.

END OF SECTION

SECTION 02936

SEEDING AND SODDING

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Preparation of subsoil.
 - 2. Placing topsoil.
 - 3. Seeding, sodding, mulching and fertilizing.
 - 4. Maintenance.
- B. Except for paved, riprapped, or built-up areas, all areas of the site which are disturbed and areas noted on the drawings shall be seeded or sodded. Surfaces on 3 to 1 slope or less may either be seeded or sodded but surfaces on greater than 3 to 1 slope shall be sodded.
- C. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. FS O-F-241—Fertilizers, Mixed, Commercial.
- B. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the, *State of Indiana Department of Transportation, Standard Specifications, Latest Edition*, including all issued supplemental specifications.

1.03 QUALITY ASSURANCE

- A. Provide seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.
- B. Sod: Minimum age of 18 months, with root development that will support its own weight without tearing when suspended vertically by holding the upper two corners. Submit sod certification for grass species and location of sod source.

1.04 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- B. Deliver sod on pallets or in rolls. Protect exposed roots from dehydration. Do not deliver more sod than can be laid within 24 hours.
- C. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2—PRODUCTS

2.01 SEED MIXTURE

- A. Seed mix Type U or R per Standard Specifications. Use certified seed. Do NOT use bent or Poa Annua. Each seed lot will be subject to sampling and testing by the state seed laboratory.
- B. Weed content shall not exceed 0.5% in mixture.

2.02 SOD

- A. Follow Section 621 of the Standard Specifications.
- B. Netting or fabric for sod reinforcement shall be in accordance with Section 621 of the Standard Specifications.
- C. Anchorage staples shall be in accordance with Section 621 of the Standard Specifications.

2.03 SOIL MATERIALS

- A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay, or impurities, plants, weeds, roots and rocks; pH value of minimum 5.4 and maximum 7.0.
- B. Topsoil from the site may be used if it meets the above requirements. Additional topsoil shall be provided as required by the drawings and specifications.

2.04 ACCESSORIES

- A. Mulching material shall be oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.
- B. Fertilizer shall be FS O-F-241, Type I, Grade A; recommended for grass, with 50% of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil to the following proportions: Nitrogen 10%, phosphoric acid 10%, soluble potash 10%. Submit composition deviations to suit site conditions for ENGINEER's review.
- C. Water shall be clean, fresh, and free of substances or matter which could inhibit vigorous growth of grass.

PART 3—EXECUTION

3.01 EXAMINATION

- A. Verify that prepared soil base is ready to receive the work of this section.

3.02 PREPARATION OF SUBSOIL

- A. Prepare subsoil to eliminate uneven areas and low spots. Maintain lines, levels, profiles, and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds, and undesirable plants and their roots. Remove contaminated subsoil in accordance with local, state, and federal regulations.
- C. Scarify subsoil to a depth of 3 inches where topsoil is to be placed. Repeat cultivation in areas where equipment used for hauling and spreading topsoil has compacted subsoil.

3.03 PLACING TOPSOIL

- A. Spread topsoil to a minimum depth of 4 inches over area to be seeded. Rake until smooth.
- B. Place topsoil during dry weather and on dry unfrozen subgrade.
- C. Remove vegetable matter and foreign nonorganic material from topsoil while spreading.
- D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.
- E. Manually spread topsoil around trees, plants, and buildings to prevent damage.
- F. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.04 FERTILIZING

- A. Apply fertilizer at a rate of 17 pounds per 1,000 square feet.
- B. Apply after smooth raking of topsoil and prior to installation of seed or sod, no more than 18 hours before seeding or 48 hours before sodding.
- C. Do not apply fertilizer at same time or with same machine as will be used to apply seed.
- D. Mix thoroughly into upper 2 inches of topsoil.
- E. Lightly water to aid the dissipation of fertilizer.

3.05 SEEDING

- A. Apply seed at a total rate of 3 1/2 pounds per 1,000 square feet. Apply evenly in two intersecting directions. Rake in lightly or roll the seeded area after seeding.
- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Planting season shall be between April 15 and June 15 or between August 15 and October 15.
- D. Do not sow immediately following rain, when ground is too dry, or during windy periods.

- E. Immediately following seeding, apply mulch.
 - 1. Minimum spread rate: 1 1/2 tons per acre.
 - 2. Maximum depth: 1 1/2 inches to 2 inches.
- F. Apply water with a fine spray immediately after each area has been mulched and on a daily basis to keep straw in place.
- G. Seeding shall be maintained by CONTRACTOR until grass is well-established. Grass is well-established when it covers the entire seeded areas to a height of 2 inches.
- H. Place erosion control mats per Section 02270—Slope Protection and Erosion Control.

3.06 LAYING SOD

- A. Moisten prepared surface immediately prior to laying sod.
- B. Lay sod immediately after delivery to site to prevent deterioration.
- C. Lay sod tight with no open joints visible, and no overlapping; stagger end joints 12 inches minimum. Do not stretch or overlap sod pieces.
- D. Lay smooth. Align with adjoining grass areas.
- E. Place bottom elevation of sod 1 inch below top of adjoining edging, paving, or curbs.
- F. On slopes 4-to-1 and steeper, sod will be secured with wooden pegs at a maximum of 24 inches on center.
- G. On slopes 2-to-1 and steeper, lay sod perpendicular to slope and secure every row with wooden pegs at maximum 2 feet on center. Drive pegs flush with soil portion of sod.
- H. All sod placed in ditches, flumes, or other appurtenances where a concentrated flow of water may be expected shall be staked regardless of the slope.
- I. Water sodded areas immediately after installation. Saturate sod to 4-inch depth of soil.
- J. No frozen sod shall be laid and no sod shall be laid on frozen soil. Sodding is permitted only when the temperature is above 35°F.

3.07 MAINTENANCE

- A. Mow grass at regular intervals to maintain at a maximum height of 2 1/2 inches. Do not cut more than one-third of grass blade at any one mowing.
- B. Immediately remove clippings after mowing.
- C. Water to prevent grass and soil from drying out.
- D. Roll surface to remove minor depressions or irregularities.
- E. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.

- F. Immediately reseed areas which fail to show adequate catch. Bare spots shall not exceed 5 square feet in area and not exceed 3% of the total seeded areas. Immediately replace sod in areas which show bare spots or deterioration.
- G. Protect seeded areas with warning signs during maintenance period.
- H. Immediately reseed areas which do not show a satisfactory stand of established grass, and resod areas that do not show satisfactory establishment.
- I. Correct damage resulting from erosion, gullies, rills, or other causes by filling with topsoil, tamping, refertilizing, and reseeding if damage occurs prior to acceptance of work.
- J. Maintain seeded lawns for not less than 60 days after substantial completion.
- K. If seeded in fall and not given full 60 days of maintenance, or if not considered acceptable at that time, continue maintenance the following spring until acceptable lawn is established.
- L. Maintain sodded lawns for not less than 30 days after substantial completion.
- M. Maintain lawns by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading, and replanting as required to establish a smooth acceptable lawn free of eroded or bare areas.

END OF SECTION

SECTION 03100

CONCRETE FORMWORK

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Forms for cast-in-place concrete.
 - 2. Form accessories.
 - 3. Openings for other work.
 - 4. Form stripping.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ACI 117–Tolerances for Concrete Construction.
- B. ACI 301–Structural Concrete for Buildings.
- C. ACI 318–Building Code Requirements for Reinforced Concrete.
- D. ACI 347–Recommended Practice for Concrete Formwork.
- E. PS1–Construction and Industrial Plywood.

1.03 DESIGN

- A. All formwork shall comply with ACI 347 and ACI 301.
- B. CONTRACTOR shall assume the responsibility for the complete design and construction of the formwork.

1.04 SUBMITTALS

- A. Submit shop drawings in accordance with Section 01300–Submittals for form ties, form coatings, form liners (if any), and any other form accessories.
- B. Submit geometry of forms for circular structures.

PART 2–PRODUCTS

2.01 FORMS

- A. Forms shall be of wood, plywood, steel, fiberboard lined, or other approved materials which will produce concrete which meets the specified requirements. The type, size,

quality, and shape of all materials of which the forms are made are subject to the review of ENGINEER.

- B. Caution shall be exercised in the use of wood or composition forms or form liner to be certain that no chemical reaction will take place which causes a damaging effect on the concrete surface.

2.02 FORM TIES—NONREMOVABLE

- A. Internal wall ties shall contain positive stops at the required wall thickness. The exterior clamp portions of the tie shall be adjustable in length. Ties shall have cones on the water side of water-containing structures. Ties shall also have cones on the exterior side of all structures which have PVC water-stopped construction joints. Ties shall provide a positive disconnection on both ends 1 to 1 1/2 inches inside the finished face of the concrete.
- B. All wall ties used in the placement of structures which have PVC or hydrophilic water-stopped construction joints shall contain integral waterstops. All such ties shall be crimped or deformed in such a manner that the bond between concrete and tie cannot be broken in removal of the outer units. This portion of the tie shall not be removed prior to 24 hours after completion of the concrete placement.
- C. The use of wood spacers and wire ties will not be approved.

2.03 FORM TIES—REMOVABLE

- A. Taper ties which are designed to be removed entirely from the wall may be used with forms designed for this tie type and spacing.
- B. Tie holes shall be plugged with either a neoprene plug, Sure-Plug by Dayton Superior, Inc., or an EPDM rubber plug, X-Plug by Sika Greenstreak, or equal.
- C. Cementitious waterproofing material for patching taper tie holes shall be Hey Di K-11, Xypex Patch-N-Plug, or equal. Taper tie holes above the normal operating water surface shall be patched with mortar mix as specified in Section 03300—Cast-in-Place Concrete for patching tie holes.

2.04 FORM COATINGS

- A. Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces requiring bond or adhesion, nor impede the wetting of surfaces to be cured with water or curing compounds.

2.05 CHAMFER STRIPS

- A. Provide 3/4-inch by 3/4-inch wood or plastic chamfer strips at all exposed corners, except as noted.

2.06 KEYWAYS

- A. Keyways shall be formed with wood inserts.

PART 3—EXECUTION

3.01 CONSTRUCTION

- A. Forms shall conform to the shape, line, grade, and dimensions as shown on the drawings. They shall be mortar-tight and sufficiently rigid to prevent displacement or sagging between supports and shall support the loads and pressures without deflection from the prescribed lines. They shall be properly braced or tied together so as to maintain position and shape and insure safety to workmen and passersby. Spacing of ties shall be recommended by the tie manufacturer.
- B. Formwork and finished concrete construction shall meet the tolerances specified in ACI 117.
- C. All exposed curved surfaces shall be formed to the continuous surface of the radius specified. Where segmented forms are proposed, a form system which deviates more than 3/8 inches from a circle through pan edges will not be allowed.
- D. Architectural surfaces and surfaces to be fitted with equipment shall be formed to match the shape intended. Where indicated on the drawings, the form shall be lined with minimum 3/8-inch masonite and shimmed as required.
- E. When forms are placed for successive concrete placement, thoroughly clean concrete surfaces, remove fins and laitance, and tighten forms to close all joints. Align and secure joints to avoid offsets.
- F. At the request of ENGINEER, temporary openings shall be provided at the base of column forms and wall forms and at other points where necessary to facilitate cleaning and observation immediately before depositing concrete.
- G. Provide inserts and provide openings in concrete form work to accommodate work of other trades. Verify size and location of openings, recesses, and chases with the trade requiring such items. Securely support items to be built into forms.
- H. Provide top forms for inclined surfaces where the slope is too steep to place and vibrate concrete.
- I. Bevel wood inserts for forming keyways (except in expansion joints where inserts shall have square edges), reglets, recesses, and the like to assure ease of removal. Inserts shall be securely held in place prior to concrete placement. Unless otherwise shown, chamfer strips shall be placed in the angles of the forms to provide 3/4-inch bevels at exterior edges and corners of all exposed concrete.
- J. The forms shall be oiled with a field-applied commercial form oil or a factory-applied nonabsorptive liner. Oil shall not stain or impede the wetting of surfaces to be cured with water or curing compounds. The forms shall be coated prior to placing reinforcing steel. Oil on reinforcement will not be permitted.
- K. All form surfaces shall be thoroughly cleaned, patched, and repaired before reusing and are subject to review of ENGINEER.

3.02 FORM REMOVAL

- A. Supporting forms and shoring shall not be removed until the member has acquired sufficient strength to support its own weight and the construction live loads on it.
- B. All form removal shall be accomplished in such a manner that will prevent injury to the concrete and will ensure complete safety of the structure.
- C. Forms shall not be removed before the expiration of the minimum times as stated below or until the concrete has attained its minimum 28-day design strength as confirmed by concrete cylinder tests, unless specifically authorized by ENGINEER.
 - 1. Wall and vertical faces: 24 hours.
 - 2. Columns: 24 hours.
 - 3. Beams and elevated slabs: 14 days.

END OF SECTION

SECTION 03200

CONCRETE REINFORCEMENT

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes providing complete, in-place, all steel and fibers required for reinforcement of cast-in-place concrete as shown on the drawings.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. Applicable standards listed in this section include, but are not necessarily limited to the following:
 - 1. ACI 315—Manual of Standard Practice for Detailing Reinforced Concrete Structures.
 - 2. ACI 318—Building Code Requirements for Reinforced Concrete.
 - 3. ASTM A82—Standard Specifications for Cold-Drawn Steel Wire for Concrete Reinforcement.
 - 4. ASTM A185—Standard Specifications for Welded Steel Wire Fabric for Concrete Reinforcement.
 - 5. ASTM A615—Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 6. ASTM A996—Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcing.
 - 7. ASTM C1116—Standard Specification for Fiber-Reinforced Concrete.
 - 8. CRSI—Manual of Standard Practice.

1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300—Submittals.
- B. Provide complete shop drawings of all material to be furnished and installed under this section:
 - 1. Before fabrication of the reinforcement is begun, CONTRACTOR shall obtain the approval of ENGINEER on reinforcing bar lists and placing drawings.
 - 2. These drawings and lists shall show in detail the number, size, length, bending, and arrangement of the reinforcing. Reinforcing supports shall also be located on the shop drawings.
 - 3. Shop drawings shall be in accordance with ACI 315.

1.04 PRODUCT HANDLING

- A. Delivery:
 - 1. Deliver reinforcement to the job site bundled, tagged, and marked.
 - 2. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.

- B. Storage: Store reinforcement at the job site on blocks and in a manner to prevent damage and accumulation of dirt and excessive rust.

PART 2-PRODUCTS

2.01 MATERIALS

- A. Reinforcing bars shall comply with ASTM A615 or A996 Type R, Grade 60. Reinforcing bars required to be welded shall be ASTM A706 low alloy.
- B. Steel wire shall comply with ASTM A82.
- C. Welded wire fabric shall comply with ASTM A185. Fabric shall be provided in flat sheets. Rolled fabric shall not be used.
- D. Reinforcement supports including bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement in place shall be:
 - 1. Wire bar-type supports complying with CRSI recommendations, unless otherwise indicated.
 - 2. For slabs on grade, supports with sand plates, or horizontal runners where base material will not support chair legs.
 - 3. For exposed-to-view concrete surfaces or where the concrete surface will be exposed to weather or moisture, where legs of supports are in contact with forms, supports with either hot-dipped galvanized or plastic protected legs.
 - 4. When supports bear directly on the ground and it is not practical to use steel bar supports, precast concrete blocks may be used to support only the bottom lift of reinforcement. The precast blocks must be solid, be of an equal or higher strength than the concrete being placed, must provide adequate support to the reinforcement, and be of proper height to provide specified reinforcing cover. The use of face bricks, hollow concrete blocks, rocks, wood blocks, or other unapproved objects will not be permitted.
- E. Fibrous Reinforcing:
 - 1. Fibrous concrete reinforcement shall be Fibermesh 300, manufactured by Propex Concrete Systems, or equal.
 - 2. Reinforcement shall be 100% virgin polypropylene fibrillated, multi-length graded fiber containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
 - 3. Physical Characteristics:
 - a. Specific Gravity: 0.91.
 - b. Fiber Length: Multidesign gradation.

2.02 FABRICATION

- A. General:
 - 1. Fabricate reinforcing bars to conform to required shapes and dimensions with fabrication tolerances which comply with CRSI Manual.
 - 2. In case of fabricating errors, do not rebend or straighten reinforcement in a manner that will injure or weaken the material.
 - 3. Unless otherwise shown on the drawings, all end hook dimensions shall conform with "ACI Standard Hooks."

- B. Reinforcement with any of the following defects shall be deemed unacceptable and will not be permitted in the work:
 - 1. Bar lengths, depths, and bends exceeding specified fabrication tolerances.
 - 2. Bend or kinks not indicated on drawings or final shop drawings.
 - 3. Bar with reduced cross section because of excessive rusting or other cause.

PART 3—EXECUTION

3.01 INSPECTION

- A. Examine the substrate, formwork, and the conditions under which concrete reinforcement is to be placed.
- B. Correct conditions detrimental to the proper and timely completion of the work.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General:
 - 1. Comply with the specified standards for details and methods of placing reinforcement and supports.
 - 2. Clean reinforcement to remove loose rust, mill scale, earth, and other materials which reduce or destroy bond with concrete.
- B. Placing Reinforcement:
 - 1. All reinforcing shall be placed in accordance with Contract drawings and with shop drawings stamped and approved by ENGINEER.
 - 2. Position, support, and secure reinforcing against displacement by formwork, construction, or concrete placement operations.
 - 3. Support reinforcing by metal chairs, runners, bolsters, spacers, and hangers as needed.
 - 4. Unless otherwise shown on the drawings, the reinforcement is to be so detailed and placed as to allow the following concrete protection:
 - a. Three inches of cover where the concrete is placed directly against ground.
 - b. Two inches of cover where the concrete is placed in forms but is to be exposed to weather, liquid, or the ground.
 - c. One-inch cover in slabs and walls not exposed to weather, liquid, or the ground.
 - d. One and one-half-inch cover in beams, girders, and columns not exposed to weather, liquid, or the ground. This cover applies to beam stirrups and column ties where applicable.
 - 5. Reinforcement shall be positioned within $\pm 3/8$ -inch for members with depth to tension reinforcing from compression face less than or equal to 8 inches. Tolerance shall be $\pm 1/2$ inch for members with depth to tension reinforcing from compression face greater than 8 inches. Tolerance on dimension between adjacent bars in slab and wall reinforcing mats shall be 1 inch. Secure against displacement by anchoring at the supports and bar intersections with wire or clips.
 - 6. Bars shall be securely tied at all intersections except where spacing is less than 1 foot in each direction when alternate intersections shall be tied. To avoid interference with

embedded items, bar spacing may be varied slightly if acceptable to ENGINEER. Tack welding of reinforcing will not be permitted.

7. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.
8. If reinforcing must be cut because of openings or embedded items in the concrete, additional reinforcing must be provided adjacent to the opening at least equal in cross sectional area to that reinforcing which was cut, and it shall extend a minimum of 36 bars diameters beyond the opening on each side or as shown on the drawings. At sumps or depressions in slabs, bars shall be bent and/or extended under sumps or depressions.
9. Wall reinforcing mats shall be secured in a vertical plane by providing clearance from forms with bar supports and by using Z-shaped bars at ± 4 feet on center wired between two mats of steel, spacing and staying both of them. Nails shall not be driven into the forms to support reinforcement and neither shall wire for this purpose come in contact with the forms. Alternate top transverse bars in slab shall be supported by individual bar chairs at approximately 3-foot 0-inch centers. Bottom longitudinal bars shall be supported by continuous bar chairs at approximately 4-foot 0-inch centers.
10. If carrier bars are to be used, CONTRACTOR shall provide reinforcing bars for this purpose in addition to the reinforcing called for by the drawings and specifications.

C. Reinforcement Supports:

1. Strength and number of supports shall be sufficient to carry reinforcement.
2. Do not place reinforcing bars more than 2 inches beyond the last leg of any continuous bar support.
3. Do not use supports as bases for runways for concrete-conveying equipment and similar construction loads.

D. Welded Wire Fabric:

1. Install welded wire fabric in as long of lengths as practicable.
2. Lap adjoining pieces at least one full mesh.
3. Fabric shall be supported with bar supports.

E. Splices:

1. Provide standard reinforcement splices by lapping ends, placing bars in contact, and tightly wire tying.
2. Lap splices in reinforcing shall be provided as shown on the drawings. Where lap splice lengths are not shown on the drawings, provide Class B, Category 1 lap splices in accordance with ACI 318.
3. Adjacent splices of tangential bars in circular slabs and horizontal bars in circular walls shall be staggered a minimum of one full lap splice length or 3 feet, whichever is greater, unless otherwise shown. Stagger dimension shall be measured from center to center of lap splices.
4. For circular walls, horizontal bar lap splices shall not coincide in vertical arrays more frequently than every third bar.
5. Mechanical splices and threaded dowel bar inserts may be used where approved by ENGINEER. Splices shall be capable of developing at least 125% of the yield strength of the reinforcing bar.

F. Embedded Items:

1. Allow other trades to install embedded items as necessary.
2. Particularly after bottom layer of reinforcing is placed in slabs, allow electrical contractors to install conduit scheduled for encasement in slabs prior to placing upper layer of reinforcing.

- G. Minimum Reinforcing: Where reinforcing is not shown, provide a minimum of No. 4 at 8-inch centers each way in members 10 inches or less in thickness and No. 5 at 12-inch centers each way in each face in members greater than 10 inches thick.
- H. Fibrous Reinforcing:
1. Fibrous concrete reinforcing shall be used in all slab-on-grade concrete and all precast concrete topping.
 2. Add fibers at a minimum rate of 1.5 pounds per cubic yard.
 3. Mix concrete in strict accordance with reinforcement manufacturer's recommendations.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. All cast-in-place concrete as shown except as noted otherwise.
 - 2. Hydrophilic waterstops, expansion joint fillers, bonding agents, patching mortars, curing compounds, nonshrink grout, grout topping, floor sealer, and other related items and accessories.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ACI 211.1—Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
- B. ACI 301—Specifications for Structural Concrete.
- C. ACI 304R—Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- D. ACI 305R—Guide to Hot Weather Concreting.
- E. ACI 306R—Guide to Cold Weather Concreting.
- F. ACI 308—Specification for Curing Concrete.
- G. ACI 309—Guide for Consolidation of Concrete.
- H. ACI 318—Building Code Requirements for Structural Concrete and Commentary.
- I. ASTM C31—Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- J. ASTM C33—Standard Specification for Concrete Aggregates.
- K. ASTM C39—Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- L. ASTM C40—Standard Test Method for Organic Impurities in Fine Aggregates for Concrete.
- M. ASTM C88—Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
- N. ASTM C94—Standard Specification for Ready-Mixed Concrete.
- O. ASTM C143—Standard Test Method for Slump of Hydraulic-Cement Concrete.

- P. ASTM C150—Standard Specification for Portland Cement.
- Q. ASTM C156—Standard Test Method for Water Loss (from a Mortar Specimen) Through Liquid Membrane-Forming Curing Compounds for Concrete.
- R. ASTM C172—Standard Practice for Sampling Freshly Mixed Concrete.
- S. ASTM C231—Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- T. ASTM C260—Standard Specification for Air-Entraining Admixtures for Concrete.
- U. ASTM C309—Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
- V. ASTM C494—Standard Specification for Chemical Admixtures for Concrete.
- W. ASTM C618—Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
- X. ASTM D994—Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- Y. ASTM D1752—Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with Section 01300—Submittals.
- B. Submit the following information:
 - 1. Gradation of fine and coarse aggregate—ASTM C33.
 - 2. Specific gravity and dry rodded density of each aggregate.
 - 3. Test of deleterious substances in fine and coarse aggregate—ASTM C33.
 - 4. Design mix of each individual concrete mix to be used.
 - 5. Previous test results or trial batch results with 7- and 28-day compressive strengths for each concrete mix proposed.
 - 6. Certified mill test results for cement identifying brand, type, and chemistry of cement to be used.
 - 7. Brand, type, principal ingredient, and amount of each admixture to be used.
- C. It is important that the above data be submitted to ENGINEER well in advance of anticipated concreting operations to avoid any delay in construction.

PART 2—PRODUCTS

2.01 CEMENT

- A. Cement shall be Portland cement conforming to ASTM C150. Cement used for structures exposed to wastewater, sludge, combined sewage, or sanitary sewage shall be Type II or Type I/II. All other cement shall be Type I or Type I/II. Type III cement shall be used only when permitted by ENGINEER. All cement shall be the product of one reputable manufacturer and mill.

- B. Cement shall be stored in a dry, weathertight, properly ventilated structure with the floor raised not less than 1 foot above the ground.

2.02 FLY ASH

- A. All fly ash used as an admixture in Portland cement concrete shall be Class C or F conforming to the requirements of ASTM C618.

2.03 AGGREGATE

- A. All aggregates shall be washed and shall consist of natural sand, gravel, or crushed rock and shall have clean, hard, durable, uncoated grains of strong minerals. The amounts of deleterious substances present in the fine and coarse aggregate expressed in percentages by weight shall not exceed the following:

Deleterious Substance	Aggregate	
	Fine	Coarse
Clay Lumps and Friable Particles	3.0	3.0
Coal and Lignite	0.5	0.5
Mineral finer than No. 200 sieve	3.0	
Soft Fragments	3.0	3.0
Chert*	---	5.0
Sum of Chert and Clay Lumps		5.0

- * Material classified as chert and having a bulk specific gravity of less than 2.45. The percentage of chert shall be determined on the basis of the weight of chert in the sample retained on a 3/8-inch sieve divided by the weight of the total sample.

- B. The combined amount of all deleterious substances in an aggregate shall not exceed 5% of the weight of the aggregate.
- C. If required by ENGINEER, sodium sulfate soundness tests (ASTM C88) shall be performed on the aggregate. When the aggregate is subjected to 5 cycles, the weight loss shall not exceed 12%. Samples of proposed aggregates shall be submitted to an independent laboratory for testing in advance of concrete work. All testing shall be performed in accordance with ASTM C33. Certified test results shall be submitted to ENGINEER confirming that aggregate complies with all stated specifications. Report shall identify source of aggregate and absorbed water.
- D. Fine aggregate shall be well-graded from coarse to fine and shall conform to the following requirements:

Percentage by Weight	
Passing 3/8-inch sieve	100
Passing No. 4 sieve	95-100
Passing No. 8 sieve	80-100
Passing No. 16 sieve	50-85
Passing No. 30 sieve	25-60
Passing No. 50 sieve	5-30
Passing No. 100 sieve	0-10

- E. Gradation of fine aggregate shall be reasonably uniform and not subject to the extreme percentages of gradation specified above. The fineness modulus shall be not less than 2.3 or more than 3.1, nor shall the fineness modulus of any sample vary by more than +0.20 from the fineness modulus of the representative sample used in proportioning the concrete.
- F. If required by ENGINEER, fine aggregate shall be subjected to the color-metric test for organic impurities (ASTM C40) and shall not produce a color darker than Figure 1, unless they pass the mortar strength test. Aggregate producing color darker than Figure 2 shall not be used in any event.
- G. Coarse aggregate shall be well-graded from coarse to fine, and when tested by laboratory sieves having square openings, shall conform to the following requirements:

	Percentage by Weight Aggregate	
	3/4-inch Stone	1 1/2-inch Stone
Passing 2-inch sieve	---	100
Passing 1 1/2-inch sieve	---	90-100
Passing 1-inch sieve	100	20-55
Passing 3/4-inch sieve	90-100	0-15
Passing 3/8-inch sieve	20-55	0-5
Passing No. 4 sieve	0-10	---
Passing No. 8 sieve	0-5	---

- H. The 3/4-inch aggregate shall be used in concrete members no thinner than 4 inches and less than 10 inches thick. A blend of 3/4-inch and 1 1/2-inch aggregate shall be used in members 10 inches thick and thicker with the 3/4-inch aggregate comprising between 35% and 65% of the total coarse aggregate. When members thinner than 10 inches are placed monolithically with members thicker than 10 inches, the aggregate requirements for the thinner member shall apply.
- I. Aggregates must be allowed to drain for at least 12 hours before being used. The ground upon which aggregates are stored must be hard, firm, well-drained, and free from all vegetable matter. Various sizes of aggregates must be stored separately, and if they have become contaminated or merged with each other, they shall not be used.

2.04 WATER

- A. Water used in mixing concrete shall be clean and free from injurious amounts of oil, alkali, organic matter, or other deleterious substances.

2.05 ADMIXTURES

- A. Water Reducing Admixture shall be Pozzolith 200N by BASF Admixtures, Inc., Daracem 19 by Grace, or equal. Water reducing admixture shall conform to ASTM C494, Type A and Type F. Water reducing admixture shall not reduce durability, shall increase strength 10%, and shall not affect bleeding characteristics over reference mix.
- B. Air-Entraining Admixture shall be equal to MB AE90 Standard by BASF Admixtures, Inc., Darex by Grace Construction Products, or equal. Air-entraining admixture shall conform to ASTM C260.

- C. No other admixture will be allowed without written approval of ENGINEER. All admixture shall be compatible with cement, aggregate, and water used.

2.06 PROPORTIONING

- A. The proportions of aggregate to cement shall be such as to produce a workable mixture that can be thoroughly compacted and that will work readily in the forms and around reinforcement without permitting materials to segregate or excess water to collect on the surfaces. The combined aggregates shall be such that when separated on the No. 4 sieve, the weight passing the sieve shall not be less than 30% nor greater than 50%.
- B. Concrete of various classes shall have the following maximum water/cement or water/(cement + fly ash) ratio minimum compressive strengths at 28 days and minimum cement and fly ash contents:

Class	Maximum Water/ Cement or Water/ (Cement+Fly Ash)	Minimum 28 Day Strength-Pounds per Square Inch	Cement Content-Pounds per Cubic Yard	Fly Ash- Pounds per Cubic Yard	
				Type C	Type F
AA	0.42	4,500	611	---	---
A	0.45	4,000	564	---	---
A-FA	0.45	4,000	480	110	125
B	0.53	3,500	517	---	---
C	0.53	3,000	517	---	---
X	---	2,000	376	---	---

- C. Except as otherwise indicated on the drawings or specified, all concrete shall be Class A or Class A-FA concrete.
- D. Grout for clarifier bottoms shall contain pea gravel, crushed stone, or other suitable coarse aggregate graded from 1/8 inch to 3/8 inch in addition to well-graded sand. Use six bags of Portland cement and 100 pounds of Class C fly ash per cubic yard. Not more than 35 gallons of mixing water per cubic yard, including free water in aggregate, shall be used. Minimum 28-day design strength shall be 4,000 psi. Provide similar mix with fibrous reinforcing added for concrete topping over precast plank.
- E. All concrete mixes shall be designed for a strength of 15% above that specified to allow for job variations. All mixes shall be designed in accordance with ACI 211.1 by a competent concrete engineer or competent laboratory technician. Required materials test data shall be submitted with design mixes for review and approval by ENGINEER. Mix computations shall be submitted if requested by ENGINEER.
- F. The slump for all concrete shall be 3 inches and concrete with a slump within the range of 2 to 3 1/2 inches will be acceptable unless otherwise stated.
- G. A water-reducing admixture shall be used in all concrete. A qualified representative of the manufacturer shall be available to assist in proportioning the concrete, advise on the proper addition of the admixture to the concrete, and advise on adjustments of concrete proportions to suit job conditions.

- H. An air-entraining admixture shall be used in all concrete except as noted. Air content shall be tested by the pressure method as outlined in ASTM C231 and shall be between 4% to 7% by volume. An air-entraining admixture is not required for concrete patching and for concrete floors, equipment pads, and supports in interior heated buildings where the concrete will be protected from freezing during and after construction.
- I. CONTRACTOR shall submit to ENGINEER concrete cylinder compressive strength results from previous projects for the same concrete mixes proposed on the current project. If this information is not available, one cubic yard trial batches of each individual mix proposed for use shall be made prior to use in the work. Four test cylinders shall be made for each trial batch, two to be tested at 7 days and two at 28 days. The trial batches shall be made preceding actual placement operations so that the results of the 7-day tests can be obtained. All costs for material, equipment, and labor incurred during design of concrete mixes shall be borne by CONTRACTOR.
- J. All aggregates shall be measured by weight. The concrete mixer is to be equipped with an automatic water-measuring device that can be adjusted to deliver the desired amount of water.

2.07 WATERSTOPS

- A. Hydrophilic waterstop shall be a flexible hydrophilic natural rubber strip composed of nonvulcanized rubber and urethane polymer hydrophilic agent creating a moisture-activated, self-healing waterproofing compound.
- B. Hydrophilic waterstop shall be Adeka Ultraseal, or equal, products as follows:
 - 1. Construction Joints:
 - a. Wall/slab thickness greater than 9 inches with double mat of reinforcing: MC-2010MN (3/4 inch by 3/8 inch) with embedded stainless steel wire mesh for expansion control. The waterstop shall develop a minimum of 400 psi expansion pressure and withstand a minimum 150-foot hydrostatic head. Expansion amount shall not exceed 120%.
 - b. Wall/slab thickness between 4 inches and 9 inches with 1-inch minimum cover and single or double mat of reinforcing: KBA-1510FP (9/16 inch by 3/8 inch). Expansion amount shall not exceed 30%.
 - 2. Pipe Penetrations:
 - a. Wall/slab thickness between 4 inches and 9 inches and pipe diameter greater than 4 inches and less than or equal to 24 inches: KBA-1510FP (9/16 inch by 3/8 inch).
 - b. Wall/slab thickness greater than 9 inches and pipe diameter greater than 4 inches and less than or equal to 24 inches: MC-2005T (3/4 inches by 3/16 inches).
 - c. Wall/slab thickness greater than 9 inches and pipe diameter greater than 24 inches: MC-2010MN (3/4 inch by 3/8 inch) with embedded stainless steel wire mesh for expansion control.

2.08 JOINT FILLER

- A. Expansion joints shall have standard 1/2-inch-thick cork expansion joint filler, W. R. Meadows, or equal, meeting ASTM D1752–Type II. Exceptions to this are expansion joints in exterior concrete walks and between concrete walks and other structures which shall be asphalt expansion joint filler, 1/2 inch thick, Grace, W.R. Meadows, or equal, meeting ASTM D994.

2.09 BONDING AGENT

- A. Acceptable manufacturers include MasterProtect® P110 by BASF, MasterEmaco P 124 by BASF, or equal.

2.10 PATCHING ADDITIVE

- A. Acceptable manufacturers include MasterEmaco A 660 by BASF, Sonocrete by Sonneborn Contech Co., or equal.

2.11 NONSHRINK GROUT

- A. Acceptable manufacturers include Dayton Superior, Master Builders, or equal. Grout shall be nonshrink, nonmetallic and shall achieve a strength of 7,500 psi in 28 days.

2.12 CURE–SEAL HARDENER

- A. Penetrating sealer for interior building floors shall be Ashford Formula by Curecrete Chemical Company, Inc., or equal. See finish schedule for locations to be used.

PART 3–EXECUTION

3.01 MIXING

- A. Ready-mixed concrete shall be batched, mixed, and delivered in accordance with ASTM C94 and ACI 304R. In general, concrete shall be mixed 50 revolutions at plant, 20 upon arrival at site, and 20 each time water is added; maximum of 110 revolutions at mixing speed. Concrete shall be delivered and discharged within 1 1/2 hours or before the drum has revolved 300 times after introduction of water to the cement and aggregates or the cement to the aggregates. Truck mixers shall be equipped with drum revolution counters. In no event shall concrete which has taken its initial set be allowed to be used. Retempering of concrete is not permitted.
- B. A representative of ENGINEER may be at the batching plant periodically to observe the batching and mixing.
- C. No water shall be added on the job unless required by CONTRACTOR and with the knowledge of ENGINEER; the amount of water, if added, shall be recorded on all copies of the delivery tickets. If water is added, CONTRACTOR shall verify that the required water-cement ratio is not exceeded.
- D. Concrete shall have a temperature not less than 60°F nor more than 80°F as delivered to the jobsite.
- E. With each load of concrete CONTRACTOR shall obtain delivery tickets and shall make these tickets available for review by ENGINEER. Delivery tickets shall provide the following information:
 - 1. Date.
 - 2. Name of ready-mix concrete plant, job location, and CONTRACTOR.
 - 3. Type of cement and admixtures, if any.
 - 4. Specified cement content in sacks per cubic yard of concrete and approved concrete mix number or designation.
 - 5. Amount of concrete in load, in cubic yards.

6. Water-cement ratio.
 7. Water added at job, if any.
 8. Truck number and time dispatched.
 9. Number of mixing drum revolutions.
- F. For job-mixed concrete, all concrete materials shall be mixed in a machine batch mixer for at least 1 1/2 minutes after all ingredients are in the mixer and shall continue until there is a uniform distribution of the materials and the mass is uniform in color and homogeneous. The mixer shall not be loaded beyond the capacity given by the manufacturer and shall be rotated at the speed recommended by the manufacturer. The mixer is to be provided with positive timing device that will positively prevent discharging the mixture until the specified mixing time has elapsed.

3.02 JOINTS

- A. CONTRACTOR shall place all joints as shown on the drawings or specified herein. If approved by ENGINEER, CONTRACTOR may, at his own expense, place construction joints in addition to and at places other than those shown on the drawings. Unless otherwise shown, all joints shall be straight, truly vertical or horizontal, and proper methods shall be employed to obtain this result.
- B. Where joints are not shown on the drawings or specified elsewhere, CONTRACTOR shall provide joints as follows:
1. Walls shall have vertical joints at 60 feet on center maximum but not more than 15 feet from corners or intersections and shall have horizontal joints at 15 feet on center maximum.
 2. Slabs shall have joints at 20 feet on center maximum in each direction.
- C. Immediately after completion of the first pour at a joint, the concrete surface, reinforcement, and waterstop projecting beyond the joint shall be thoroughly cleaned and laitance removed. The waterstops shall not be disturbed after the concrete in the first pour at a joint has set. Concrete around waterstops shall be thoroughly compacted by hand spading and vibrating. Immediately before the second pour, all extraneous matter shall be removed from the joint, the waterstop and steel cleaned, and the surface thoroughly wetted.
- D. Concrete at all joints shall have been in place at least 48 hours before abutting concrete is placed. At least two hours must elapse after depositing concrete in columns or walls before depositing in beams, girders, or slab supported thereon. Beams, girders, brackets, column capital, and haunches shall be considered as part of the floor system and shall be placed integrally therewith.

3.03 WATERSTOPS

- A. Unless noted otherwise, hydrophilic waterstop shall be provided at all construction joints in liquid holding tanks and channels that are not adjacent to areas occupied by personnel and at joints between new and existing concrete. Waterstop shall be placed as shown on drawing details, if any, and in accordance with the manufacturer's recommendations.

3.04 BONDING TO EXISTING CONCRETE

- A. When placing new concrete adjacent to existing concrete, the existing concrete shall be thoroughly roughened, cleaned, and saturated with water 24 hours before pouring new concrete. Existing concrete is defined as concrete more than six months old. At time of

new pour, remove any standing water and apply bonding agent. Bonding agent shall be applied in accordance with manufacturer's recommendations.

- B. When patching existing concrete, remove poor concrete until firm hard concrete is exposed; roughen and clean surface of the existing concrete, clean any exposed reinforcing bars, and pour new concrete. Concrete finish shall match existing concrete. New concrete shall be 4,000 psi 28-day strength mixed with patching additive, mixed according to manufacturer's instructions. Concrete shall not be air-entrained.

3.05 EMBEDDED ITEMS IN CONCRETE

- A. All sleeves, inserts, anchors, and embedded items required for adjoining work or for its support shall be placed prior to concreting.
- B. All contractors whose work is related to the concrete or must be supported by it shall be given ample notice and opportunity to introduce and/or furnish embedded items before the concrete is placed.
- C. Embedded items shall be positioned accurately and supported against displacement. Reinforcing bars shall clear embedded items a minimum of 2 inches.

3.06 PLACING CONCRETE

- A. Before placing concrete, all equipment, forms, ground, reinforcements, and other surfaces with which the concrete will come in contact are to be thoroughly cleaned of all debris, ice, and water. Ground shall be wetted prior to placement of concrete on it.
- B. After reinforcement is placed and before concrete is placed over it, ENGINEER shall be allowed sufficient time to observe the reinforcing.
- C. Unless otherwise authorized by ENGINEER, all concrete shall be placed in the presence of ENGINEER.
- D. Concrete shall be conveyed from the mixer to the place of final deposit as rapidly as practicable by methods that will prevent the segregation or loss of materials. Chuting for conveying purposes must be accomplished in such a manner as to prevent segregation or loss of materials. Receiving hoppers shall be installed at the chute discharge and at no point in its travel from the mixer to place of final deposit shall the concrete pass through a free vertical drop of more than 3 feet. Elephant trunks or tremies shall be used in all wall pours to prevent coating of forms and reinforcing bars.
- E. Care shall be taken to avoid an excess of water on the concrete surface. Excess water shall be drained or otherwise removed from the surface. Dry cement or a mixture of cement and sand shall not be sprinkled directly on the surface to absorb water.
- F. Concrete in wall and beam pours shall be deposited in approximately horizontal layers not to exceed 18 inches in thickness. Each layer shall be well worked into the preceding layer while both layers are still soft.
- G. Concrete shall be deposited as nearly as practicable in its final position to avoid segregation from rehandling or flowing. The maximum allowable lateral movement of the concrete after being deposited is 3 feet. Once concreting is started, it shall be carried on as a continuous operation until the placing of the section or panel is completed.

- H. All concrete shall be placed with the aid of mechanical vibrating equipment in accordance with ACI 309. In congested areas, vibration shall be supplemented by hand spading adjacent to the forms. Vibration should secure the desired results within 5 to 15 seconds at intervals of 18 inches apart maximum. The vibrator shall penetrate the preceding layer of concrete. Vibrators shall have a frequency of not less than 10,000 impulses per minute when in operation submerged in concrete.
- I. A sufficient number of spare vibrators shall be kept in ready reserve to assure adequate vibration in case of breakdown of those in use.
- J. In placing concrete in beams where it is intended to be continuous and monolithic with the slab above, a delay to provide for settlement of the deep concrete shall be scheduled before placing the upper concrete in the slab. The length of delay shall be as long as possible and still permit the revibration of the deep concrete.
- K. Concrete is not to be placed under water. A suitable means shall be provided for lowering the water level below surfaces upon which concrete is to be placed. This may require excavating approximately 12 inches below the bottom of the concrete surface and refilling with gravel and compacting. The groundwater shall not be allowed to rise to the bottom of the concrete until 24 hours after the concrete pour has been completed. Water shall not be allowed to fall upon or run across the concrete during this period.
- L. No extra payment will be allowed for dewatering, undercutting, and gravel fill.

3.07 MOIST CURING

- A. All concrete shall be maintained in a moist condition for at least 7 days after being deposited except that for high-early strength concrete, a 3-day period will be sufficient. Moist curing shall be accomplished by one of the following methods:
 - 1. Wood forms left in place and kept wet at all times. If the forms are not going to be kept wet, they shall be removed as soon as practicable and other methods of moist curing shall be started without delay.
 - 2. Use of a curing compound conforming to ASTM C309, Type I as approved by ENGINEER. Curing compound shall be applied at a uniform rate as indicated by the manufacturer sufficient to comply with the requirements of the test water retention of ASTM C156. Curing compound applied to vertical concrete surfaces after forms are removed shall be specially adapted to provide required coverage on the vertical surface. On nonformed surfaces, the curing compound shall be applied immediately after the disappearance of the water sheen after finishing of the concrete. Curing compound shall not be used on concrete surfaces that are to be painted, receive ceramic tile or resilient flooring, or be waterproofed. Care shall be taken not to get curing compound on construction joints, reinforcing steel, and other surfaces against which new concrete will be poured.
 - 3. Use of plastic film. Plastic film shall have a minimum thickness of 4 mils. It shall be placed over the wet surface of the fresh concrete as soon as possible without marring the surface and shall be weighted so that it remains in contact with all exposed surfaces of the concrete. All joints and edges shall be lapped and weighted. Any tears in the film shall be immediately repaired.
 - 4. Application of wet coverings weighing 9 ounces per square yard such as burlap, cotton mats, or other moisture-retaining fabrics. The covering system shall include two layers and shall be kept continuously moist so that a film of water remains on the concrete surface throughout the curing period.
 - 5. Use of an approved waterproof curing paper. Edges of adjacent sheets shall be overlapped several inches and tightly sealed.

6. Ponding of water or continuous sprinkling of water is permitted. Sprinkling at intervals will not be permitted.
 7. Construction joints shall be moist cured by one of the methods listed above except by Method "2."
- B. The use of moist earth, sand, hay, or another method that may discolor hardened concrete will not be permitted.

3.08 HOT WEATHER CONCRETING

- A. When the atmospheric temperature exceeds 80°F during concrete placement, this section and ACI 305 shall apply in addition to all other sections of the specifications.
- B. The temperature of the delivered concrete shall not exceed 85°F.
- C. Care shall be exercised to keep mixing time and elapsed time between mixing and placement at a minimum. Ready-mix trucks shall be dispatched so as to avoid delay in concrete placement, and the work shall be organized to use the concrete promptly after arrival at the jobsite.
- D. The subgrade, forms, and reinforcing shall be sprinkled with cool water just prior to placement of concrete. Prior to placing concrete, there shall be no standing water or puddles on the subgrade.
- E. If approved by ENGINEER, an admixture for retarding the setting of the concrete may be used.
- F. Exposed concrete surfaces shall be carefully protected from drying. Continuous water curing is preferred. Curing compounds shall be white pigmented.

3.09 COLD WEATHER CONCRETING

- A. Conditions of this section shall apply, in addition to all other sections of the specifications, when placing concrete in cold weather. Cold weather is defined as a period when, for more than 3 successive days, the average daily temperature drops below 40°F. When temperatures above 50°F occur during more than half of any 24-hour period, the period will no longer be regarded as cold weather. The average daily temperature is the average of the highest and lowest temperature during the period from midnight to midnight. Cold weather concreting shall conform to all requirements of ACI 306.1, except as modified by the requirements of these specifications.
- B. Detailed procedures for the production, transportation, placement, protection, curing, and temperature monitoring of concrete during cold weather shall be submitted to ENGINEER. Cold weather concreting shall not begin until these procedures have been accepted.
- C. All concrete materials, forms, ground, mixing equipment, and other surfaces with which the concrete is to come in contact shall be free from frost, and the temperature of contact surfaces shall be 35°F or above. Ground upon which concrete is to be placed shall not be frozen at any depth.
- D. The mixing water and aggregates shall be heated and when entering the mixer shall have temperatures not exceeding 175°F and 80°F, respectively. Concrete temperature as mixed shall not exceed 80°F and shall typically be between 55°F and 70°F. Concrete, when placed in the forms, shall have a temperature of not less than 50°F.

- E. Freshly placed concrete shall be protected by adequate covering, insulating, or housing and heating. If heating is used, ambient temperature inside the housing shall be maintained at a minimum of 70°F for 3 days or 50°F for 5 days. The maximum ambient temperature during curing shall not exceed 80°F. If insulating methods are used, recommendations contained in ACI 306R shall be followed. Surface temperature shall be maintained at 50°F for 7 days. After the curing period, the temperature of the concrete shall be reduced uniformly at a rate not to exceed 40°F per 24 hours until outside air temperature is reached. Heating of enclosure shall continue if it is anticipated that the outside air temperature will drop more than 20°F in the next 24 hours. The concrete temperature shall be obtained by attaching a thermometer provided by CONTRACTOR to the concrete surface. Concrete shall be kept moist.
- F. If heating is used, the housing shall be constructed weathertight and shall be constructed in a manner that will provide uniform air circulation and air temperatures over the complete concrete area that is being cured. Special attention shall be given to the edges and ends of a concrete pour with the housing extending at least 5 feet beyond any concrete surface being protected. The housing shall be in place and heat applied within 2 hours after concrete placement.
- G. Heating may be by steam or hot air. Heaters shall be vented to outside of the housing. Open burning salamanders will not be permitted. Heating devices shall not be placed so close to the concrete as to cause rapid drying or discoloration from smoke.
- H. If heating is used, CONTRACTOR shall provide sufficient 24-hour inspection of the heaters to ensure compliance with the above-specified temperature requirements during the curing period. CONTRACTOR shall provide maximum-minimum thermometers for ENGINEER's use.
- I. The use of calcium chloride, salts, or other chemical admixtures for the prevention of freezing is prohibited.
- J. Salts or other deleterious materials shall not be used on temporary or permanent structures above concrete surfaces that are being placed, finished, or cured.

3.10 FINISHING

- A. Flat Work:
 - 1. Floated Finish: Place, consolidate, strike off, and level concrete eliminating high spots and low spots. Do not work concrete further until it is ready for floating. Begin floating with a hand float, a bladed power float equipped with float shoes, or a powered disk float when the bleed water sheen has disappeared and the surface has stiffened sufficiently to permit the operation. Immediately refloat the slab to a uniform texture.
 - 2. Light Troweled Finish: Float concrete surface, then power trowel the surface. Hand trowel the surface smooth and free of trowel marks.
 - 3. Hard Troweled Finish: Float concrete surface, then power trowel the surface. Hand trowel the surface smooth and free of trowel marks. Continue hand troweling until a ringing sound is produced as the floor is troweled.
 - 4. Tolerance for concrete floors shall be 1/4 inch within 10 feet in any direction. Straight edge shall be furnished by CONTRACTOR.
 - 5. Broom or Belt Finish: Immediately after concrete has received a floated finish, give the concrete surface a coarse transverse scored texture by drawing a broom or burlap belt across the surface.
 - 6. The above finishes shall be used in the following locations:
 - a. Float Finish: Surface to receive roofing, waterproofing, or sand bed terrazzo.

- b. Light Troweled Finish: Submerged tank slabs.
- c. Hard Troweled Finish: Building floors.
- d. Broom or Belt Finish: Exterior slabs, sidewalks, tops of walls, and tank slabs to receive grout topping.

B. Formed Surfaces:

1. Within 2 days after removing forms and prior to application of a curing compound, all concrete surfaces shall be observed and any poor joints, voids, stone pockets, or other defective areas shall be patched at once before the concrete is thoroughly dry. Defective areas shall be chipped away to remove all loose and partially bonded aggregate. The area shall be thoroughly wetted and filled with as dry as practical mortar mix placed to slightly overfill the recess. Mortar shall include a bonding agent. After partial set has taken place, the excess mortar shall be removed flush with the surface on the concrete using a wood float. All patching shall be cured, protected, and covered as specified for concrete. All cracks, leaks, or moist spots that appear shall be repaired. No extra compensation will be allowed CONTRACTOR for such work.
2. The exterior or removal portion of nonremovable ties shall be removed with the use of a special tool designed for this purpose. Cutting or chipping of concrete to permit removal of exterior portion will not be permitted.
3. For nonremovable ties, tie rod holes left by the removal of the exterior portion of the tie and cone shall be thoroughly wetted and filled by ramming with as dry as practical mortar mix in such a manner as to insure complete filling of the hole. Mortar shall include a bonding agent. All patching shall be cured, protected, and covered as specified for concrete. The holes are to be filled immediately after removal of the exterior portion of the tie.
4. Holes left by removable ties shall be filled by installing a neoprene plug near the center of the wall. The balance of the hole shall be filled with mortar as specified above to within 1 inch of the face of the wall. The remainder of the hole shall be filled with a waterproofing compound.
5. All finished or formed surfaces shall conform accurately to the shape, alignment, grades, and sections as shown or prescribed by ENGINEER. All surfaces shall be free from fins, bulges, ridges, offsets, honeycombing, or roughness. All sharp angles, where required, shall be rounded or beveled. Any formed surface to be painted shall be free of any material that will be detrimental to the paint. The surface of the concrete shall be given one of the following finishes immediately after form stripping:
 - a. Finish A shall be referred to as a sack finish. Surfaces shall be free of contaminants prior to sacking. After wetting the surface, a grout shall be rubbed in using a rubber float or burlap. After the grout hardens sufficiently, it shall be scraped from the surface with the edge of a steel trowel without disturbing the grout in the air holes. After further drying, the surface shall be rubbed with burlap to remove all surface grout. The entire surface shall be finished to secure a continuous, hard, dust-free uniform texture surface free from pinholes and other minor imperfections. Finish A will be required for all unpainted surfaces (See Section 09900 for painted surfaces), interior surfaces of equipment rooms, operation areas, and permanently exposed vertical surfaces. Where steel-faced forms are used to form walls, the portion of wall to receive the sack finish shall first be roughened by brush blasting or other approved method to achieve a texture similar to 40 to 60 grit sandpaper.
 - b. Finish B shall be the same as Finish A, except that the final burlap rubbing may be omitted, providing the steel trowel scraping removes the loose buildup from the surface. Finish B shall be provided for waterproof- and moistureproof-coated surfaces.
 - c. Finish C shall be referred to as a finish that has surface imperfections less than 3/8 inches in any dimension. Surface imperfections greater than 3/8 inches shall be repaired or removed and the affected areas neatly patched. Finish C or

smoother shall be provided for interior surfaces of wet wells, tanks, and channels from 1 foot below minimum water surfaces and down and otherwise unfinished interior surfaces.

- d. Finish D shall be the finish for surfaces that may be left as they come from the forms, except that tie holes shall be plugged and defects greater than 1/2 inch in any dimension shall be repaired. Finish D shall be provided for surfaces to be buried or covered by other construction such as masonry veneer.
- C. All precautions shall be taken to protect the concrete from stains or abrasions, and any such damage shall be removed or repaired under this Contract.

3.11 LOADING OF CONCRETE STRUCTURES

- A. No concrete structure or portion thereof shall be loaded with its design load until the concrete has obtained its specified 28-day compressive strength. This shall include but not be limited to vertical live load, equipment loading, water loading, groundwater loading, and backfill load. Concrete strength at time of loading shall be determined by testing field-cured concrete cylinders.
- B. Extreme care shall be taken to ensure that construction loads do not exceed design loading of the structure.

3.12 NONSHRINK GROUT

- A. Nonshrink, nonmetallic grout shall be used for filling recesses and pockets left for equipment installation and for setting of base plates. The material used shall be approved by ENGINEER. Store, mix, and place the nonshrinking compound as recommended by the manufacturer. The minimum compressive strength shall be 5,000 psi at age 7 days and 7,500 psi at age 28 days.

3.13 TESTING AND SAMPLING

- A. The following tests of fresh concrete shall be performed by CONTRACTOR. CONTRACTOR shall prepare, protect, transport, and have tested all cylinders at his expense.
 - 1. Sampling of concrete for slump tests, air tests, temperature tests, and for making concrete test cylinders shall be performed in accordance with ASTM C172.
 - 2. Cylinders:
 - a. Three test cylinders shall be made for each pour less than 25 cubic yards, four test cylinders shall be made for each pour between 25 and 100 cubic yards, and eight test cylinders shall be made for each pour in excess of 100 cubic yards. Each concrete mix shall be represented by at least four cylinders for the entire job. Concrete for cylinders shall be collected near the middle of the load and/or as requested by ENGINEER.
 - b. Cylinders shall be made and tested in accordance with ASTM C31 and ASTM C39, respectively. The cylinders must be kept moist and at temperatures between 60°F and 80°F and shall remain undisturbed and stored in a location free from vibration. In hot weather, the cylinders shall be covered with wet burlap and stored in a shaded area. It is CONTRACTOR's responsibility to provide a suitable protected location for storing cylinders on the jobsite.
 - c. After 24 hours, the cylinders shall be transferred to an independent testing laboratory acceptable to OWNER. The cylinders shall be packed in sawdust or other cushioning material for transit to avoid any bumping or jarring of the cylinders.

- d. Cylinders shall be broken at 7 and 28 days or as requested by ENGINEER. Test results shall be mailed immediately and directly to ENGINEER. Test data shall include date and location of pour and concrete mix used.
- 3. Slump Test: CONTRACTOR shall make one slump test near the beginning of all pours with two tests being made for all pours in excess of 25 yards or as requested by ENGINEER. Slump tests shall conform to ASTM C143.
- 4. Air Test:
 - a. When air-entrained concrete is used, the air content shall be checked by CONTRACTOR near the beginning of all pours with at least two checks being made for all pours in excess of 25 cubic yards, or as requested by ENGINEER.
 - b. The air contents shall be checked using the pressure method in accordance with ASTM C231. The pocket-sized alcohol air indicator shall not be used unless it is first used in conjunction with the pressure method test.
- B. All costs of additional testing and sampling of fresh or hardened concrete needed because of suspected or actual violation of the specifications shall be borne by CONTRACTOR.

3.14 RECORDS

- A. A record is to be kept of all concrete work. The record shall include the date, location of pour, concrete mix, slump, air content, test cylinder identification, concrete temperature, and ambient air temperature. In addition, for cold weather concreting the record shall include the daily maximum-minimum thermometer readings of all thermometers during the entire curing period for all concrete pours. The project representative will keep this record, and CONTRACTOR shall assist in obtaining needed information.

3.15 SIDEWALKS AND EXTERIOR SLABS

- A. Sidewalks shall be constructed where shown on the drawings. They shall be a minimum of 5 inches thick and shall slope away from buildings or structures at a rate of 1/4 inch per foot. Concrete shall be as previously specified. Sidewalks shall be constructed on 3 inches of compacted granular fill. They shall have tooled joints of 1-inch minimum depth at approximately 5-foot centers with 1/2-inch preformed expansion joint filler at approximately 25-foot centers with one at all corners and located anywhere sidewalks abut structures and buildings.

3.16 CONCRETE REMOVAL AND PATCHING

- A. All areas disturbed as a result of concrete removal or repair shall be patched as specified in Bonding to Existing Concrete.

3.17 CURING AND SEALING INTERIOR BUILDING FLOORS

- A. Install cure-seal hardener product in accordance with manufacturer's instructions. Apply only to those floors noted to be sealed in the finish schedule.
- B. Where product will be used for moist curing, sealing and hardening, apply to new concrete as soon as the concrete is firm enough to walk on after troweling. Where product will be used for sealing and hardening only, surface must be free of dust, dirt, laitance, curing compounds, and any material that would inhibit the penetration of the product. In some instances, the floor may need to be stripped and neutralized before application.
- C. Spray on at rate of 200 square feet per gallon.

- D. Keep surfaces wet with cure-seal hardener for minimum soak-in period of 30 minutes, without allowing drying out or becoming slippery. In hot weather, slipperiness may appear before the 30-minute time period has elapsed. If that occurs, apply more cure-seal hardener as required to keep entire surface in a nonslippery state for the first 15 minutes. For the remaining 15 minutes, mist the surface as needed with water to keep the material in a nonslippery state.
- E. After this period, when treated surface becomes slippery, lightly mist with water until slipperiness disappears.
- F. Wait for surface to become slippery again and then flush entire surface with water removing all residue of cure-seal hardener.
- G. Squeegee surface completely dry, flushing any remaining slippery areas until no residue remains.
- H. Wet vacuum or scrubbing machines may be used to remove residue, provided manufacturer's instructions are followed.
- I. Protect installed floors until chemical reaction process is complete; at least 3 months.
- J. Clean up spills immediately and spot-treat stains with good degreaser or oil emulsifier.
- K. Protection and cleaning of floors are the responsibility of CONTRACTOR until final completion. Replace concrete that becomes stained because of improper precautions or lack of cleaning.

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Shop-fabricated carbon steel and stainless steel items, including lintels and door frames.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM A36—Carbon Structural Steel.
- B. ASTM A53—Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASTM A123—Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- D. ASTM A143—Practice for Safeguarding Against Embrittlement of Hot-Dipped Galvanized Structural Steel Products and Procedure for Detecting Embrittlement.
- E. ASTM A153—Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- F. ASTM A176—Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip.
- G. ASTM A276—Stainless Steel Bars and Shapes.
- H. ASTM A307—Carbon Steel Bolts, Studs, and Threaded Rod 60,000 psi Tensile Strength.
- I. ASTM A384—Practice for Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies.
- J. ASTM A385—Practice for Providing High-Quality Zinc Coatings (Hot-Dip).
- K. ASTM A500—Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- L. ASTM A780—Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
- M. ASTM A992—Structural Steel Shapes.
- N. ASTM A1008—Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.

- O. ASTM A1011—Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- P. AWS A2.0—Standard Symbols for Welding, Brazing, and Nondestructive Examination.
- Q. AWS D1.1—Structural Welding Code—Steel.
- R. AWS D1.6—Structural Welding Code—Stainless Steel.
- S. AWS A5.4—Stainless Steel Electrodes for Shielded Metal Arc Welding.

1.03 DESIGN REQUIREMENTS

- A. All fabrications shall meet applicable code requirements including OSHA.

1.04 SUBMITTALS FOR REVIEW

- A. Comply with pertinent provisions of Section 01300—Submittals.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, sections, elevations, and details where applicable.
- C. Mill Test Reports: Submit indicating structural strength and composition.
- D. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.

1.05 QUALITY ASSURANCE

- A. Fabricate steel members in accordance with AISC Code of Standard Practice.
- B. Welders Certificates: Certify welders employed on the work, verifying AWS qualification within the previous 12 months.

1.06 QUALIFICATIONS

- A. Qualify welding processes and welding operators in accordance with AWS *Standard Qualifications Procedures*.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to job site properly marked to identify the structure for which it is intended and at such intervals to ensure uninterrupted progress of the work. Marking shall correspond to markings indicated on the shop drawings.
- B. Store all members off the ground using pallets, platforms, or other supports.
- C. Do not store materials on the structure in a manner that might cause distortion or damage to the members of the supporting structures.

- D. In the event of damage, immediately make all repairs and replacements necessary at no additional cost to OWNER.

PART 2-PRODUCTS

2.01 MATERIALS-CARBON STEEL

- A. Steel Sections:
1. ASTM A36 (channels, angles, plates).
 2. ASTM A992 (wide flange sections).
 3. Pipe: ASTM A53, Grade B.
 4. Tubes: ASTM A500, Grade B.
 5. Silicon content of steel members to be hot-dipped galvanized shall be in the range of 0 to 0.04%. Submit mill test reports confirming compliance.
- B. Sheet Steel: ASTM A1011.
- C. Plain Washers: Round carbon steel complying with FS FF-W-92.
- D. Bolts and Nuts: ASTM A307 Grade A, or galvanized to ASTM A153 for galvanized components for exterior use and where built into exterior walls.
- E. Lock Washers: Helical spring-type carbon steel complying with FS FF-W-84.
- F. Welding Electrodes:
1. Comply with AWS D1.1. E70XX electrodes for carbon steel. For ASTM A992 steel and any other steel with 50 ksi or greater yield strength, use only E7018 or other E70XX electrodes specifically permitted by AWS D1.1.
 2. ER316L electrodes for 316L stainless steel.
 3. ER308L electrodes for 304L stainless steel.
- G. Select fasteners for the type, grade, and class required.

2.02 MATERIALS-STAINLESS STEEL

- A. Unless otherwise noted, all stainless steel shall meet the requirements of ASTM A276 and shall be Type 316L.
- B. If components are not available in Type 316L, other 300 Series type shall be used as approved by ENGINEER.

2.03 FABRICATION

- A. Fabrication and Assembly:
1. Fabricate items of structural steel in accordance with AISC Specifications and as indicated on the approved shop drawings.
 2. Properly mark and match-mark materials for field assembly and for identification as to structure and site for which intended.
 3. Fabricate for delivery sequence which will expedite erection and minimize field handling of materials.

4. Where finishing is required, complete the assembly, including welding of units, before start of finishing operation.
 5. Provide finish surfaces of members exposed in the final structure free of markings, burrs, and other defects.
- B. Connections:
1. Bolts and washers of all types and sizes shall be provided for completion of all field erection.
 2. Comply with AWS Code for procedures, appearance, and quality of welds used in correcting welded work.
 3. Assemble and weld built-up sections to produce true alignment of axes without warp.
 4. Welding shall be done by the shielded arc process.
 5. All welds shall be chipped, ground smooth, and primed immediately after fabrication.
- C. Workmanship:
1. Use materials of size and thickness shown or, if not shown, of size and thickness to produce strength and durability in the finished product.
 2. Work to dimensions shown or accepted on the Shop drawings using proven details of fabrication and support.
 3. Form exposed work true to line and level, with accurate angles and surfaces, and with straight sharp edges.
 4. Form bent metal corners to smallest radius possible without causing grain separation or otherwise impairing works.
 5. Cap all open ends of pipe and structural tubing.
 6. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush; match and blend with adjoining surfaces.
 7. Provide for anchorage of the type shown. Coordinate with supporting structures. Fabricate and space the anchoring devices to provide adequate support for intended use.
 8. Cut, reinforce, drill, and tap miscellaneous metal work as indicated to receive hardware and similar items.

2.04 FINISHES

- A. Carbon steel surfaces shall be prepared by abrasive blasting to SSPC-SP10 as specified in Section 09900—Painting.
- B. Do not prime surfaces where galvanizing or field welding is required.
- C. Immediately after surface preparation, prime paint carbon steel items with one coat in accordance with manufacturer's instructions and Section 09900—Painting.
- D. Structural Steel Members: Galvanize after fabrication to the requirements in this section and ASTM A123.
- E. Surfaces that will be inaccessible after assembly or erection shall be finish painted prior to assembly or erection.
- F. Galvanizing:
1. All items, except piping designated to be galvanized, shall be hot-dipped galvanized in accordance with ASTM Specification A123 and A153. Piping shall be hot-dipped

galvanized in accordance with ASTM A53. Furnish a Certificate of Compliance stating that the galvanizing complies with ASTM Specifications and Standards and all other applicable requirements specified herein.

2. Fabrication of items to be galvanized shall be in accordance with ASTM A143, A384, and A385. Structural steel shall be fabricated generally in accordance with Class 1 guidelines as shown in *Recommended Details for Galvanized Structures* as published by the American Hot Dip Galvanizer's Association, Inc.
3. Galvanized items shall be handled, transported, and stored to prevent damage or staining to the coating. Maintain adequate ventilation and continuous drainage.
4. Silicon content for steel to be hot-dipped galvanized shall be in the range of 0 to 0.04%.
5. Steel work shall be precleaned utilizing a caustic bath, acid pickle and flux, or shall be blast cleaned and fluxed. In either case, all surface contaminants and coatings shall be removed.
6. All welding shall be performed in accordance with the American Welding Society publication D19.0-72, *Welding Zinc Coated Steel*. All uncoated weld areas shall be touched up.

PART 3-EXECUTION

3.01 EXAMINATION

- A. Correct conditions detrimental to the proper and timely completion of the work.
- B. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Furnish setting drawings, diagrams, templates, instructions, and directions for installation of anchorages such as concrete inserts, anchor bolts, and miscellaneous items having integral anchors which are to be embedded in concrete construction.
- B. Coordinate delivery of such items to project.
- C. Clean and strip primed steel items to bare metal where site welding is required.

3.03 INSTALLATION

- A. Setting Precast Anchorages:
 1. Clean bearing surfaces free from bond-reducing materials, and roughen to improve bond to surfaces. Clean the bottom surface of bearing plates.
 2. After the bearing members have been positioned and plumbed, tighten and anchor bolts. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the bearing plate before packing with grout.
 3. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.
- B. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction including threaded fasteners for concrete inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.

C. Cutting, Fitting, and Placement:

1. Perform cutting, drilling, and fitting for installation of miscellaneous metal fabrications.
2. Set work accurately in location, alignment, and elevation and make plumb, level, true, and free from rack measured from established lines and levels.
3. Fit exposed connections accurately together to form tight hairline joints.
4. Weld connections that are not to be left as exposed joints, grind joints smooth, and touchup shop paint coat or galvanizing repair.

3.04 FIELD WELDING

- A. Comply with AWS Code for procedures of manual shielded metal arc welding, appearance and quality of weld made, and methods in correcting welding work.

3.05 TOUCH-UP PAINTING

- A. Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting in accordance with Section 09900–Painting.

3.06 GALVANIZING REPAIR

- A. Areas damaged by welding, flame-cutting, or during handling, transport, or erection shall be repaired by one of the following methods whenever damage exceeds 3/16 inch in width.
1. Cold Galvanizing Compound:
 - a. Surfaces to be reconditioned with zinc-rich paint shall be clean, dry, and free of oil, grease, and corrosion products.
 - b. Areas to be repaired shall be power disc-sanded to bright metal. To ensure that a smooth reconditioned coating can be effected, surface preparation shall extend into the undamaged galvanized coating.
 - c. Touch-up paint shall be an organic cold-galvanized compound having a minimum of 94% zinc dust in the dry film.
 - d. The paint shall be spray- or brush-applied in multiple coats until a dry film thickness of 8 mils minimum has been achieved. A finish coat of aluminum paint shall be applied to provide a color blend with the surrounding galvanizing.
 - e. Coating thickness shall be verified by measurements with a magnetic or electromagnetic gauge.
 2. Zinc-Based Solder:
 - a. Surfaces to be reconditioned with zinc-based solder shall be clean, dry, and free of oil, grease, and corrosion products.
 - b. Areas to be repaired shall be wire-brushed.
 - c. Heat shall be applied slowly and broadly close to but not directly onto the area to be repaired. The zinc-based solder rod shall be rubbed onto the heated metal until the rod begins to melt. A flexible blade or wire brush shall be used to spread the melt over the area to be covered. The zinc-based solder shall be applied in a minimum thickness of 2 mils.
 - d. Coating thickness shall be verified by measurements with a magnetic or electromagnetic gauge.

3.07 SCHEDULE

- A. The following schedule is a list of principal items only. Refer to Drawing details for items not specifically scheduled.
- B. Guard Posts: Steel pipe, concrete-filled, crowned cap, as detailed-galvanized and field finish paint in accordance with Division 9.
- C. Lintels: Shop prime paint finish for interior wall lintels; galvanized and field finish paint in accordance with Division 9 for exterior wall lintels. Lintels approved by ENGINEER shall be placed over all masonry openings, even though not shown on the drawings.
- D. Door Frames for Overhead Door Openings: Jamb angle sections-galvanized and field finish paint in accordance with Division 9. Sill angle sections-galvanized finish.

END OF SECTION

SECTION 05502

SLIDE GATES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: This section includes furnishing, installing, and placing into successful operation slide gates as shown on the Drawings. Slide gates shall be complete with gate, guides, framing, operator, and other components as required to make a complete system.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 SYSTEM DESCRIPTION

- A. Application: Slide gates shall be suitable for use in wastewater streams that, in addition, may contain iron salts, polymers, chlorine solution, or sulfur dioxide solutions.

1.03 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2–PRODUCTS

2.01 MANUFACTURERS

- A. Fabricated stainless steel slide gates shall be Whipps, Inc. of Athol, Massachusetts, Rodney Hunt of Orange, Massachusetts, Fontaine USA of Bedford, New Hampshire, or equal.

2.02 GATE CONSTRUCTION

- A. The slide gates shown on the drawings and listed in the specifications shall conform to the latest edition of the AWWA Standard for Slide Gates, AWWA C561, and to the following detailed specifications.
- B. Disc: The gate disc shall consist of a flat plate reinforced with structural or formed members welded to the plate. The disc shall be designed to limit the deflection of the gate to 1/360 of its span or 1/16 inch, whichever is less, under design head. The working design stresses shall not exceed the lesser of 40% of the yield strength or 25% of the ultimate strength of the material. All disc components shall have a minimum material thickness of 1/4 inch. Provide ultra-high molecular weight polymer bearing bars on each side of gate.

- C. Frame: The gate frame shall consist of guides, invert member, and operator yoke welded or bolted together to form a rigid one-piece frame. The guides shall conform to AWWA C561 requirements and shall have a minimum material thickness of 1/4 inch. The guide slot shall engage the disc plate a minimum of 1 inch. The invert member shall be an angle, channel, or formed shape welded to the bottom of the guide to form a flush surface and to meet with the disc seal. For self-contained gates, the yoke members shall be designed to limit the deflection to 1/360 of its span. The working stresses shall not exceed the lesser of 40% of the yield strength or 25% of the ultimate strength of the material and shall be arranged to permit removing the disc from the frame.
- D. Seals: "J"-type or self-adjusting UHMW seals shall be attached to the frame if necessary so that leakage shall not exceed 0.05 gpm per foot of seal perimeter of the maximum head in the seating and unseating head condition.
- E. Stems: Stems shall be 304 stainless steel and shall have a minimum diameter of 1 1/2 inches. Stem threads shall be of the cut Acme type. Stems shall be designed to transmit in compression a minimum of two times the rated output of the hoist at 40 pounds effort on the crank or handwheel. The L/r ratio of the unsupported stem shall not exceed 200. Stem guides, where required to limit the unsupported stem length, shall be bronze or UHMW bushed. All gates having widths greater than two times their height shall be provided with two lifting devices connected by a tandem shaft for simultaneous operation.
- F. Stem Covers: Rising stem gates shall be provided with clear butyrate or Lexan stem covers to provide indication of gate position, permit inspection of the stem threads, and to protect the stem from contamination. The stem cover shall be constructed of clear rigid butyrate or Lexan. Vent holes shall be provided to prevent condensation.
- G. All gates shall be shipped and delivered to the project site fully assembled unless CONTRACTOR requests other arrangements.
- H. All gates shall be provided with UHMW seats on the upstream and downstream sides of the disc to prevent metal-to-metal contact between the disc and the frame.

2.03 MATERIALS

- A. Slide gate components shall be 304 stainless steel unless otherwise indicated. All welds and weld burn shall be sandblasted or passivated at the factory to provide a clean, uniform finish. Self-adjusting UHMWPE seat/seals shall conform to ASTM D4020.
- B. "J"-type side seals shall be rubber conforming to ASTM D2000.

2.04 MANUAL OPERATORS

- A. Unless otherwise specified, operation of the gate shall be by an antifriction handwheel bench stand or by crank operation through right angle bevel gears. Maximum effort shall not exceed 40 pounds on handwheel or crank to raise gate under full operating head. The lift mechanism shall be capable of withstanding, without damage, a handwheel or crank effort of 200 pounds. Bench stand shall be minimum of 36 inches above operating floor. Where possible, the bench stand shall be 42 inches above the operating floor where the gate interrupts handrailing. If the bench stand must be higher to allow operation of the gate, provide a horizontal member across the yoke at 42 inches above the operating floor. The member shall meet OSHA strength requirements for guardrail.

- B. A suitable side-mount operator system shall be provided where the bench stand is located over 48 inches above the operating floor. System shall include right angle bevel gear boxes, stainless steel shafting, and flexible couplings as required for operation 36 inches above the operating floor.
- C. The hoist nut shall be manganese bronze conforming to ASTM B584 C86500. The hoist nut shall be supported on roller bearings. The hoist shall be outfitted with a stainless steel pinion shaft and the pinion shaft shall be supported by roller or ball bearings. A 2-inch-square nut shall be provided on the pinion shaft to allow operation by a portable electric operator. A lubrication fitting shall be provided for lubrication of the hoist bearings without disassembly of the hoist. Suitable seals shall be provided to prevent entry of foreign matter. The direction of handwheel or crank rotation to open the gate shall be clearly and permanently marked on the hoist. Where the actuators will be interconnected, it shall be by a flexible coupling and stainless steel shaft or extruded aluminum tubing with stainless steel hardware.

2.05 ANCHOR BOLTS

- A. CONTRACTOR shall provide anchor bolts necessary for equipment furnished. Anchor bolts shall be Type 304 stainless steel and shall be of ample strength for intended service. Provide anchor bolts in accordance with Section 05560—Anchor Bolts, Expansion Bolts and Resin Anchors.

PART 3—EXECUTION

NOT APPLICABLE

END OF SECTION

SECTION 05560

ANCHOR BOLTS AND POST-INSTALLED ANCHORS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Anchor bolts, expansion bolts, adhesive anchors, and screw anchors.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM A36/A36M—Standard Specification for Carbon Structural Steel.
- B. ASTM F1554—Anchor Bolts, Steel, 36, 55, and 105-ksi yield strength.
- C. ICC-ES International Code Council—Evaluation Service.
- D. AC 193—Acceptance Criteria for Mechanical Anchors in Concrete Elements.
- E. AC 308—Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete.
- F. ACI 355.2—Qualification of Post-Installed Mechanical Anchors in Concrete and Commentary.
- G. ACI 355.4—Qualification of Post-Installed Adhesive Anchors in Concrete and Commentary.

PART 2—PRODUCTS

2.01 ANCHOR BOLTS

- A. Anchor bolts complete with washers and nuts shall be fabricated as shown or as specified by the equipment manufacturer and unless otherwise indicated shall be hot-dip galvanized carbon steel or 316 stainless steel. Anchor bolts shall, as a minimum, conform to the requirements of ASTM F1554-Grade 36.
- B. Stainless steel anchor bolts shall be used in all submerged locations, below final grade, and in contact with aluminum and other items not to be painted. Galvanized anchor bolts shall be used elsewhere.

2.02 EXPANSION BOLTS

- A. Expansion bolts shall be KWIK Bolt TZ by Hilti, Inc., TruBolt+ by ITW Red Head, Power-Stud + SD2, SD4, or SD6, by Powers Fastening Systems, Strong-Bolt, or Strong-Bolt 2, by Simpson Strong-Tie Anchor Systems, or approved equal.

- B. Unless waived by ENGINEER for certain applications, all expansion bolts shall comply with the 2014 Indiana Building Code, AC 193, and ACI 355.2. They shall be ICC-ES approved for use in cracked and uncracked concrete.
- C. Expansion bolts will not be permitted as substitutes for embedded anchor bolts except with the prior written acceptance of ENGINEER or where otherwise specifically called for.
- D. Unless indicated otherwise on the drawings or specified, use the following bolt material for the various installation situations:
 - 1. Stainless Steel: For all submerged locations, below final grade, and in contact with aluminum appurtenances and other items not to be painted. Also for anchoring equipment, unless otherwise specified.
 - 2. Steel: In other locations in contact with items to be painted or encased in concrete.

2.03 ADHESIVE ANCHORS

- A. Adhesive anchors shall be HIT HY 200 by Hilti, Inc., Red Head Epcon C6+ or Red Head Epcon S7 by ITW, PE 1000+ by Powers Fastening Systems, Set-XP by Simpson Strong-Tie Anchor Systems, or approved equal.
- B. Unless waived by ENGINEER for certain applications, all adhesive anchors shall comply with the 2014 Indiana Building Code, AC 308, and ACI 355.4. They shall be ICC-ES approved for use in cracked and uncracked concrete.

2.04 SCREW ANCHORS

- A. Screw anchors shall be KWIK HUS-EZ by Hilti, Inc., Wedge-Bolt+ by Powers Fastening Systems, Titen-UD by Simpson Strong-Tie Anchor Systems, or approved equal.
- B. Unless waived by ENGINEER for certain applications, all screw anchors shall comply with the 2014 Indiana Building Code. They shall be ICC-ES approved for use in cracked and uncracked concrete.

PART 3—EXECUTION

3.01 ANCHOR BOLTS

- A. Anchor bolts for structural members shall be located as shown and specified.
- B. Anchor bolts for mechanical equipment shall have embedment length, edge distances, and spacing as required by the equipment manufacturer.
- C. All dirt or foreign materials shall be removed prior to embedding into concrete. After anchor bolts have been embedded, their threads shall be protected by grease and by installing the nuts or by other means until the time of installation of the equipment or metal work.

3.02 EXPANSION BOLTS

- A. Unless otherwise noted on the drawings, expansion bolt edge distance and spacing shall be in accordance with manufacturer's printed installation instructions.

- B. Bolt embedment shall at least equal 6-bolt diameters.
- C. Installation procedures shall be in accordance with the manufacturer's printed installation instructions.
- D. Where location of bolts is adjustable, reinforcing steel shall be located prior to drilling holes and bolts shall be located to clear reinforcing steel.

3.03 ADHESIVE ANCHORS

- A. At locations shown on the drawings, reinforcing bars or threaded rod shall be provided in existing concrete by drilling holes, injecting epoxy adhesive, and inserting the reinforcing bar.
- B. All existing surfaces to receive adhesive anchors, including the entire area in contact with the new concrete, shall be cleaned and roughened to amplitude of 1/4 inch.
- C. Installation procedures shall be in accordance with the manufacturer's printed installation instructions.
- D. Where location of anchors is adjustable, reinforcing steel shall be located prior to drilling holes and anchors shall be located to clear reinforcing steel.
- E. CONTRACTOR shall arrange an anchor manufacturer's representative to provide on-site installation training for installation of their adhesive anchor system products. Submit documentation that all CONTRACTOR's personnel or subcontractors who install adhesive anchors have been trained prior to the announcement of anchor installation.

3.04 SCREW ANCHORS

- A. Unless otherwise noted on the drawings, screw anchor edge distance and spacing shall be in accordance with manufacturer's recommendations.
- B. Anchor embedment shall at least equal 6-bolt diameters.
- C. Installation procedures shall be in accordance with the manufacturer's printed installation instructions.
- D. Where location of anchors is adjustable, reinforcing steel shall be located prior to drilling holes and anchors shall be located to clear reinforcing steel.

END OF SECTION

SECTION 06112

WOOD FRAMING AND SHEATHING

PART 1—GENERAL

1.01 SUMMARY

- A. Work included:
 - 1. Roof sheathing.
 - 2. Miscellaneous framing and sheathing.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ALSC—American Lumber Standards Committee.
- B. APA—American Plywood Association.
- C. AWWA—American Wood Preservers Association.
- D. NFPA—National Forest Products Association.
- E. NLGA—National Lumber Grades Authority.
- F. SPIB—Southern Pine Inspection Bureau.
- G. WCLIB—West Coast Lumber Inspection Bureau.
- H. WWPA—Western Wood Products Association.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Protect lumber and other building materials and keep under cover both in transit and at the job site. Protect from dampness. Stack framing lumber and plywood to insure proper air circulation. Locate stacks on well-drained areas. Support 6 inches above grade and protect with waterproof cover.

PART 2—PRODUCTS

2.01 MATERIALS

- A. Lumber shall be kiln-dried with moisture content not to exceed 19% at time of installation and grade marked according to the National Lumber Manufacturer's Association.
- B. All studs shall be 2 inches by 4 inches nominal or 2 inches by 6 inches nominal as shown on the drawings and shall be No. 2 Douglas Fir, No. 2 Southern Pine, or better.

- C. All roof joists, ceiling joists, and floor joists shall be No. 2 Southern Pine or better.
- D. Plywood roof, wall, and ceiling sheathing shall be grade C-D Ext., or better, graded in accordance with the American Plywood Association.
- E. Wood sills, plates, blocking, etc., to be same grade as studs.

PART 3—EXECUTION

3.01 FRAMING

- A. General: All rough framing lumber and all other wood framing, studs blocking, and furring shall be accurately set to required lines and levels, closely fitted, shimmed, and rigidly secured in place.

3.02 PLYWOOD SHEATHING

- A. Plywood sheathing shall be nailed at 6 inches on center at edges and 12 inches on center at intermediate supports with 8d common nails.
- B. Secure roof sheathing perpendicular to framing members with ends staggered and sheet ends over firm bearing. Use sheathing clips between sheets between roof framing members, or provide solid edge blocking between sheets.

3.03 CONNECTIONS

- A. All framing connections and nailing shall be in accordance with the details shown and/or the 2014 Indiana Building Code minimum requirements, whichever is more restrictive.
- B. Framing connectors shall be Simpson Strong Tie or equal. Connector numbers shown on details are Simpson. Submit engineering data on any substitutes.
- C. Connectors shall be installed in accordance with manufacturer's requirements.

END OF SECTION

SECTION 06114

WOOD BLOCKING AND CURBING

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Roof curbs and cants.
 - 2. Wood blocking.
 - 3. Wood furring and grounds.
 - 4. Preservative treatment of wood.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ALSC–American Lumber Standards Committee.
- B. AWWA–American Wood Preservers Association.
- C. NFPA–National Forest Products Association.
- D. NLGA–National Lumber Grades Authority.
- E. SPIB–Southern Pine Inspection Bureau.
- F. WCLIB–West Coast Lumber Inspection Bureau.
- G. WWPA–Western Wood Products Association.

1.03 SUBMITTALS

- A. Submittals shall be in accordance with Section 01300–Submittals.
- B. Certification of type of wood and wood treatment to be used.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. All materials shall be thoroughly sealed and protected from weather during transport and at the jobsite. Protect from dampness.

PART 2–PRODUCTS

2.01 MATERIALS

- A. Lumber for roof curbs, cants, blocking, furring, and grounds shall be “standard” grade Douglas Fir, No. 2 Southern Pine, or better, graded in accordance with the WWPA, WCLIB, NLGA, or SPIB grading rules as applicable. Lumber shall bear the grading agency’s stamp.

- B. Wood shall be kiln-dried with moisture content not to exceed 19% at time of installation.
- C. All lumber furnished under this section shall be pressure-treated with a chromated copper arsenite (CCA) waterborne preservative to a minimum retention of 0.40 pounds per cubic foot. Acceptable products include Hoover Treated Wood Products CCA, Wood Preserving Co. Osmose CCA, or equal. Cuts shall be treated in the field with a brush-on waterborne preservative compatible with the pressure treatment.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Provide and install wood curbs, cants, blocking, furring, and grounds of proper size and shape where required to secure other work or equipment in place.
- B. Members shall be installed true to lines, level, plumb, and secure.
- C. Connections and nailing shall be in accordance with the details shown and/or the 2014 Indiana Building Code minimum requirements, whichever is more restrictive.
- D. Apply brush-on wood preservative treatment to cuts in accordance with manufacturer's recommendations.

END OF SECTION

SECTION 06193

PLATE CONNECTED WOOD TRUSSES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. All materials, equipment, and labor necessary for the prefabrication, delivery, and permanent setting of wood trusses on buildings.
 - 2. Bridging.
 - 3. Temporary and permanent bracing.
 - 4. Related hardware.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ALSC—American Lumber Standards Committee.
- B. APA—American Plywood Association.
- C. ASTM A167—Stainless and Heat-Resisting Chromium–Nickel Steel Plate, Sheet, and Strip.
- D. ASTM A653—Sheet Steel, Zinc-Coated (Galvanized) by the Hot Dip Process, (Structural Physical) Quality.
- E. AWWA—American Wood Preservers Association.
- F. NFPA—National Forest Products Association.
- G. SPIB—Southern Pine Inspection Bureau.
- H. TPI—Truss Plate Institute.
- I. WWPA—Western Wood Products Association.

1.03 DESIGN REQUIREMENTS

- A. The basic design loads shall be in accordance with the 2014 Indiana Building Code.
- B. Dead Loads and Collateral Loads: Trusses shall be designed for a Top Chord dead load of 10 psf, a bottom chord dead load of 5 psf, plus bottom chord collateral load of 5 psf.
- C. Live Loads:
 - 1. Roof live loads shall be computed in accordance with the 2014 Indiana Building Code using a ground snow load of 2.5 psf, a snow load importance factor of 1.1, and snow exposure and thermal factors as per Code. Minimum roof live load shall be 20 psf. Snow load and minimum roof live load shall be applied to the top chord.

2. Design for unbalanced snow loads in accordance with the building code.
3. Design for sliding and drifted snow loads as shown on the drawings.
4. Roof live loads shall be applied to the horizontal projection of the roof.
5. Bottom chord Live Load shall be 20 psf.

D. Wind Loads:

1. Wind loads shall be computed in accordance with the 2014 Indiana Building Code using a 3-second gust wind speed of 90 mph, exposure category C, and an importance factor of 1.15.

E. Concentrated Loads: Design for any concentrated loads shown on the drawings.

F. Combination of Loads: The combining of loads for design purposes shall be as prescribed with the 2014 Indiana Building Code.

1.04 SUBMITTALS

A. Submittals shall be as in Section 01300–Submittals.

B. Professional Engineer: All truss designs shall bear the name and seal of a State of Indiana licensed professional engineer. CONTRACTOR shall be responsible for submitting the required additional copies of truss drawings with original stamp and signature for submittal to the State of Indiana. These materials must be submitted prior to installation.

C. Truss designs shall include the following information: Pitch, span, dimensions, and spacing of trusses; truss bearing sizes and locations; design loading of truss and allowable stress increase; axial forces in each truss member; nominal sizes and location of connector plates at all joints; size, species, and stress of grade of lumber for all truss members; camber; permanent lateral bracing as required by design to reduce buckling length of individual truss members; and handling and erection recommendations. Where sheathing is not attached directly to truss bottom chords, provide bottom chord bracing and bridging as required by design to resist wind uplift loads.

1.05 QUALITY ASSURANCE

A. The design and fabrication criteria of all wood trusses shall meet the following:

1. “National Design Specifications for Stress-Grade Lumber and its Fastenings,” by National Forest Products Association (latest revision).
2. “Timber Construction Standards,” by American Institute of Timber Construction (latest revision).
3. “Design Specifications for Light Metal Plate Connected Wood Trusses,” by Truss Plate Institute (latest revision).
4. 2014 Indiana Building Code.

B. Fabricator Manufacturer: Minimum three years experience in successful fabrication of trusses comparable to type indicated for this project.

C. Design Trusses under direct supervision of a professional engineer experienced in design of this work and licensed in the State of Indiana.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Fabricated trusses and subcomponents shall be so handled and stored that they are not subject to damage.
- B. If the trusses are to be stockpiled prior to erection, sufficient bearing points and/or bracing shall be provided to prevent excessive lateral bending or tipping over.

PART 2—PRODUCTS

2.01 MATERIALS

- A. Lumber:
 - 1. All lumber used for truss members shall be Spruce-Pine-Fir, Douglas Fir, Southern Pine, Hem-Fir, or Western Larch and shall conform to lumber for trusses and shall have a minimum nonrepetitive fiber bending strength of 1,050 psi. If design calls for use of a lumber with greater strength, then that lumber shall be used for the associated members.
 - 2. At the time of delivery, the moisture content of all lumber shall not exceed 19% kiln-dried.
 - 3. All lumber shall conform to the species and shall be fully recognized nominal sizes shown on the drawings or truss engineering design.
 - 4. All members shall be cut from lumber which bear the proper grade-mark stamps of a licensed lumber inspection agency.
- B. Connectors:
 - 1. All truss connector plates shall be manufactured from stainless steel.
 - 2. The connectors shall have a series of nail-like projections which are designed to separate the fibers of the wood into which they are pressed in accordance with accepted nailing practices.
 - 3. Where field-assembly of truss subcomponents is necessary, the connections shall be in accordance with the details shown on the truss design drawings, approved by a Professional Engineer.

2.02 FABRICATION

- A. All trusses and other roof structural components shall be fabricated in a properly equipped manufacturing facility of a permanent nature. They shall be manufactured by experienced workmen using precision cutting and truss fabricating equipment under the direct supervision of a qualified foreman. All trusses shall be fabricated under strict rules of inspection and quality control as the local code may require and be open to the observation of ENGINEER or his representative at all times.
- B. All truss members shall be accurately cut to length, angle, and be true to line to assure tight joints for finished truss.
- C. All truss members and connector plates shall be properly placed in special jigs and the members tightly clamped in place remaining in that position until the connector plates have been pressed into the lumber simultaneously on both sides of the joints.

- D. Camber shall be built into the trusses, as noted on the engineering truss designs, by properly positioning the members in the fabricating jig. No camber will be allowed on the bottom chord.

PART 3–EXECUTION

3.01 ERECTION

- A. Install trusses in accordance with manufacturer's instructions and TPI BWT (latest revision).
- B. Framing anchors and/or truss hangers shall be provided by CONTRACTOR, as required, or detailed to withstand all loads, both dead and live, as well as wind and transfer loads to bearing.
- C. Field erection of the trusses, including items such as handling, safety precautions, and temporary bracing to prevent toppling or the domino effect on the trusses during erection, and any other safeguards or procedures consistent with good workmanship and good building erection practices, shall be employed.
- D. During the entire construction period, all contractors shall provide means for adequate distribution of concentrated loads so that the carrying capacity of any one truss and/or other component is not exceeded.
- E. Proper erection bracing shall be installed to hold the trusses true and plumb and in safe condition until permanent truss bracing and bridging can be solidly nailed in place to form a structurally sound roof framing system. All erection and permanent bracing shall be installed and all components permanently fastened before the application of any loads. Provide all permanent bracing necessary for truss stability. Where sheathing is not attached directly to truss bottom chord and where required by design, provide bottom chord bracing and bridging as required to resist wind uplift loads.
- F. Frame openings between trusses with lumber in accordance with Section 06112–Wood Framing and Sheathing.

END OF SECTION

SECTION 06600

FIBERGLASS PLANK SYSTEM

PART 1—GENERAL

1.01 SUMMARY

- A. This section includes fiberglass plank system upstream of the new mechanical step screen and at the new Parshall flume as shown on drawings.

1.02 QUALITY ASSURANCE

- A. Fabricator Qualifications: Firm with minimum of 5 years experience in successfully producing FRP fabrications similar to that indicated in this project.

1.03 DESIGN CRITERIA

- A. The design of FRP products including connections shall be in accordance with governing building codes and standards as applicable.
- B. Design live loads of FRP plank system shall not be less than 100 pounds per square foot uniformly distributed unless specifically stated otherwise in drawings.
- C. Structural members shall be designed to support all applied loads. Deflection in any direction shall not be more than $L/180$ of span for structural members. Connections shall be designed to transfer the loads. See Section 06610—Fiberglass Fabrications.

1.04 SUBMITTALS

- A. Shop drawings shall be submitted to ENGINEER in accordance with Section 01300.
- B. Manufacturer's Catalog Data Showing:
 - 1. Dimensions, spacings, and construction of products.
 - 2. Materials of construction.
- C. Detail Shop Drawings Showing:
 - 1. Dimensions.
 - 2. Sectional assembly.
 - 3. Location and identification mark.
 - 4. Size and type of support frames required.
- D. Samples of each type of product shall be submitted.

PART 2—PRODUCTS

2.01 GENERAL

- A. All FRP products shall be manufactured using a pultruded process utilizing polyester resin with flame retardant and ultraviolet inhibitor additives. A synthetic surface veil shall be the

outermost layer covering the exterior surface. The flame retardant FRP shapes shall achieve a flame spread of 25 or less in accordance with ASTM test method E-84.

- B. After fabrication, all cut ends, holes, and abrasions of FRP shapes shall be sealed with a compatible resin coating.
- C. FRP products exposed to weather shall contain an ultraviolet inhibitor. Should additional ultraviolet protection be required, a 1-mil minimum UV coating can be applied.
- D. All exposed surfaces shall be smooth and true to form.
- E. Manufacturers: Strongwell, or equal.

2.02 FIBERGLASS PLANKS SYSTEM

- A. General:
 - 1. FRP planks shall be shipped from the manufacturer, palletized, and banded with exposed edges protected to prevent damage in shipment.
 - 2. Each piece shall be clearly marked showing manufacturer's applicable drawing number.
 - 3. FRP planks shall be SAFPLANK® as manufactured by Strongwell.
- B. Design:
 - 1. FRP planks shall be 2 inches deep and be capable of withstanding a uniform load of 100 pounds per square foot, or a concentrated load of 300 pounds on an area of 4 square inches located in the center of the plank.
 - 2. The top surface of all panels shall have a nonskid grit.
 - 3. Panels shall be fabricated to the sizes shown on the drawings.
 - 4. Hold-down clamps shall be Type 316L stainless steel insert hold-downs as provided by Strongwell. A minimum of one each per panel.
 - 5. Color shall be gray.
- C. Products:
 - 1. The FRP planks shall be manufactured by the pultrusion process. The planks shall be 2 inches deep and 24 inches wide (12 inches wide where needed) with interlocking joints on outside legs of plank. The glass fiber reinforcement for the planks shall be a core of continuous glass strand rovings wrapped with continuous strand glass mat. A synthetic surface veil shall be the outermost layer covering the exterior surfaces.
 - 2. Fiberglass planks shall be made from a fire retardant isophthalic polyester resin system that meets the flame rating of 25 or less in accordance with ASTM E-84 testing and meets the self-extinguishing requirements of ASTM D-635. UV inhibitors are added to the resin.

PART 3—EXECUTION

3.01 PREPARATION

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

3.02 GENERAL INSTALLATION

- A. Fastening to in-place construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous FRP fabrications to in-place construction; include threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, and other connectors as determined by ENGINEER.
- B. Cutting, fitting, and placement: Perform cutting, drilling, and fitting required for installation of miscellaneous FRP fabrications. Set FRP fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; measured from established lines and levels.
- C. Provide temporary bracing or anchors in form work for items that are to be built into concrete or similar construction.

3.03 ALL FRP INSTALLATION

- A. All field-cut and drilled edges, holes, and abrasions shall be sealed with a catalyzed resin compatible with the original resin as recommended by the manufacturer. The sealing of the edges shall prevent premature fraying at the field-cut edges.
- B. Install items specified as indicated and in accordance with manufacturer's instructions.

END OF SECTION

SECTION 06610

FIBERGLASS FABRICATIONS

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes fiberglass structural shapes (angles, channels, I-beams, tubes, bars, plates, etc.).
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 QUALIFICATIONS

- A. Manufacturer of fiberglass structural shapes shall have a minimum of 5 years of verifiable experience in the manufacture and fabrication of pultruded fiberglass structural shapes and fabrications.

PART 2—PRODUCTS

2.01 FIBERGLASS STRUCTURAL SHAPES

- A. Fiberglass structural shapes shall be manufactured by the pultrusion process using the following materials:
 - 1. Isophthalic polyester resin with flame-retardant additive.
 - 2. Glass fiber reinforcing consisting of both continuous strand mat and continuous strand longitudinal fiber (roving).
 - 3. Surfacing veil of polyester nonwoven fabric.
 - 4. UV inhibitor.
- B. Acceptable product lines include the following or equal:
 - 1. Extren Series 525 by Strongwall Extren.
 - 2. Pultex Series 1525 by Creative Pultrusions, Inc.
 - 3. Dynaform ISOFR system by Fibergrate Composite Structures, Inc.
- C. Sections shall be constructed of materials recommended for use in a submerged condition in contact with wastewater.

2.02 FASTENERS/ADHESIVES

- A. Unless noted otherwise, all bolts, nuts, and washers shall be Type 316 stainless steel as specified in Section 05120—Structural Steel. Fiberglass bolts, nuts, and washers shall be Dynaform as manufactured by Fibergrate Composite Structures, Inc., FibreBolt as manufactured by Strongwell, or equal.
- B. Adhesive resin used for joining sections and for sealing cut edges shall be approved for use by the manufacturer.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Installation/erection of components shall be in accordance with the design drawings and shop drawings.
- B. All cut edges shall be sealed with a resin recommended by the manufacturer.

END OF SECTION

SECTION 06614

FIBERGLASS WEIRS AND BAFFLES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Fiberglass weirs and baffles as shown on the drawings.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ANSI/AWWA F102—Matched-Die-Molded, Fiberglass-Reinforced Plastic Weir Plates, Scum Baffles, and Mounting Brackets.
- B. ASTM D570—Standard Test Method for Water Absorption of Plastics.
- C. ASTM D638—Standard Test Method for Tensile Properties of Plastics.
- D. ASTM D790—Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D2583—Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

1.03 QUALITY ASSURANCE

- A. Manufacturer shall maintain a continuous quality control program and shall, upon request, furnish ENGINEER with certified test reports of physical properties
- B. Weir plates, baffles, and mounting brackets shall be fabricated to ANSI/AWWA F102 Standards.

1.04 PACKING AND STORAGE

- A. Should it be necessary to store product prior to installation, precautions should be taken to prevent warpage or distortion.

PART 2—PRODUCTS

2.01 WEIRS AND BAFFLES

- A. Weirs and baffles shall be fiberglass.
- B. Fiberglass shall be as manufactured by Warminster Fiberglass Company, NEFCO Incorporated, or equal. All fasteners and anchors shall be type 304 stainless steel of size and type recommended by manufacturer of weirs and baffles.

- C. The weirs, baffles and supports shall be polyester plastic resin, reinforced with glass fiber. All weir plates, weir washers, weir splice plates, baffle panels, baffle splice plates and baffle support brackets shall be fiberglass reinforced plastic molded to produce uniform smooth surfaces. The surface shall be resin rich, free of voids and porosity, without dry spots, crazes or unreinforced areas and shall provide for increased corrosion resistance and UV protection. All edges shall be sealed in the mold. The weirs and baffles shall be green in color.
- D. Laminate will have Type "C" (chemical) glass surfacing mat, 10 to 20 mils thick, with a silane finish and a styrene soluble binder, on both sides. Required thickness will be achieved using the appropriate number of piles of Type "E" (electrical borosilicate) glass mat with chrome or silane finish and a styrene soluble binder. Glass content of laminate will be $28 \pm 3\%$ by weight. Resin filters shall be $40 \pm 2\%$ of the resin mixture. Final laminate thickness shall be within $\pm 10\%$ of the nominal specified thickness.
- E. The fiberglass laminate shall have the following minimum physical properties:

		Test Method
Tensile Strength (min)	14,000 psi	ASTM D638
Flexural Strength (min)	25,000 psi	ASTM D790
Flexural Modulus (min)	1.0×10^6	ASTM D790
Impact, Notched, Izod, foot pound per inch (min)	15.0	ASTM D256
Barcol Hardness (min avg)	40	ASTM D2583
Water Absorption, % 24 hours (max)	0.2%	ASTM D570
Average Coefficient of Thermal Expansion inch per inch per °F (max)	10.5×10^{-6}	ASTM D696

- F. All machined or cut edges shall be sealed with Polyester Resin.

2.02 NEOPRENE GASKETS

- A. All splices and connections of weirs shall have a minimum 1/4 inch thick, or as noted on drawings, neoprene gasket in accordance with Section 10050–Miscellaneous Specialties.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Install weirs and baffles in accordance with details shown on the drawings using Type 316L stainless steel or fiberglass connection hardware.
- B. Weirs and baffles shall be installed level to within $\pm 1/8$ inch.
- C. All weir splices and connections shall be watertight. Provide neoprene gaskets between all splices and connections to provide complete watertight unit. Provide splice plates as required.

END OF SECTION

SECTION 07191

VAPOR BARRIER

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes: Vapor barrier under concrete floors on grade and in exterior construction.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 2—PRODUCTS

2.01 MATERIALS

- A. Vapor barrier for below slabs: Vapor barrier shall consist of 10 mil ASTM E1745 Class B polyethylene sheeting with less than 0.3 perm water vapor permeance in accordance with ASTM E96.
- B. Vapor barrier for exterior wall construction: Vapor barrier shall consist of 6 mil ASTM D4397, Class B polyethylene sheeting with less than 0.3 perm water vapor permeance in accordance with ASTM E96

PART 3—EXECUTION

3.01 INSTALLATION—UNDER CONCRETE FLOORS ON GRADE

- A. Provide continuous vapor barrier under concrete floors on grade that are 8 inches or less in thickness, lap all joints a minimum of 12 inches.
- B. Place 6 inches of granular cushion over vapor barrier.

3.02 INSTALLATION ON ROOF CONSTRUCTION

- A. Provide continuous vapor barrier on underside of roof framing.

3.03 INSTALLATION IN EXTERIOR WALL CONSTRUCTION

- A. Provide continuous vapor barrier on inside face of wood-framed walls.

END OF SECTION

SECTION 07212

BOARD INSULATION

PART 1–GENERAL

1.01 SUMMARY

- A. Work includes board insulation for cavity wall construction, for perimeter foundation walls, and under floor-slabs on-grade.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 2–PRODUCTS

2.01 CAVITY WALL INSULATION

- A. Cavity wall insulation shall be 1 1/2-inch-thick polyisocyanurate foam board with foil facing on both sides. Aged thermal resistance (R-value) at 72°F shall be a minimum of 10.0.
- B. Acceptable products include the following, or equal. DOW Thermax by DOW Corporation.
- C. Adhesive for adhering insulation to backup wall shall be as recommended by the insulation manufacturer.

2.02 FOUNDATION AND UNDER-SLAB INSULATION

- A. Foundation and under-slab insulation shall be 2-inch-thick extruded polystyrene closed cell rigid foam board with continuous skins on both sides. Aged thermal resistance (R-value) at 75°F shall be a minimum of 10.0.
- B. Acceptable products include the following, or equal:
 - 1. Styrofoam Square Edge by Dow Chemical Company.
 - 2. Foamular 250 by UC Industries, Inc.

PART 3–EXECUTION

3.01 INSTALLATION–CAVITY WALLS

- A. Insulation shall be installed horizontally within the cavity space between masonry wythes.
- B. Take care during installation to ensure all insulation boards are butted and installed between ties and fit flush against inner wythe or backup wall.
- C. Cut insulation neatly to fit around obstructions across the cavity such as vents, louvers, pipes, and conduits.

- D. Secure insulation in place against backup wall with mastic adhesive and observe label directions.

3.02 INSTALLATION—FOUNDATION WALLS AND UNDER FLOORS

- A. Rigid insulation shall be laid dry against the foundation walls as backfill is placed. Insulation shall be located at all perimeter frost walls and below-grade walls of buildings and structures containing areas that may be occupied by personnel.
- B. At perimeter frost wall foundations, insulation shall be 48 inches high and located on the inside of foundation walls.
- C. Insulation under edges of slab-on-grade floors shall be 24 inches wide.

END OF SECTION

SECTION 07631

GUTTERS AND DOWNSPOUTS

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Aluminum gutters and downspouts.
 - 2. Precast concrete splash pads.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM B209–Aluminum and Aluminum Alloy Sheet and Plate.
- B. SMACNA–Architectural Sheet Metal Manual.

1.03 DESIGN REQUIREMENTS

- A. Conform to SMACNA manual for sizing components for a 10-year storm event.

1.04 REGULATORY REQUIREMENTS

- A. Conform to the 2014 Indiana Building Code or governing local building code for size and method of rainwater discharge.

PART 2–PRODUCTS

2.01 GUTTERS AND DOWNSPOUTS

- A. Gutters and downspouts shall be constructed of 0.032-inch-thick aluminum sheet conforming to ASTM B209 and shall be made from the same manufacturer as the fascia system.

2.02 ACCESSORIES

- A. Anchorage devices shall meet SMACNA or manufacturer's requirements.
- B. Gutter supports shall be straps and fasteners at maximum 3 feet 0 inches on center.
- C. Downspout supports shall be brackets of the appropriate size and spacing.
- D. Fasteners shall be stainless steel.

2.03 SPLASH PADS

- A. Splash pads shall be precast concrete of the appropriate size with minimum 28-day compressive strength of 3,000 psi and minimum 5% air entrainment.

2.04 FABRICATION

- A. Form gutters and downspouts to SMACNA requirements.
- B. Fabricate with required connection pieces.
- C. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion of defects detrimental to appearance or performance. Allow for expansion by providing expansion joints as required.
- D. Hem exposed edges of metal.
- E. Fabricate gutter and downspout accessories; seal watertight.

2.05 FINISHES

- A. Finish on gutters and downspouts shall match finish on fascia system. All components, including fasteners and supports, shall be prefinished to match gutters and downspouts.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Install gutters, downspouts, and accessories with manufacturer's instructions.
- B. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.
- C. Install gutters with a 1/8-inch-per-foot slope.
- D. Seal metal joints watertight.
- E. Set splash pads under downspouts.

END OF SECTION

SECTION 07900

CAULKING AND SEALANTS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Caulking and sealants on the project, including primers and backer rod material.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM C920—Elastomeric Joint Sealants.

1.03 SUBMITTALS

- A. Submittals shall comply with provisions of Section 01300—Submittals.
- B. Submit color chart for each sealant used on project. Colors will be selected by ENGINEER.
- C. Submit copies of warranty.

1.04 WARRANTY

- A. Caulked joints shall be weathertight and guaranteed watertight by installer for 2 years from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions or Substantial Completion of the project. Deliver original guarantee to OWNER with copies to ENGINEER.
- B. Provide manufacturer's standard 5-year product warranty.

PART 2—PRODUCTS

2.01 CAULK—NONSUBMERGED APPLICATIONS—GENERAL

- A. Caulk for nonsubmerged applications in all locations except floor joints shall be a one-part polyurethane sealant.
- B. Acceptable products include the following, or equal:
 - 1. Masterseal NP1 by BASF Construction Chemicals, LLC.
 - 2. Vulkem 116 by Tremco, Inc. (exterior applications only).
 - 3. Dymonic 100 by Tremco, Inc.

2.02 CAULK–NONSUBMERGED APPLICATIONS–FLOOR JOINTS

- A. Caulk for floor joints in nonsubmerged applications shall be a one-part, self-leveling, polyurethane sealant.
- B. Acceptable products include the following, or equal:
 - 1. SL1 by BASF Construction Chemicals, LLC.
 - 2. Vulkem 45 SSL by Tremco, Inc.

2.03 CAULK–SUBMERGED APPLICATIONS–GENERAL

- A. Caulk in all submerged applications except at potable water contact shall be a two-part, polysulfide base synthetic rubber sealant.
- B. Acceptable products include the following, or equal:
 - 1. Sonolastic Polysulfide Sealant by BASF Construction Chemicals, LLC.
 - 2. Thiokol 2235M by PolySpec.

2.04 ACCESSORIES

- A. Backer rod shall be flexible, closed-cell polyethylene rod stock sized to be under at least 25% compression when positioned in the joint. In shallow joints and where backer rod is not used, polyethylene bond breaker tape shall be used. It is essential that the caulk bond to the side of the joint but not to the base of the joint.
- B. Primer(s) shall be used where required by the manufacturer for the specific product(s) used and the specific application(s) intended. Specific product(s) shall be as recommended by the manufacturer.
- C. Cleaning fluid shall be methyl ethyl ketone (MEK), methyl isopropyl ketone (MIK), or similar solvent material which will not etch or mar metal finishes and shall be the product of a nationally recognized manufacturer, of type expressly recommended for use with the caulking or sealant compound used.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Seal completely all joints around entire perimeter of all openings in all exterior walls (inside and outside faces), including joints at all exterior doors, windows, louvers, sills, and elsewhere as noted on the drawings and as necessary to seal all open joints in the building in a complete manner. All joints shall be caulked in a completely weathertight manner. Caulking not specified in other sections shall be performed under this heading.
- B. All caulking shall be done in accordance with manufacturer's specifications. Allow minimum 28-day curing period for concrete, grout, or mortar prior to caulking unless requested otherwise. Caulking work shall be done before the final coat of paint is applied except at moving joints which shall be finish painted before caulking or caulking shall be protected during painting. All caulking shall occur only when the temperature is above 40°F.

- C. Joints shall be thoroughly cleaned and primed before caulking in accordance with manufacturer's instructions. Unless otherwise shown, joints shall be square in cross section 1/2 inch by 1/2-inch and shall comply with manufacturer's joint width/depth ratio limitations.
- D. Backer rod shall be used in all openings 3/4 inches or more in depth and shall be tightly packed to completely fill the space to 1/2 inch back of face. The 1/2 inch shall then be filled with caulking compound.
- E. Caulking shall be done by hand gun. Compound shall be driven into joint grooves with sufficient pressure to force out all air and fill joint grooves solidly. Caulking where exposed shall be free of wrinkles and shall be uniformly smooth.
- F. At completion of caulking, clean off all excess material from adjoining surfaces and material. Entire installation shall be left in a perfect appearing weathertight condition.

END OF SECTION

SECTION 08110

STANDARD STEEL DOORS AND FRAMES

PART 1—GENERAL

1.01 SUMMARY

- A. Work included: Thermally-insulated steel doors and frames.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ANSI/SD1-100—Standard Steel Doors and Frames.

1.03 SUBMITTALS

- A. Submittals shall be in accordance with provisions of Section 01300—Submittals.
- B. In addition to shop drawings and product data, indicate type of primer paint to be used and verify compatibility with field paint system specified.

PART 2—PRODUCTS

2.01 THERMALLY-INSULATED DOORS

- A. Thermally-insulated doors shall be hollow full flush, 1 3/4-inch-thick, 16 gauge steel sheet in accordance with ANSI/SD1-100 with polyurethane core rigid reinforcing full thickness.
- B. Acceptable products include the following, or equal:
 - 1. Ceco Imperial.
 - 2. Curries 707 Series.

2.02 FABRICATION—DOORS

- A. Doors shall be fully-sealed, continuously-welded construction with all surface welds, joints, and seams filled and ground smooth.
- B. Tops and bottoms of doors shall be completely closed with 16 gauge channels. Outside edges of doors shall be flush without depressions. No inverted channels will be allowed.
- C. Mortise, reinforce, drill, and tap doors to receive hardware. Reinforcement shall be welded within the stiles and rails. Reinforce top rails to accommodate closers on either side and reinforce bottom for kickplate.
- D. Glass in exterior doors shall be 1 inch thick.

2.03 FRAMES

- A. Steel door frames shall be made of 14 gauge, cold-rolled, prime-quality steel in accordance with ANSI/SD1-100.

2.04 FABRICATION–FRAMES

- A. Fabricate frames as welded unit.
- B. Frames shall be 2 inches by 5 3/4 inches. Frames shall have 4-inch head member at 7 feet 0-inch doors in masonry walls.
- C. Fabricate frames with hardware reinforcement plates welded in place.
- D. Provide anchors appropriate to wall type.
- E. Provide frames for all steel doors.

2.05 FINISH

- A. Doors and frames shall receive one coat of rust-inhibitive, shop-applied primer paint. Primer paint must be compatible with field-paint system specified.
- B. Frames shall be finish-painted as specified in Section 09900–Painting prior to installation. This includes back sides of door frames.

PART 3–EXECUTION

3.01 INSTALLATION–FRAMES

- A. Install frames in accordance with ANSI/SD1-100.
- B. Coordinate installation of frames with wall construction for anchor placement.
- C. Coordinate installation of frames with installation of doors, hardware, joint sealers, and field painting.
- D. Set all frames as supplied by manufacturer.

3.02 INSTALLATION–DOORS

- A. Install doors in accordance with ANSI/SD1-100.
- B. Coordinate installation of doors with installation of frames, hardware, glass and glazing, and field painting.
- C. Set all doors as supplied by manufacturer. Hang all doors allowing for expansion and contraction at time of setting.
- D. Set all hardware in accordance with templates as supplied by hardware supplier.

- E. Cover all exposed hardware until completion of painting and finishing.
- F. Examine hardware at completion; test, oil, grease, and adjust for perfect operation.

3.03 SCHEDULE

- A. See Door Schedule on drawings.

END OF SECTION

SECTION 08305

ACCESS DOORS AND FRAMES

PART 1—GENERAL

1.01 SUMMARY

- A. Work included: Steel floor doors and frame units.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 2—PRODUCTS

2.01 STEEL FLOOR DOORS AND FRAMES

- A. Acceptable products include the following, or equal: The Bilco Company, Types J or JD as scheduled.
- B. Type J and JD doors shall be designed for a minimum live load of 300 psf with a maximum deflection of 1/150 of span.
- C. Doors shall be constructed of 1/4-inch steel diamond-pattern plate.
- D. Channel frame for Type J and JD doors shall be 1/4-inch steel with full anchor flange around the entire perimeter. A continuous EPDM gasket shall be mechanically attached to the frame around the entire perimeter.
- E. Hinges shall be through bolted to the door and frame with tamper-proof Type 316 stainless steel lock bolts.
- F. Type J and JD doors shall be equipped with required number and size of compression spring operators for door to operate easily and smoothly. Provide heavy-forged cam-action hinges to open door so edge of door does not open into channel. Doors shall have smooth controlled operation and not be affected by temperature.
- G. Provide hold-open arm that automatically locks in open position. Provide snap lock with fixed handle mounted to underside of cover. Provide removable exterior turn/lift handle with spring-loaded ball detent to open cover. All hardware shall be Type 316 stainless steel for corrosive environment.

2.02 FINISH

- A. Steel access doors shall have shop-applied prime coat compatible with field paint system specified.

2.03 ACCESSORIES

- A. All floor/door openings shall be fitted with a permanently installed, fall-through prevention rail and net system that is easily retractable for access to the opening below. This system shall be Hatch Net 120S as manufactured by Safe Approach, Inc., Poland, Maine, or approved equal.
- B. The fall-through prevention system shall consist of the following components:
 - 1. A polyester safety net manufactured to ANSI A10.11 specification for personnel nets.
 - 2. Stainless steel side rails.
 - 3. 316 stainless steel corner hooks.
- C. Each net assembly will come with a permanently attached label with the following information: Name of manufacturer, identification of net material, date of manufacture, date of prototype test, name of testing agency, and serial number.
- D. All stainless steel hardware and instructions necessary for proper installation of the net system shall be provided by the net system manufacturer. Installation shall be in accordance with the manufacturer's instructions.
- E. The complete assembly, including the net, shall be warranted against defects in material and workmanship for manufacturer's standard time period.
- F. Hold Open Feature: A Type 316 stainless hold open device shall be provided to lock the cover in the fully open 90 degree position.
- G. Hardware: All hardware shall be Type 316 stainless steel.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Installation shall be in accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.

3.02 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer that will not damage finish.
- B. Test units for proper function and adjust until proper operation is achieved.
- C. Repair finishes damaged during installation.
- D. Restore finishes so no evidence remains of corrective work.

3.03 SCHEDULE

- A. See Door Schedule on the drawings.

END OF SECTION

SECTION 08331

OVERHEAD COILING DOORS

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes insulated overhead coiling door with electric operation, operating hardware, controls, and supports.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM A525/A525M—Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.

1.03 REGULATORY REQUIREMENTS

- A. Conform to the 2009 Indiana Electric Code for motor and motor control requirements.
- B. Products requiring electrical connection shall be listed and classified by Underwriters' Laboratories, Inc. as suitable for the purpose specified and indicated.

PART 2—PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable manufacturers include the following, or equal: Overhead Door Co. Series 625 Insulated Stormtite door, Raynor Series IF, or equal.

2.02 MATERIALS

- A. Curtain:
 - 1. Curtain slats shall be Type F-265I flat crown, pitch 2 5/8 inches, 22 gauge galvanized steel. Back cover shall be 24 gauge galvanized steel.
 - 2. Slat system shall be integral and foamed in place with polyurethane foam nominal 2-pound density applied between the slat and back cover, rising to bond the slat and back cover into an integral member with a thickness of 3/4 inches.
 - 3. End locks shall be used on alternate slats. Provide wind locks as required for 25 psf design wind load.
- B. Bottom Bar: The bottom bar shall be two carbon steel angles, minimum thickness 1/8 inch, bolted back-to-back to reinforce the curtain in the guides, and have a loop-type weather seal.
- C. Guides:
 - 1. Guides shall be three structural steel carbon steel angles with a minimum thickness of 3/16 inches.

2. Guides shall be equipped with full door height PVC weather seals contacting the exterior and interior curtain surfaces to minimize air flow.
 3. Guides shall be insulated full height and shall be equipped with wind lock bars to meet 25 psf design wind load.
- D. Brackets:
1. Brackets shall be minimum 3/16-inch-thick steel plate to support the barrel, counterbalance, and hood.
 2. Provide intermediate support brackets as necessary.
- E. Counterbalance:
1. Counterbalance shall be helical torsion springs housed in a steel pipe barrel, supporting the curtain with a deflection limited to 0.03 inches per foot of width.
 2. Counterbalance shall be adjustable by means of an external adjusting tension wheel and designed for minimum 20,000 cycles.
- F. Hood:
1. The hood shall be 24 gauge galvanized steel minimum.
 2. The hood shall have an internal baffle and an external lintel baffle to retard air infiltration.
- G. Manual Operator: Chain hoist.
- H. Electric Operator:
1. Electric operator shall be Model RDB by Overhead Door Co., or equal.
 2. Operator shall have a 1-horsepower, 460-volt, three-phase, continuous-duty motor with instant reverse- and automatic-reset thermal overload. Motors shall be TENV and be suitable for use in Class I Division 1, Groups C and D locations.
 3. Mounting shall be as required to accommodate installation. Electric panel shall be mounted to operator. Electric panel shall be rated NEMA 7 and be suitable for use in Class I, Division 1, Groups C and D locations.
 4. Operator shall have a brake that shall be spring-set and solenoid released and be able to stop and hold curtain in any position.
 5. Provide two pushbutton control stations (open/close/stop) for each operator. Control station shall be rated NEMA 7 (interior hazardous location).
 6. Each door with electric operator shall have electric sensing edge to stop and reverse the door upon contacting an object while closing. Sensing edge shall be powered from the electric operator and monitored in accordance with UL 325:2010. Sensing edge shall be as manufactured by Miller Edge, Model MGO20Y, with 25 feet of factory-provided cable, or equal. When used with explosionproof electric operators in Class I rated spaces, provide 4-wire intrinsically safe NEMA 7 control panel, Miller Edge Model FSIS-25-4, or equal.
 7. Control system shall use a heavy-duty reversing contactor, electrically and mechanically interlocked. System shall accommodate connection of sensing edge and control stations.
 8. Electrical controls and devices in rated spaces shall be rated NEMA 7 and be suitable for use in Class I, Division 1, Groups C and D locations. All devices and controls shall be provided by door manufacturer and be powered from control panel transformer(s) provided with the unit.

2.03 FINISHES

- A. The curtain and hood shall receive a UV-resistant powder-coat finish with color selected from manufacturer's standard colors.
- B. All nongalvanized, exposed ferrous surfaces shall receive one coat of manufacturer's standard factory-applied rust-inhibitive primer compatible with field paint.
- C. All nongalvanized, ferrous surfaces that will become inaccessible after installation shall be finish painted as specified in Section 09900—Painting prior to installation.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Door shall be installed in accordance with manufacturer's instructions and standards by an authorized representative.
- B. Upon completion of installation, operating devices and controls shall be adjusted and lubricated to operate properly.

3.02 SCHEDULE

- A. See Door Schedule on the drawings.

END OF SECTION

SECTION 08710

DOOR HARDWARE

PART 1-GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Hardware to fully equip all doors.
 - 2. Thresholds and weatherstripping.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 2-PRODUCTS

2.01 LOCKSETS AND LATCHSETS

- A. Marine grade mortise locksets and latchsets with stainless steel (ss) finish, as indicated in Paragraph 3.02 Schedule shall be Accurate Lock 9100M series, Schwepper 3800 series, or equal.
- B. Locksets and latchsets shall have 2 3/4-inch backset. Strikes shall be curved lip.
- C. Lockset and latchset numbers listed in Paragraph 3.02 Schedule are Accurate (listed first) followed by Schwepper number (listed second in parentheses).

2.02 HINGES

- A. Butt hinges shall be Stanley FBB 191, Hager BB 1191, or equal, full mortise, ball bearing, nonferrous, nonrising, loose pin, and flat bottom tip, unless otherwise specified. Provide three 4 1/2-inch by 4 1/2-inch hinges per door for doors 7 feet or less in height with one additional hinge for each additional 30 inches or fraction thereof, unless otherwise specified.

2.03 DOOR CLOSERS

- A. Door closers shall be LCN Series 1460 for exterior doors, or equal. Provide aluminum finish on closers. Provide full covers. Door closers for locations noted as (ss) shall have the SRI primer for corrosion resistance. Door closers specified in paragraph 3.02 are LCN. (H-Hold Open)

2.04 KICKPLATES

- A. Kickplates shall be Rockwood, or equal, 6 inches high. Kickplate width shall be 2 inches less than door width.

2.05 THRESHOLD AND WEATHERSTRIPPING

- A. All exterior doors shall be weatherstripped with Reese DS75, National Guard Products, Inc. 156, or equal, weatherstripping. Provide Reese 323C, Pemko 315AN, or equal, sweeps; and Reese S425A, Pemko 171A (provide Reese S439A, Pemko 273A, for areas with thicker flooring on one side), or equal, thresholds. Exterior doors without mullion shall have Reese No. 87, Pemko 352A, or equal, positive sealing astragal.

2.06 KEYING

- A. Door keys shall be keyed to match OWNER's existing keying. Provide two keys per lock. Doors shall have temporary construction cylinders. Provide permanent cylinders at project completion.

2.07 FINISH

- A. Finish for all hardware, except as noted below, shall be US 26D or US 32D where stainless steel (ss) hardware is specified in paragraph 2.
- B. Finish for surface bolts shall be US 26D; finish for kickplates shall be 32D.
- C. Where stainless steel (ss) is specified, all hardware, including threshold and weatherstripping, shall be installed with stainless steel fasteners.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Provide finish hardware to fully equip all doors.
- B. Install hardware in accordance with manufacturer's instructions.

3.02 SCHEDULE

- A. Provide the following hardware groups in the amounts indicated on the door schedule or required for a complete and proper installation:

Group 1

EXTERIOR DOOR

Lockset-9124M (ss) (3811 wc)
Door Closer-1460 (ss) (Parallel Arm)
Hinges and Kickplate (ss)

END OF SECTION

SECTION 09450

FRP WALL AND CEILING PANEL SYSTEMS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: FRP laminated composite wall and ceiling panels and trim.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM E84-Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

- A. Submittals shall be in accordance with provisions of Section 01300.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles, bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside, under cover, and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Damaged or deteriorated material shall be removed from premises.

PART 2—PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Acceptable manufacturers include the following, or equal: Crane Composites.

2.02 MATERIALS

- A. FRP Laminated Composite Wall and Ceiling Panels:
 - 1. Provide Kemply wall and ceiling panels with Glasbord-P FRP facing panel laminated to one side of a 0.4-inch-thick fluted polypropylene. FRP facing panel shall be 0.09 inch thick and have an embossed surface and Surfaseal finish. Panel size shall be 48 inches by 96 inches.
 - 2. Provide trim pieces of similar material at all corners, openings, and joints in panels as required to provide a finished wall and ceiling surface.
 - 3. Panels shall meet Class C flame spread and smoke development ratings per ASTM E84. Color to be chosen by OWNER.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Coordinate panel layouts with light fixtures piping supports, and appurtenances shown on electrical and mechanical drawings.
- B. Manufacturer's FRP trim shall be installed at the perimeter of the ceiling, at the face of beams, and at all openings and of other locations as required for a finished installation.
- C. FRP laminated composite wall and ceiling panel systems shall be installed per manufacturer's recommendations. Install over rigid insulation where noted on drawings. Provide FRP manufacturer's trim and accessories for a finished addition. Install fluted polypropylene-backed panels using approved mechanical fasteners rather than adhesive in moisture-sensitive applications.

3.02 CLEANING AND ADJUSTING

- A. Remove and replace units which are damaged or improperly installed.
- B. Following installation, clean soiled or discolored surfaces of units.

3.03 SCHEDULE

- A. FRP ceiling and wall systems shall be installed in rooms indicated on the Finish Schedule on the drawings.

END OF SECTION

SECTION 09882

CHANNEL LINING SYSTEM

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Surface preparation and application of channel lining system.

1.02 SCHEDULE

- A. Headworks Building and Exterior Structures: Channel lining system beginning inside Junction Box No. 1 and through new channel to inside Junction Box No. 2. Interior of Grit Collector (GT-10-01) and Junction Box Nos. 1 and 2 shall also be lined. Parshall flume shall not be lined. Apply product to walls and roof of channels, junction boxes, and grit collector.

1.03 DEFINITIONS

- A. DFT: Dry Film Thickness.

1.04 SUBMITTALS

- A. Submittals shall be in accordance with provisions of Section 01300—Submittals. Include only two copies of the Material Safety Data Sheet (OSHA Communication Standard).

1.05 PREINSTALLATION MEETING

- A. CONTRACTOR shall convene a meeting with ENGINEER, applicator, and material supplier to discuss approved application products, finishes, and curing methods.

1.06 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in the manufacture of industrial-grade coatings with a minimum of 15 years of documentable satisfactory experience.
- B. Applicator: Product manufacturer shall provide written certification that applicator has been trained in the application of the product. Applicator shall have a minimum of 5 years of satisfactory documented experience in the business of similar coating applications and project size.
- C. Single Source: Except as noted, furnish field primers, pretreatments, and thinners by the same manufacturer as finish coats.
- D. Prepare and finish sample surfaces for observation by ENGINEER to establish acceptable standards for the work.

1.07 ENVIRONMENTAL CONDITIONS

- A. Do not apply coating unless surface and surrounding air temperatures are above 50°F. Concrete surface temperature must be decreasing during time of application.
- B. Do not apply product in cold, foggy, damp, or rainy weather.

1.08 WARRANTY

- A. Refer to General Conditions.
- B. Correction Period: 5 years.

PART 2-PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Raven Lining Systems, 1024 North Lansing Avenue, Tulsa, Oklahoma 45106, (800) 324-2810, (918) 584-2810, fax (918) 582-4311, www.ravenlining.com.
- B. Sauereisen, 160 Gamma Drive, Pittsburg, Pennsylvania 15238-2989, fax (412) 963-7620, www.sauereisen.com
- C. Tnemec Company, Inc., 6800 Corporate Drive, Kansas City, Missouri 64120-1372, (800) TNE MEC1 [(800) 863-6321], www.tnemec.com.

2.02 APPROVED SYSTEMS

- A. Raven Lining Systems:
 - 1. Raven 760 High Performance Polymer Concrete (HPPC).
 - 2. Raven 405 Ultra High-Build epoxy coating.
- B. Sauereisen:
 - 1. Filler Compound No. 209.
 - 2. SewerGard No. 210S.
- C. Tnemec Company, Inc.
 - 1. Series 218 Mortarclad resurfacer.
 - 2. Series 436 Perma-Shield F.R.

PART 3-EXECUTION

3.01 GENERAL

- A. Provide dry heat and ventilation as needed to obtain the recommended drying conditions.
- B. Starting of work shall be construed as acceptance of surfaces and conditions by the applicator.
- C. Do not apply product to improperly prepared, wet, or damp surfaces.

- D. Material shall not be applied when surfaces are subjected to direct sunlight or when air and surface temperatures are rising.
- E. Correct deficiencies in the total film by applying additional coats and in accordance with manufacturer recommendations.

3.02 FIELD QUALITY CONTROL

- A. Provide high-low thermometers to verify temperatures and any other instrumentation needed to verify that ambient surface and material conditions are within the recommended application parameters.
- B. Thickness:
 - 1. During application, a wet film thickness gauge meeting ASTM D4414–Standard Practice for Measurement of Wet Film Thickness of Organic Coating by Notched Gauges, shall be used to ensure a monolithic coating and uniform thickness during application.
 - 2. Compute gallons required to each coat prior to application based on the square footage to be coated.

3.03 SURFACE PREPARATION

- A. General:
 - 1. Examine all surfaces to be coated and the conditions affecting proper performance.
 - 2. Correct unsatisfactory conditions.
 - 3. Perform preparation and cleaning procedures in accordance with manufacturer instructions to obtain a clean and dry surface.
- B. Concrete Surfaces: Formed, Trowel Finish, or Flatwork:
 - 1. Allow concrete to cure a minimum of 28 days:
 - a. Verify dryness by performing ASTM D4263 “Plastic Film Tape-Down Test.”
 - b. Surfaces where the opposite side is exposed to earth shall be tested by performing ASTM F1869 “Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.” Moisture shall not exceed 3 pounds per 1,000 square feet in a 24-hour period.
 - 2. pH Testing:
 - a. Check pH of the concrete surface to verify it is between 10.0 and 13.0.
 - b. Check pH a minimum of once for every 1,000 square feet of surface area, with no two tests closer than 50 feet apart.
 - 3. Moisture Testing:
 - a. Verify dryness by testing for moisture with an ASTM D 4263 “plastic film tape-down test.”
 - b. Verify dryness a minimum of once for each of each structure.
 - 4. Moisture Vapor Transmission Testing:
 - a. Verify the moisture vapor transmission is less than 3 pounds per 1,000 square feet in a 24-hour period by the ASTM F1869 “Standard test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.”
 - 5. Prepare surfaces by abrasive blasting according to SSPC-SP 13.
 - a. Walls shall have large burrs, fins, and form irregularities ground uniformly prior to other preparation.

- b. Abrasive-blast horizontal surfaces to remove laitance, curing compounds, sealers, or other contaminants. The surface shall expose the fine aggregate resembling 60-grit coarse sandpaper.
- c. Abrasive-blast vertical surfaces to open bug holes and remove laitance, form release agents, curing compounds, or other contaminants. The surface shall expose the fine aggregate resembling coarse sandpaper.
- 6. Allow concrete to cure a minimum of 28 days.
 - a. Verify dryness by performing ASTM D4263 "Plastic Film Tape-Down Test."
 - b. Surfaces where the opposite side is exposed to earth shall be tested by performing ASTM F1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride." Moisture shall not exceed three pounds per 1,000 square feet in a 24-hour period.

3.04 APPLICATION

- A. No application shall be performed until all substrate preparation and testing is complete for the structure being coated.
- B. Spray apply the first coat only to areas that can be final coated within the manufacturer's recoat window. If the recoat window is exceeded, the surface shall be prepared according to the manufacturer's recommendations and recoated. Contact the manufacturers for information and times in addition to that provided in their literature.
 - 1. Raven system:
 - a. Fill bug holes and irregularities with Raven 760 HPPC.
 - b. Raven does not recommend using a primer.
 - c. Thoroughly wash the surfaces prior to application of the first coat and thoroughly wash the first coat surfaces prior to application of the second coat.
 - d. Spray apply two coats of 405 at a minimum 100 mils total to concrete fillet, walls, and ceilings.
 - e. Raven typically has a maximum 24-hour recoat window at 75°F.
 - 2. Sauereisen system:
 - a. Fill bug holes and irregularities with 209.
 - b. Sauereisen does not recommend a primer with 210S.
 - c. Spray apply one or two coats of 210S at a minimum 100 mils total to concrete fillet, walls and ceilings.
 - d. Comply with all manufacturer's temperature requirements for material and substrate.
 - 3. Tnemec system:
 - a. Fill bugholes and irregularities with 218.
 - b. Spray apply one or two coats of 436 at a minimum 100 mils to concrete fillet, walls, and ceilings.
- C. Finish coats shall be applied at a minimum 30 square feet per gallon (50 mils) each coat. Spray apply the first coat only to areas that can be final coated within the manufacturer's recoat window. If the recoat window is exceeded, the surface shall be prepared according to the manufacturer's recommendations and recoated. Contact the manufacturers for information and times in addition to that provided in their literature.
 - 1. Raven typically has a maximum 24-hour recoat window at 75°F.
 - 2. The Sauereisen data sheet lists the recoat window at between 4 and 24 hours at 70°F.
 - 3. The Tnemec data sheet lists the recoat windows to be a minimum of 8 to 24 hours to recoat within 7 days to maximum recoat at 75°F and 10 to 24 hours to recoat with 7 days to maximum recoat at 55°F.

3.05 PROTECTION OF OTHER WORK

- A. Protect adjacent surfaces including floors, equipment, or refinished materials by covering with drop cloths or other acceptable means.
- B. Maintain safe conditions at all times. Remove solvent-soaked rags and other flammables daily from the area or keep in airtight metal containers.

3.06 INSPECTION AND ACCEPTANCE

- A. Immediately repair improperly prepared surfaces, misapplied materials, or inferior workmanship.
- B. Touch up or reapply product to surfaces which have been damaged.
- C. Holiday Inspection:
 - 1. After the protective coating has set hard to the touch, it shall be inspected with high-voltage holiday detection equipment. Surfaces shall first be dried, an induced holiday shall then be made on to the coated concrete surface and shall serve to determine the minimum/maximum voltage to be used to test the coating for holidays at that particular area. The spark tester shall be initially set at 100 volts per 1 mil of film thickness applied but may be adjusted as necessary to detect the induced holiday (refer to NACE RPO188-99).
 - 2. All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper marked or other hand tooling method. After abrading and cleaning, additional protective coating material can be hand applied to the repair area. All touchup/repair procedures shall follow the protective coating manufacturer's recommendations.
- D. Costs of specified tests shall be paid by CONTRACTOR.
- E. Costs for any reinspection or retesting due to defective workmanship or materials shall be paid by CONTRACTOR.

3.07 CLEANING

- A. Clean all splattered surfaces by methods which will not scratch, mar, or otherwise cause damage to finishes.

END OF SECTION

SECTION 09900

PAINTING

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: Surface preparation and application of paints and coatings.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM B117–Test Method of Salt Spray (Fog) Testing.
- B. ASTM D2247–Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
- C. ASTM D3363–Test Method for Film Hardness by Pencil Test.
- D. ASTM D4060–Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
- E. ASTM D4541–Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- F. ASTM D4585–Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
- G. SSPC–The Society for Protective Coatings–Steel Structures Painting Manual.
- H. NACE–National Association of Corrosion Engineers.
- I. ICRI–International Concrete Repair Institute.
- J. Federal Register–Code of Federal Regulations (CFR).
- K. Federal Register–Resource Conservation and Recovery Act (RCRA).
- L. Federal Register–Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

1.03 SUBMITTALS

- A. Submittals shall be in accordance with provisions of Section 01300–Submittals.
- B. Shop primer proposed for use shall be submitted with all material and equipment submittals. All shop primers shall be of the same generic type and quality as those specified herein.

- C. Submit two copies of manufacturer's Material Safety Data Sheets (MSDS) for each type of paint with each shop drawing submittal. MSDS sheets shall be posted at the construction site at all times painting is in progress.
- D. Substitution submittals shall include performance test data, as certified by a qualified testing laboratory, for the ASTM tests specified in paragraph 2.01.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: All paints, surface preparation, and application methods shall conform to federal requirements for allowable exposure to lead and other hazardous substances.
- B. Prepainting Meeting:
 - 1. A prepainting meeting shall be held immediately following the project preconstruction conference. The prepainting meeting is to be held prior to any material and equipment that requires painting is delivered to the site.
 - 2. CONTRACTOR, the paint subcontractor, and the paint manufacturer's representative shall be present to review the specifications and project scope.
 - 3. The paint manufacturer's representative shall review progress at the site as requested by ENGINEER. These are generally expected to be prior to monthly progress meetings.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Materials shall be delivered to the site in original containers with labels intact and seals unbroken.
- B. Drop cloths shall be used in all areas where painting is done to fully protect other surfaces.
- C. Oily rags and waste must be removed from the building each night or kept in an appropriate metal container.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. CONTRACTOR shall dry-heat, dehumidify, and ventilate to obtain painting conditions recommended by the paint manufacturer during surface preparation, application, and cure.
- B. Relative humidity conditions as specified by the paint manufacturer's data sheet shall be adhered to. This includes times in which supplemental heat is used. Supplemental heat shall be indirect-fired hot air furnaces or electric heat. Open-flame heaters shall not be used.
- C. No unprotected, unheated exterior painting shall be undertaken when damp weather appears probable, nor when the temperature of the substrate is below 55°F, unless approval in writing is received from the paint manufacturer.

1.07 COLOR SELECTIONS

- A. Provide color charts for all coatings being used on the project. After initial selection of colors by OWNER, provide draw down samples of selected colors for OWNER's final approval. For stained wood, provide specified wood species sample with selected color for final approval.

- B. CONTRACTOR shall provide a summary sheet at the completion of the project listing the finish paint products used and the manufacturer's color identification for each item painted. This summary sheet should be submitted to ENGINEER and OWNER for review.

PART 2-PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. All materials required for painting shall be types and quality as manufactured by Tnemec Company, Inc., Sherwin Williams Company, International Devoe, Carboline, or equal, unless noted otherwise in the schedule.
- B. Where thinning is necessary, only the products of the manufacturer furnishing the paint will be allowed. All such thinning shall be done strictly in accordance with the manufacturer's instructions.
- C. Paint and paint products of Tnemec Company and Sherwin Williams, listed in the following specifications, are set up as standard of quality. International Devoe and Carboline have preapproved equivalent products that shall be used. Other manufacturer's products will be considered as a substitution if CONTRACTOR and paint manufacturer certify that the products offered are recommended for the service intended, are compatible with the shop primers used, are equal in solids content and composition, and are of the same type. Submittal shall include the following performance data as certified by a qualified testing laboratory. ASTM Specifications shall be the latest revision:
1. Abrasion-ASTM D4060, CS-17 Wheel, 1,000 grams load.
 2. Adhesion-ASTM D4541.
 3. Hardness-ASTM D3363.
 4. Humidity-ASTM D2247 and D4585.
 5. Salt (Fog) Spray-ASTM B117.

PART 3-EXECUTION

3.01 SURFACE PREPARATION

- A. General:
1. All surfaces to be painted shall be prepared as specified herein and by the manufacturer's published data sheet and label directions. The objective shall be to obtain a uniform, clean, and dry surface.
 2. No field painting shall be done before the prepared surfaces are observed by ENGINEER. Surfaces painted without such observation shall be abrasive-blast-cleaned and repainted.
 3. Prior to field-blasting, a sample of the blast abrasive shall be provided to ENGINEER for pH testing. Additional samples of subsequent deliveries or batches of blast abrasive shall be provided to ENGINEER for pH testing.
 4. For on-site abrasive-blasting, low-dust, low-silica content material shall be used. Coal slag abrasive shall be used on pipe and ferrous materials. Staurolite abrasive shall be used on concrete and concrete block.
 5. Quality of surface preparations listed below are considered a minimum. If paint manufacturer requires a better preparation for a particular application, it shall be considered a requirement of this specification.

6. All concrete surfaces shall be tested for moisture in accordance with ASTM D4263 and, if necessary, F1869. Surfaces shall also be verified that the pH of the cleaned concrete surface to be coated is within the range of 8 to 11.

B. Ferrous Metal:

1. All ferrous metal to be primed in the shop shall have all rust, dust, and mill scale, as well as all other foreign substances, removed by abrasive blasting. Cleaned metal shall be primed or pretreated immediately after cleaning to prevent new rusting.
2. All ferrous metals not primed in the shop shall be abrasive-blasted in the field prior to application of the primer, pretreatment, or paint.
3. Abrasive blasting of metals in the shop shall be in accordance with SSPC-SP 10 Near White Blast Cleaning. Abrasive blasting of metals in the field for immersion service shall be in accordance with SSPC-SP 10 Near White Blast Cleaning. Abrasive blasting of metals in the field for nonimmersion service shall be in accordance with SSPC-SP6 Commercial Blast Cleaning.
4. Solvent cleaning in accordance with SSPC-SP1 shall precede all abrasive-blasting operations.
5. Ductile iron pipe shall be prepared by abrasive blasting per National Association of Pipe Fabricators NAF 500-03-04 Abrasive Blast Cleaning.
6. Prior to finish coating, all primed areas that are damaged shall be cleaned and spot-primed.

C. Concrete:

1. All concrete surfaces, including precast concrete to be painted, shall be cleaned of all form oil, curing compound, and other foreign matter. Concrete floors containing oil and grease residues shall be cleaned with detergent to remove all residues.
2. All new concrete and precast concrete walls, floors, and ceilings shall be abrasive-blast cleaned in accordance with SSPC-SP13/NACE No. 6 in order to prepare the surfaces for adherence of the painting systems as specified. Abrasive blasting of concrete shall result in a surface profile in accordance with ICRI No. 03732 at CSP-3 to CSP-5.
3. Bug holes, pits, voids, and cracks shall be filled as specified in Section 03300—Cast-in-Place Concrete without placing a friable sand-cement surface overall. The dried surface shall be stoned down.
4. Paint manufacturer shall observe and approve the surface preparation method and the prepared surface prior to painting.
5. After cleaning, the surface shall be washed and all dust, sand, and loose particles shall be removed by vacuuming. If CONTRACTOR elects to blow the surfaces off with air, it shall be oil-free air, and the methods shall conform to OSHA requirements.

- D. PVC and CPVC: All PVC and CPVC to be painted shall be solvent-cleaned in accordance with SSPC-SP1 and shall be lightly sanded.

E. Wood:

1. Wood surfaces shall be thoroughly cleaned and free of all foreign matter. Cracks and nail holes and other defects shall be properly filled and smoothed.
2. Wood trim shall be sandpapered to a fine finish and wiped clean of dust.

3.02 APPLICATION

- A. All materials shall be used as specified by the manufacturer's published data sheets and label directions.

- B. No paint shall be applied on a wet or damp surface and in no case until the preceding coat is dry and hard. Each coat shall be allowed to dry in accordance with manufacturer's data sheets before the next coat is applied.
- C. Drying time shall be construed to mean "under normal conditions." Where conditions are other than normal because of the weather or because painting must be done in confined spaces, other drying times will be necessary.
- D. Additional coats of paint shall not be applied, nor shall units be returned to service until paints are thoroughly dry and cured.
- E. Steel that will be inaccessible in the completed work shall receive the final coat before enclosure.
- F. Paint shall be applied to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, or other surface imperfections will not be acceptable. Tops and bottoms of walls and areas that are "cut-in" by brush prior to rolling shall have a uniform appearance in comparison with adjoining surfaces.
- G. Concrete block walls shall be back-rolled to achieve a pinhole-free surface coat.
- H. Walls and ceiling surfaces shall receive a minimum of one coat of paint before surface-mounted items such as conduits, boxes, piping, etc., are installed on these surfaces.
- I. Crevices and other hard-to-apply areas shall be back-rolled/back-brushed in conjunction with application of the first field coat of primer or intermediate coat. This includes, but is not limited to, between pipe flanges, pipe flange/pipe barrel joints, equipment fittings, and other narrow openings.
- J. No paint shall be applied to new or existing surfaces until joints have been caulked according to Section 07900 requirements, except at moving joints which shall be finish-painted before caulking or caulking shall be protected during painting.
- K. For PVC and CPVC piping, unions and valves shall not be painted.

3.03 FIELD QUALITY CONTROL

- A. Examination of work on the site by the manufacturer's representative shall be performed when requested by ENGINEER.

3.04 CLEANING

- A. All stains and marks shall be removed from other surfaces upon completion of the work.

3.05 SCHEDULE

- A. General:
 - 1. At the completion of the project, all painted surfaces which have been damaged shall be repainted or touched-up.
 - 2. See Finish Schedule on the drawings for an additional reference for areas to be painted.

3. The painter shall use some discretion in what should and should not be painted. Do not paint over labels and other information, bronze, machined surfaces, moving parts where painting may impair movement, hot surfaces which may peel, etc. If in doubt whether a part should be painted, ask ENGINEER.
4. Products listed first are Tnemec and second are Sherwin Williams.

B. New Work:

1. All new work done by all trades shall be painted by CONTRACTOR in accordance with the following schedule and in accordance with paint manufacturer's recommendation. It is the intent of these specifications that all non-galvanized ferrous metal items scheduled for painting be shop-primed. If items are not shop-coated, surfaces shall be prepared and painted in the field as specified. If any items of new construction are not listed, CONTRACTOR shall request paint system from ENGINEER, and the items shall be painted as part of this Contract without additional cost.
2. Equipment bases:
 - a. One prime coat of 201 Epoxoprime, ArmorSeal 1000 HS Epoxy (reduced), hand broadcast antiskid sand into the wet paint between finish coats in locations as requested by OWNER, and two finish coats of 280 Tneme-Glaze, ArmorSeal 1000 HS Epoxy.
 - b. See Section 03300 for sealed concrete floors.
3. Cast or ductile iron; not submerged or buried (including pipes to be insulated):
 - a. One shop coat of N69-1255 Hi-Build Epoxoline, Macropoxy 646 Beige as primer;
 - b. Touch-up prime coat prior to finish coating; and apply either:
 - (1) Two coats of N69 Hi-Build Epoxoline II, Macropoxy 646 for interior surfaces, or
 - (2) One coat of N69 Hi-Build Epoxoline II, Macropoxy 646, and one coat of 1074 Endura-Shield, Acrolon 218HS for exterior surfaces.
4. Cast or ductile iron, tar coated; buried: Not painted.
5. Cast or ductile iron, submerged:
 - a. One shop coat Series 1 Omnithane (N140 or N69-1255 Epoxoline), Dura-Plate 235 Beige as primer.
 - b. Touch-up prime coat prior to finish coating; and two coats of Series N69-Hi-Build Epoxoline II, Dura-Plate 235.
6. Steel, machinery, and equipment; not submerged (including pipes to be insulated):
 - a. One shop coat of N69-1255 Hi-Build Epoxoline, Macropoxy 646 Beige as primer.
 - b. Touch-up primer prior to finish coat, and either:
 - (1) Two coats of N69 Hi-Build Epoxoline II, Macropoxy 646 for interior surfaces; or
 - (2) One coat of N69 Hi-Build Epoxoline II, Macropoxy 646; and one coat of 1074 Endura-Shield, Acrolon 218HS for exterior surfaces.

FIRST FIELD COAT SHALL BE APPLIED PRIOR TO INSTALLATION TO SURFACES INACCESSIBLE AFTER INSTALLATION INCLUDING BACK SIDES OF DOOR FRAMES. SEE DIVISION 8 FOR FACTORY-APPLIED DOOR PRIMERS.

7. Motors, gear drives, and doors delivered with nonepoxy primers:
 - a. Degrease per SSPC-SP1.
 - b. Lightly hand-sand per SSPC-SP2.
 - c. Apply one coat 135-1255 Chembuild Beige, Macropoxy 646 Beige.
 - d. Apply two finish coats as follows:
 - (1) Two coats of N69 Hi-Build Epoxoline II, Macropoxy 646 for interior surfaces, or

- (2) One coat of N69 Hi-Build Epoxoline II, Macropoxy 646, and one coat of 1074 Endura-Shield, Acrolon 218HS for exterior surfaces.
 8. Steel, machinery, and equipment, submerged:
 - a. One shop coat Series 1 Omnithane (N140 or N69-1255 Epoxoline), Dura-Plate 235 Beige as primer.
 - b. Touch-up prime coat prior to finish coating, and two coats of Series 446 Perma-Shield MCU, Dura-Plate 235.
 9. CPVC and PVC; not submerged or buried:
 - a. One coat of N69-1255 Hi-Build Epoxoline II, Macropoxy 646, and either:
 - b. Two coats of N69 Hi-Build Epoxoline, Macropoxy 646 for interior surfaces, or
 - c. One coat of N69 Hi-Build Epoxoline, Macropoxy 646, and one coat of 1074 Endura-Shield, Acrolon 218HS for exterior surfaces.
 10. Insulation of equipment, pipes, and ductwork:
 - a. Two coats of Series 6 Tnemec-Cryl, DTM Acrylic B66100.
 - b. Colored PVC jacketing shall not be painted.
 11. Galvanized, copper, CPVC, and PVC; submerged or buried: Not painted.
 12. Stainless steel: Not painted.
- C. Coverage:
1. Dry mil thickness shall conform to those specified. Mil test measurement shall conform to SSPC Steel Structures Painting Manual. Dry Film Thickness (DFT) shall be verified in accordance with SSPC-PA2.
 2. The coatings listed will provide the mil thickness given when applied at the coverages listed. Upon the request of ENGINEER, such surfaces shall be checked by the painter with a calibrated mil thickness gauge and any deficiencies found in the film shall be remedied by additional coat(s) at the expense of CONTRACTOR.
 3. On masonry, application rates will vary according to surface texture; however, in no case shall the manufacturer's stated coverage rate be exceeded. On porous surfaces, it shall be the painter's responsibility to achieve a protective and decorative pinhole-free finish either by decreasing the coverage rate or by applying additional coats of paint.
 4. Coverages reflect manufacturer's recommendations using spray application techniques. Where brushing or rolling is specified or performed at the discretion of the painter, one additional coat, minimum, will be required to achieve total DFT thickness as specified and recommended by the manufacturer.

	Sq. Ft.** Coverage	Dry Mil** Thickness Per Coat
Products		
6 Tnemec-Cryl, DTM Acrylic B66100	200	
N69 Hi-Build Epoxoline II, Macropoxy 646		
Steel or Impervious Substrate Primer Coat	---	4.0
Steel or Impervious Substrate Intermediate Coat(s)	---	5.0
Steel or Impervious Substrate Finish coat	---	5.0
135-1255 Chembuild, Macropoxy 646	335	4.0
Steel Doors	---	3.0
140 Pota-Pox Plus, Macropoxy 646 NSF		
Steel or Impervious Substrate Primer	---	4.0
Steel or Impervious Substrate Intermediate Coat(s)	---	5.0
Steel or Impervious Substrate Finish Coat	---	5.0

	Sq. Ft.** Coverage	Dry Mil** Thickness Per Coat
Products		
1074 Endura-Shield II, Acrolon 218HS	---	2.5
201 Epoxoprime, ArmorSeal 1000 HS Epoxy	250	
280 Tneme-Glaze, ArmorSeal 1000 HS Epoxy	250	
Epoxoblock WB 1254, Kem Cati-Coat HS	80	
HB Tneme-Tuffcoat 114, Pro Industrial Water Based Epoxy B73-300	200	
Series1 Omnithane, DuraPlate 235 (Primer)		3.0, 5.0
N69 HI-Build Epoxoline, Dura-Plate 235 (Submerged)		6.0
WB Tneme-Crete 180, Sher-Cryl HPA	150	
Sherwin-Williams Products		
ProMar 200 Primer (sprayed)	200	
ProMar200 Primer (rolled/brushed)	260	
ProMar 200 Enamel (sprayed)	280	
ProMar 200 Enamel (rolled/brushed)	360	
A 100 Alkyd Wood Primer (sprayed)	200	
A 100 Alkyd Wood Primer (rolled/ brushed)	260	
A 100 Satin Latex Trim (sprayed)	280	
A 100 Satin Latex Trim (rolled/ brushed)	360	
S-W Wood Classics Stain (sprayed)	390	
S-W Wood Classics Stain (rolled/brushed)	480	
S.W. Wood Classics Varnish (sprayed)	320	
S.W. Wood Classics Varnish (rolled/brushed)	360	

** Roller or brush application requires two or more coats to obtain recommended film thickness. No allowance is made here for overspray, waste in handling, mixing, or application. Final total dry film thickness (DFT) shall be equal to that specified. Paint submittals shall note where roller or brush application is proposed and the paint manufacturer's recommendations of number of coats to achieve the required thickness shall be noted.

Primer, intermediate and/or final surface colors shall be of contrasting colors to assure coverage.

- D. Pipe Colors: Colors are to be selected by OWNER, with the following piping colors used where applicable. Pipe color shall be in accordance with the requirements of the 10 States Standards (2004 Wastewater).

Pipe Type	WASTEWATER PIPING COLORS
	10 States Standards (2004 Wastewater)
Raw sludge line	Brown with black bands
Sludge recirculation suction line	Brown with orange bands
Sludge drawoff line	Brown with orange bands
Sludge recirculation discharge line	Brown
Sludge	-
Biogas	Orange or Red
Natural gas	Orange or red with black bands
Potable water	Blue
Chlorine	Yellow
Sulfur dioxide	Yellow with red bands
Sewage (wastewater)	Gray

Pipe Type	WASTEWATER PIPING COLORS
	10 States Standards (2004 Wastewater)
Compressed air	Green
Heating hot water (buildings or digesters)	Blue with 6-inch red band spaced 30 inches apart
Fuel oil	Red
Plumbing drains and vents	Black
Polymer	Purple
Nonpotable water	Blue with black bands

- E. Shop Finish Painting: The following items shall have factory-applied finishes and will not require field painting. CONTRACTOR shall field touch-up any damaged areas with factory-provided touch-up coating.
1. Sectional overhead doors and overhead coiling doors.
 2. Factory-finished HVAC equipment.
 3. Parshall flume liner.
 4. Motor control centers.
 5. Supervisory control centers.

END OF SECTION

SECTION 10050

MISCELLANEOUS SPECIALTIES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: Neoprene gaskets.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 2–PRODUCTS

2.01 NEOPRENE GASKETS

- A. Furnish and install neoprene gaskets at weir plates and as called for on the drawings.
- B. Neoprene shall be of the size and thickness shown on the drawings. Minimum thickness shall be 1/8 inch. The material shall be 40-50 durometer premium-grade neoprene. Only virgin polymers shall be used to manufacture the neoprene. A certificate of material quality shall be furnished.
- C. Where splices are necessary, they shall be butt splices made with a two-part neoprene base-bonding cement. The vulcanizing cement shall be Black Cement by CPR Industries of Carteret, New Jersey, or equal.
- D. At splices in weir plates, provide an additional thickness of neoprene to match the plate material. Bond the additional neoprene to the continuous gasket using the cement specified for splices.
- E. All gaskets shall be watertight.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturer's instructions.

END OF SECTION

SECTION 10522

FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Fire extinguishers.
 - 2. Accessories.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ANSI/NFPA 10—Portable Fire Extinguishers.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300—Submittals.
- B. Product Data: Provide extinguisher operational features, color and finish, and anchorage details.

1.04 QUALITY ASSURANCE

- A. Provide units conforming to NFPA 10 requirements for portable fire extinguishers.
- B. Provide fire extinguisher and accessories by single manufacturer.

PART 2—PRODUCTS

2.01 MANUFACTURERS

- A. Larsen's Manufacturing Company, Product MP Series.
- B. Substitutions: Under provisions of Section 01600—Materials and Equipment.

2.02 EXTINGUISHERS

- A. Provide one dry-chemical-type, Larsen's MP Series, 10-pound-capacity fire extinguisher. Fire extinguisher shall be UL-approved for Class A, Class B, and Class C fires.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Place extinguisher in bracket where shown on the drawings.
- C. Mount fire extinguisher so the handle is at 48 inches above the finished floor.

END OF SECTION

SECTION 11320

GRIT COLLECTOR

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: This section includes furnishing, installing, and placing into successful operation one forced vortex grit collector (GT-10-01) and appurtenances in the Headworks Building. The collector and appurtenances shall be furnished by the same supplier.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.
- C. Coordinate the Work of this section with Section 11327—Grit Pump and Section 11329—Grit Washer.

1.02 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. The grit removal device shall be capable of removing grit from raw screened sewage and depositing the grit in the storage hopper by means of a forced vortex, induced by a rotating axial flow propeller that moves the grit to the center hopper inlet while keeping organics in suspension. The grit collector shall be designed to handle a peak flow of 7.0 mgd and a minimum flow of 0.6 mgd without loss of grit removal efficiency. The maximum headloss of the unit shall not exceed 5 inches at the peak hydraulic flow rate. No moving parts subject to wear or stoppage shall be below the water surface. Unit shall be designed to prevent grit accumulation of over 1 inch in upper grit collector.
 - 2. All drives, lubrication points, and bearing shall be readily accessible from the finished floor elevation of the Headworks Building.
- B. Performance Requirements:
 - 1. Performance: The grit collector shall be capable of removing the following at the specified peak hydraulic flow rate with no decrease in efficiency at flows less than this design rate:
 - a. 95% of the grit greater than 140 mesh in size.
 - b. Grit is defined as any inorganic substance having a specific gravity of 2.5 or greater.
 - c. Manufacturer shall certify in writing that removal efficiencies will be maintained through full range of design flows: 0.6 mgd minimum flow through peak flow of 7.0 mgd.
 - 2. The removal efficiencies as stated above are for inlet-to-outlet removal efficiency by percentage, based on the material retained in the sieve. This means that the figure for 140 mesh removal is based on all material retained on a 140 mesh sieve, comparing the influent to the effluent.
 - 3. To maximize grit removal efficiency, the flat floor grit chamber hydraulics shall incorporate a torodial flow path enhanced by a slow vortex. Grit chambers incorporating the gravity principle will be acceptable due to the minimal turbulence in the flow, which promotes gravity settling and effective removal of grit in accordance with the specified performance in item 1.02.B.1.c. above. Aerated grit chambers,

including those incorporating conventional settling criteria, are specifically unacceptable.

4. The grit moving across the bottom of the chamber shall be hydraulically scoured by the propeller blades as paddles which cause hydraulic currents to lift up the organics. The grit scouring intensity shall be adjustable. Propellers running with a center line greater than 8 inches from the bottom of the upper chamber will not be acceptable. The grit shall pass from the removal chamber through an opening into the lower grit storage hopper.

1.03 SUBMITTALS

- A. Submittals for motors associated with equipment specified in this section shall include data sheets from the motor manufacturer. Data sheets from the equipment manufacturer or supplier are not acceptable.

1.04 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2-PRODUCTS

2.01 MANUFACTURERS

- A. Grit collector shall be Model 7.0B Pista Grit by Smith & Loveless, Inc., of Lenexa, Kansas, or equal.

2.02 EQUIPMENT

- A. Drive Unit: The grit removal unit shall have a fixed pitch axial flow propeller or paddle connected by a drive tube. The drive tube shall be driven by a large, totally enclosed spur gear and turntable bearing. The maximum output speed of the drive shall be 21 rpm. The helical gear motor pinions and bull gears shall be of high quality steel, machined and hardened for high strength and long wear, and shall have a service factor of 2.0 or greater.
- B. A pinion mounted on the output shaft of the helical gear motor shall drive a large spur tooth bull gear enclosed in a heavy cast iron case. The spur gear pinion shall be cut from heat treated steel. The bull gear shall rotate with a minimum 21-inch-diameter turntable bearing for durability and stability. The pinion and bull gear shall have a service factor of 5 or greater at standard operating speeds.
- C. All bearings of the drive unit, including the motor, shall have a minimum B-10 bearing life of 100,000 hours, except for the minimum 21-inch-diameter turntable bearing supporting the propeller assembly which shall have a minimum B-10 bearing life of 20 years.
- D. The bull gearbox shall be specifically designed for this service. It shall have an opening for the minimum 10 3/4-inch-diameter drive stainless steel torque tube driving the propeller. The gearbox shall be sealed and the bottom opening shall have an air bell around the

torque tube to prevent water from entering the gearbox in case of flooding. The bull gearbox shall be oil-filled.

- E. The drive motor shall have normal starting torque and low starting current. The motor shall not be overloaded beyond nameplate rating, without service factor, under any normal conditions encountered. The grit collector drive shall be designed for continuous service.
- F. Propeller: The torque tube shall support and rotate a four-blade propeller. The propeller shall be constructed of stainless steel and shall be adjustable to enable optimization of grit scouring intensity. Grit collection system shall also be equipped with grit fluidizer vanes located within 6 inches of the elevation of the pump suction inlet and bolted to the propeller drivetube in a helical fashion to gently pump the grit upward and keep the grit fluidizer at the grit pump suction inlet.
- G. V-Force Baffle: V-Force Baffle on the outlet shall be nonrestrictive. V-Force Baffle shall be constructed of 304 stainless steel. The installing contractor shall attach the V-Force Baffle to the concrete structure using 5/8-inch stainless steel anchor bolts, as recommended by manufacturer.

2.03 MOTORS

- A. Motors shall conform to all applicable requirements of NEMA, ANSI, IEEE, and NEC standards and shall be UL listed for the service specified.
- B. Motors provided for the equipment scheduled below shall meet the following requirements. Motors shall not be loaded beyond nominal rating, not including service factor, at any design condition.
 - 1. Physical Construction:
 - a. Copper leads and windings with ball or roller bearings in end brackets of steel or cast iron or aluminum brackets with steel bearing sleeves. Motor leads shall have the same insulation class as the windings.
 - b. Rotor bars shall be copper. Where installed in NEMA 4X and Class I, Division 1 locations, a 45% nonphosphorous silver copper razing shall be applied.
 - c. Motor shaft shall be high-strength steel protected by a bronze shaft sleeve secured to the shaft to prevent rotation. The maximum allowable no-load shaft runout shall be 0.002 inch.
 - d. Motors shall be equipped with grease fittings and automatic grease reliefs. Bearings shall be prelubricated and field regreasable. Openings for addition of grease shall have grease fittings provided.
 - 2. Mounting: Vertical.
 - 3. Enclosure: Class I, Division 1, Groups C and D.
 - 4. Efficiency: Premium efficiency as noted in schedule below.
 - 5. Service Factor: 1.15.
 - 6. Power requirements: 60 Hz, three-phase, 208-230/460-volt, factory-wired for 460-volt connection, $\pm 10\%$ voltage variation.
 - 7. Load type: Constant torque.
 - 8. NEMA Design: B.
 - 9. Insulation: Class F.
 - 10. Nominal operating speed: Single speed, 1800 rpm.
 - 11. Nameplate: Stainless steel engraved attached to motor frame or enclosure with stainless steel rivets.

12. Conduit/Junction Box: Cast iron, diagonally split, fully rotatable, gasketed between cover and bar, and between box and frame. Motor lead opening in the frame shall also be gasketed. A clamp-type terminal shall be provided inside each motor conduit box for grounding.
 13. Accessories:
 - a. Oversized motor junction box.
 - b. Lifting eyes.
- C. Motor Schedule: If motor horsepower is increased to meet the requirements of this specification, CONTRACTOR is responsible for increasing all wiring, starters, drives, and other electrical components as required by Code, at no additional cost to OWNER.

Horsepower	Nominal Speed	Efficiency	Starter Type
1	1800 rpm	87.5%	FVNR

2.04 CONTROLS

- A. Equipment in this section and in Section 11327–Grit Pump shall be controlled from a single control panel (HCP-02). Refer to Section 11327 for control descriptions and equipment requirements.
- B. Equipment manufacturer shall review electrical wiring and control diagrams prepared by the Section 11327 contractor. Manufacturer shall provide written approval to CONTRACTOR with copy to ENGINEER and OWNER.

2.05 FINISHES

- A. It is the intent of this specification that all equipment, supports and appurtenances shall be furnished factory shop-primed, clean and ready to accept finish painting by CONTRACTOR, with a minimal amount of surface preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9. Unless otherwise specified mechanical equipment and accessories shall be furnished with all surfaces (except galvanized, stainless steel, rubber, copper, PVC) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation shall be done at such time during the assembly process as to preclude damage to the equipment once assembled. Cleaned surfaces shall then be factory shop-primed. Shop priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify.

2.06 ANCHOR BOLTS

- A. Provide all anchor bolts required for equipment furnished. Anchor bolts shall be Type 316 stainless steel and shall be of ample strength for the intended service. Provide anchor bolts in accordance with Division 5.

PART 3-EXECUTION

3.01 GENERAL

- A. See Division 1 for requirements related to equipment installation, field quality control, testing, supervision, and start-up.
- B. A minimum of one trip and two days on-site shall be provided for start-up assistance and operator training

END OF SECTION

SECTION 11327

GRIT PUMP

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: This section includes furnishing, installing, and placing into successful operation one vacuum-priming centrifugal grit pump (GP-10-01) in the Headworks Building. The grit pump and appurtenances shall be furnished by the same supplier for equipment as specified in Section 11320—Grit Collectors.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.
- C. Coordinate the Work of this section with Sections 11320—Grit Collector and 11329—Grit Washer.

1.02 SYSTEM DESCRIPTION

- A. Design Requirements: The pump shall be used to pump grit from the lower level of the vortex grit collector to the grit washer. The pump shall operate under suction lift conditions at all times.
- B. Performance Requirements:
 - 1. CONTRACTOR shall supply pump to perform under the following operating conditions:

Capacity	250 gpm
Minimum TDH	28 feet
Normal TDH	25 feet
Maximum Static Suction Lift	19 feet

- 2. Pump shall operate at the normal condition within +10% of specified flow at specified head, or within +5% of specified head at specified flow. The head specified does not include allowance for internal pump velocity head, and CONTRACTOR shall adjust all the specified head for the velocity heads applicable to the pump. Internal pump velocity head shall not be considered effective head delivered by pump.

1.03 SUBMITTALS

- A. Submittals for motors associated with equipment specified in this section shall include data sheets from the motor manufacturer. Data sheets from the equipment manufacturer or supplier are not acceptable.

1.04 WARRANTY

- A. Extended Warranty: Manufacturer shall warrant equipment and appurtenances for a period of five years from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or

Substantial Completion of the project. Warranty shall be nonprorated, include all parts and labor, and be in written form. Warranty shall specifically exclude buyer's indemnification language. Warranty language shall not eliminate manufacturer's responsibility for sizing of the equipment. During warranty period, manufacturer shall be responsible for any travel expenses, outside contractor fees, and rental equipment fees associated with providing warranty service. Warranty shall not exclude normal wear items. Manufacturer shall pay expenses incurred for repairs and parts replacement not made by manufacturer if manufacturer's response is not within 72 hours of notification by OWNER. Warranty language shall be provided with the shop drawings.

PART 2-PRODUCTS

2.01 MANUFACTURERS

- A. The vacuum-priming centrifugal grit pump shall be Model 4B2H by Smith & Loveless, Inc. of Lenexa, Kansas, or equal.

2.02 GENERAL

- A. Grit Pump:
 - 1. Pump shall be vertical, close-coupled, vacuum-priming centrifugal, of Ni-Hard construction and shall be as follows:
 - a. All openings, internal passages, and internal recirculation ports shall be large enough to permit the passage of a 3-inch sphere. Screens or any internal devices that create a maintenance nuisance or interfere with priming and performance of the pump shall not be permitted.
 - b. The pump shall be designed to be in-line mounted directly to a flange on top of the straight 4-inch suction line. The suction line shall be vertical, passing up through the vortex grit chamber drive to prevent accumulated grit from flowing into the suction pipe during idle periods and clogging the suction line. The pump shall be vertical for easy removal of the motor and impeller and to facilitate maintenance of the suction line by providing a straight path to any potential blockage.
 - c. Impeller shall be five-vaned, Ni-Hard, and completely out of the flow path between the pump inlet and discharge connection so that the grit pumped is not required to pass through the impeller. The impeller shall produce a turbine-like flow pattern within the casing, generating flow. To prevent grit from entering the seal area, all impellers less than full diameter shall have an untrimmed back shroud so that a minimum clearance from shroud to casing is maintained. Both the end of the shaft and the bore of the impeller shall be tapered to permit easy removal of the impeller from the shaft.
 - d. The shaft shall be solid stainless steel through the mechanical seal to eliminate corrosion and abrasive rust particles. Removable shaft sleeves will not be acceptable if the shaft under the sleeve does not meet the specified 1 7/8-inch minimum diameter. Carbon steel shafts are not acceptable.
 - e. The pump shall be sealed against leakage by a single mechanical seal, constructed to be automatically drained and automatically primed each time the pump is drained and primed. Water that lubricates the mechanical seal shall be automatically drained from around the seal if the pump loses prime to allow both the pump and seal to be drained. The seal shall be of carbon and ceramic materials with the mating surface lapped to a flatness tolerance of one light band.

The rotating ceramic shall be held in mating position with the stationary carbon by a stainless steel spring.

- f. To minimize seal wear caused by lineal movement of the shaft, the shaft bearing nearest the pump impeller shall be locked in place so that end play is limited to the clearance within the bearing. To minimize seal wear resulting from shaft deflection caused by the radial thrust of the pump, the shaft from the top of the impeller to the lower bearing supporting the impeller shall have a minimum diameter of 1 7/8 inch. The dimension from the lower bearing to the top of the impeller hub shall not exceed 6 inches.
- g. The pump shall be specifically designed for vacuum priming service and shall have been proven in this service for a period of at least 10 years. The pump shall have an adapter providing a large water reservoir above the impeller to provide for positive exclusion of air from the impeller. The seal shall be inside this area to assure lubrication and grit shall be excluded from this area by a full-size impeller shroud.
- h. The pump shall be arranged so the complete rotating element can easily be removed from the casing without disconnecting the electrical wiring or disassembling the motor, impeller, back head, or seal.

B. Vacuum Priming System:

- 1. The vacuum priming system shall be located in the Administration Building. CONTRACTOR shall coordinate location with OWNER. It shall be complete with vacuum pump, air compressor for the pinch valve, priming logic controls, and a float-operated check valve installed in the system ahead of the vacuum pump to prevent liquid from entering the vacuum pump.
- 2. The vacuum pump shall have corrosion-resistant internal components. It shall be capable of priming the grit pump and grit removal piping in not greater than 60 seconds under rated static lift conditions. Vacuum pump shall be equipped with a single-phase, 60 Hz, 120-volt, 1/2 horsepower motor and shall be UL listed for the service provided.
- 3. The float-operated check valve shall have a transparent body for visual inspection of the liquid level and shall be automatically drained when the vacuum pump shuts off.
- 4. All hoses and tubing used in the priming system shall be at least 3/8-inch nominal diameter.
- 5. Liquid level in the pump priming chamber shall be monitored by a resonant frequency liquid level probe. The probe shall be equipped with a piezoelectric drive and sensitive circuits to detect frequency shifts when the probe is covered by liquid. The probe shall be completely sealed and have a 316L stainless steel housing for corrosion resistance. It shall be provided with a wiring connector molded of polyphenylsulfone, an amorphous high-performance thermoplastic for impact and chemical resistance. The probe shall have a plug-in connector to facilitate easy removal.
- 6. The priming system shall automatically provide positive lubrication of the mechanical seal each time the grit pump is primed. To prevent excessive stoppage from grit accumulation, no passageway in the priming system through which grit must pass shall be smaller than the equivalent of a 2 1/2-inch opening. Priming from high-pressure (gauge) connections will not be acceptable.
- 7. The vacuum priming system shall be equipped with a piston-type air compressor. Compressor shall be Model 9L34C manufactured by Thomas Industries, Inc. Compressor shall be equipped with a single-phase, 60 Hz, 120-volt, 1/3 horsepower motor and shall be UL listed for the service provided.

8. Vacuum priming system shall be equipped with a 2 kVA dry-type transformer. Transformer shall conform to the specifications identified in Section 16480-Transformers.
- C. Pinch Valve: A pneumatically-controlled discharge pinch valve shall be furnished for installation by others in the vertical discharge piping run, and the controls shall be located in the vacuum priming control panel. The controls shall include an oil-less air compressor and solenoid valve. Operation of the discharge pinch valve shall be tied into the cycle timer and the resonant frequency liquid level probe so as to be fully automatic.
- D. Fabrication: The complete units, when assembled and operating, shall be free of cavitation and noise. Vibration shall not be in excess of Hydraulic Institute Standards over the entire range of operation specified and shall be verified by supplier after start-up. Pump impeller selection must compensate for slip losses or other speed variations due to final motor or control selection in order to deliver flows at head conditions specified herein. Pump supplier shall be responsible for verifying that his pump will operate properly utilizing the suction and discharge pipe sizes, valves, and fittings as shown on the Drawings and with the control equipment specified in Section 11940—Controls and Instrumentation, of these Specifications.

2.03 MOTORS

- A. Motors shall conform to all applicable requirements of NEMA, ANSI, IEEE, and NEC standards and shall be UL listed for the service specified.
- B. Motors provided for the equipment scheduled below shall meet the following requirements. Motors shall not be loaded beyond nominal rating, not including service factor, at any design condition.
 1. Physical Construction:
 - a. Copper leads and windings with ball or roller bearings in end brackets of steel or cast iron or aluminum brackets with steel bearing sleeves. Motor leads shall have the same insulation class as the windings.
 - b. Rotor bars shall be aluminum. Where installed in NEMA 4X and Class I, Division 1 locations, a 45% non-phosphorous silver copper brazing shall be applied.
 - c. Motor shaft shall be high strength steel protected by a bronze shaft sleeve secured to the shaft to prevent rotation. The maximum allowable no-load shaft run-out shall be 0.002-inch.
 - d. Motors shall be equipped with grease fittings and automatic grease reliefs. Bearings shall be prelubricated and field regreasable. Openings for addition of grease shall have grease fittings provided.
 2. Mounting: Vertical.
 3. Enclosure: Class I Division 1 Groups C and D.
 4. Efficiency: Premium efficiency as noted in schedule below.
 5. Service Factor: 1.15
 6. Power requirements: 60 Hz, three phase, 230/460 volt, factory-wired for 460 volt connection, $\pm 10\%$ voltage variation.
 7. Load type: Variable torque.
 8. NEMA Design: B.
 9. Insulation: Class F.
 10. Nominal operating speed: Single speed, 1,800 rpm.
 11. Nameplate: Stainless steel engraved attached to motor frame or enclosure with stainless steel rivets.

12. Conduit/Junction Box: Cast iron, diagonally split, fully rotatable, gasketed between cover and bar, and between box and frame. Motor lead opening in the frame shall also be gasketed. A clamp-type terminal shall be provided inside each motor conduit box for grounding.
 13. Accessories:
 - a. Over-sized motor junction box.
 - b. Lifting eyes.
 - c. Thermostats applied to motor windings, capable of shutdown and manual reset by external controls (by Division 16).
- C. Motor Schedule: If motor horsepower is increased to meet the requirements of this specification, CONTRACTOR is responsible for increasing all wiring, starters, drives, and other electrical components as required by Code, at no additional cost to OWNER.

Pump	Horsepower	Nominal Speed	Efficiency	Starter Type
GP-10-01	15	1,800	92.4%	FVNR

2.04 HEADWORKS CONTROL PANEL 2 (HCP-2)

- A. Provide a NEMA 12, painted steel, wall-mounted Headworks Control Panel 2 (HCP-2) housing all controls necessary for fully automatic operation of the Grit Pump (GP-10-01), Grit Trap (GT-10-01), and all associated appurtenances. HCP-2 shall include, but not be limited to, a PLC, an operator interface panel (OIP), a UPS, associated I/O modules, power supplies, control relays, auxiliary relays, intrinsic barrier relays, 120 V power distribution to associated instruments, (i.e. solenoid valves, transmitters, etc.). Panel shall be a maximum of 30 inches wide by 66 inches tall by 18 inches deep. The control panel and all equipment in the panel shall meet the requirements of Section 11940—Controls and Instrumentation Equipment.
- B. This panel shall be used as a termination point for all transmitting and receiving equipment associated with the MCCs and the Headworks Building. All control algorithms and alarms described herein shall be programmed into this PLC. Refer to Section 11990—SCADA System I/O listing for all required I/O that shall interface with HCP-2. Provide all necessary hardware to accommodate the listed I/O. Provide spare I/O wired to terminal blocks as noted in the I/O list.
- C. Provide PLC programming and OIP graphics including, but not limited to, those noted below. Graphics shall use animated symbols and icons to represent the equipment. Tabular or text-based information will not be acceptable. If colors are used to display status information, a legend shall be included to identify the meaning of the colors. Provide the following as a minimum:
 1. Grit Pump and Collector system overview graphic showing the status of the grit pump, grit trap, vacuum priming system, influent instantaneous and totalized flow, and associated valves.
 2. A detailed graphic for the grit pump and vacuum priming system including H-O-A graphics for soft hand-off-auto control selection and any associated equipment status or alarm status (i.e. starter overload, motor overtemperature, E-stop, etc.). Detailed graphics shall also display call-to-run fail status and lapsed time for the grit pump motor.
 3. Setpoint graphics to allowing the operator to change any operator-adjustable setpoint.
 4. An alarm history graphic showing active and historical alarms. For active unacknowledged alarms, the graphic shall include a description of the alarm and the

date and time that the alarm occurred. For active acknowledged alarms, the graphic shall include a description of the alarm and the date and time that the alarm was acknowledged. Historical alarm graphics shall include a description of the alarm and the date and time that the alarm occurred, was acknowledged, and cleared.

5. All graphics shall be submitted for review with the submittal package.
- D. Provide intrinsic safety barrier relays for all grit pump and grit trap control equipment wiring noted in Section 16940—Controls and Instrumentation, including those devices wired to the Main MCC.
- E. Produce a general/common equipment digital output for all alarms identified herein and denoted on the Section 11990 I/O list for HCP-2. This alarm shall include all alarms that already have a dedicated output from HCP-2 to the cellular modem.
- F. The grit pump and vacuum priming system (GP-10-01) shall be controlled from this PLC with an OIP Hand-Off-Auto switch as follows:
 1. In OIP Hand, the grit pump shall start and run at an operator adjustable speed setpoint (0 to 100%).
 2. In OIP Auto, the operator shall be able to select either a timed mode or a flow mode for control of the grit pump as follows:
 - a. In the timed mode, the grit pump shall be controlled from a repeat cycle timer within this PLC. The operator shall be able to enter the time between cycles (0 to 240 minutes). Once the cycle timer has expired, the grit pump shall be called to run for an operator-adjustable “run time” timer (0 to 20 minutes). Once the pump has shut down, the repeat cycle timer shall start timing a new cycle.
 - b. In the flow mode, the grit pump shall be controlled based on the influent flow, as calculated in this control panel based on FIT-10-01. The operator shall be able to enter the total accumulated influent flow (in kilogallons) before the grit pump is called to run. Once the accumulated flow setpoint is reached, the grit pump shall start and run for an operator-adjustable time period (0 to 60 minutes).
 - c. There shall be an operator-adjustable “High Flow Override” setpoint (in mgd) based on the influent flow signal such that the grit pump shall run continuously when the influent flow exceeds this setpoint. There shall be an operator-adjustable shut down time delay (0 to 120 minutes) within this PLC that will delay shut down of the grit pump once the influent flow rate drops below the high flow override setpoint. Once shut down, the grit pump shall resume normal operation.
- G. The Vacuum Priming System Cabinet shall be provided with the Grit Pump (GP-10-01). The cabinet includes an air compressor, vacuum pump, and liquid level sensor. The Vacuum Priming system shall operate as follows:
 1. When the Grit Pump (GP-10-01) is called to run, the air compressor shall run and close the pinch valve, the solenoid valve shall open, and the vacuum pump shall run to draw liquid in to the suction line.
 2. When the appropriate pump prime is detected by the liquid level sensor, the Grit Pump (GP-10-01) shall run, the air compressor and vacuum pump shall shut off, and the solenoid valve shall close.
 3. When the Grit Pump (GP-10-10) is shut off, the solenoid valve shall open.

2.05 FINISHES

- A. It is the intent of this specification that all equipment, supports, and appurtenances shall be furnished factory shop-primed, clean, and ready to accept finish painting by

CONTRACTOR with a minimal amount of surface preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9. Unless otherwise specified, mechanical equipment and accessories shall be furnished with all surfaces (except galvanized, stainless steel, rubber, copper, PVC) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation shall be done at such time during the assembly process to preclude damage to the equipment once assembled. Cleaned surfaces shall then be factory shop-primed. Factory shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify. Motors and speed reducers shall be factory shop-primed and finished-painted using the manufacturer's standard paint system for the specified application.

2.06 ANCHOR BOLTS

- A. Provide all anchor bolts required for equipment furnished. Anchor bolts shall be stainless steel of ample strength for the intended service. Provide anchor bolts in accordance with Division 5.

PART 3-EXECUTION

3.02 GENERAL

- A. Refer to requirements specified in Division 1 for equipment installation, quality control, testing, supervision, start-up, and operator training.
- B. A minimum of one trip and two days onsite shall be provided for start-up assistance and operator training.

3.03 PREPARATION

- A. During equipment start-up, manufacturer's representative shall confirm pump is operating on the design curve at design speed. Manufacturer shall provide a means to measure flow from grit pump discharge including a strap-on meter if necessary and shall provide appropriate sheaves to obtain desired flow rate. Report shall be submitted verifying test. Pump shall be modified if specified conditions are not met. The pumps shall be free of cavitation and noise.

END OF SECTION

SECTION 11329

GRIT WASHER

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: This section includes furnishing, installing, and placing into successful operation one grit washer, grit auger (GW-10-01), grit agitator (GW-10-02), and appurtenances in the Headworks Building as specified herein and shown on the drawings. The grit washer, grit auger, grit agitator, and appurtenances shall be furnished by the same supplier.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.
- C. Coordinate the Work of this section with Sections 11320—Grit Collector and 11327—Grit Pump.

1.02 SYSTEM DESCRIPTION

- A. The grit washer shall be designed to clean, dewater, and transport grit pumped from the grit collector. Cleaned and dewatered grit shall be transported into the roll-out dumpster (provided by OWNER) as shown on the drawings.
- B. Performance Requirements:
 - 1. The grit washer shall be capable of cleaning and dewatering grit slurry at a rate of up to 300 gpm. Average flow rate shall be approximately 250 gpm. The grit loading capacity of the unit shall be minimum 12 cubic feet per hour, with a grit slurry of 0.5 to 7.0% and dry solids specific gravity of 1.4 to 2.65. Solids handling capacity of the screw auger shall be minimum 12 cf/hour.
 - 2. Grit discharged from grit washer shall have a maximum water content in washed grit product of 10%, maximum volatile solids content in dried grit product of 5%, and minimum capture rate of 200 micron quartz sand at the average flow rate of 95%. Total and volatile solids content shall be determined using the latest Standard Methods.

1.03 SUBMITTALS

- A. Submittals for motors associated with equipment specified in this section shall include data sheets from the motor manufacturer. Data sheets from the equipment manufacturer or supplier are not acceptable.

1.04 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2--PRODUCTS

2.01 MANUFACTURERS

- A. Grit washer shall be model RoSF 4.2 by Huber Technology of Huntersville, North Carolina, or equal.

2.02 GENERAL

- A. Products Description: The grit and organics shall enter the grit washer by means of a tangential inlet pipe which generates an initial separation of the light phase free organics from the grit. The flow velocity shall be reduced to below 1 fps by means of a baffling arrangement and result in a constant flow to a bell mouth overflow weir. The design of the runoff hopper shall be such that only minimal turbulence occurs. The organics shall be discharged and returned to the influent channel. The grit particles which may include attached organics and some free organics shall be sheared using a stirring mechanism and washed by upflow water designed to lift the organics, clays, and fine silt out of the washer. The clean grit shall settle in the hopper bottom chamber where it is further agitated with a small paddle stirrer. At the hopper bottom in the lower end of the integral classifier, the cleaned grit shall be dewatered as it is transported by the screw auger to the upper discharge chute. The wash water containing dissolved organics shall be intermittently drawn off through a 4-inch pipe connected to the outlet pipe.
- B. Materials: All components of grit washer in contact with liquid shall be made of Type 316L stainless steel. These components shall include but are not limited to the following:
1. Washer chamber.
 2. Support legs.
 3. Inlet and outlet piping.
 4. Bellmouth overflow weir and internal piping.
 5. Internal washing system, including stirring mechanism.
 6. Small paddle stirrer, if required.
 7. Covers and access hatch.
 8. Transport tube.
 9. Discharge chute.
 10. Stub shaft and end plate (lower bearing).
 11. Hardware.
 12. Screw auger shall be made of high tensile steel, ASTM A441, and transport tube liner shall be made of 316L stainless steel, if required.
 13. Provide 316 stainless drop pipe to extend grit discharge into dumpster.
- C. Manufactured Units:
1. The grit conveyor shall be a 12-inch-diameter shafted spiral screw auger and 3.25-inch-diameter integral tube. Transport tube shall be 12.52 inches and be lined with a liner, if required.
 2. Gear Reducers: Gear reducers shall be Danfoss Bauer or SEW helical gear reducers, service factor 2.0, AGMA rating III. Agitator gear reducer output shall be 5.7 rpm and grit auger gear reducer shall be 6.5 rpm. Gear reducers shall be fitted with clear sight glasses to check the level and condition of lubricating oil.
 3. One 6-inch-diameter pipe connection shall be provided on the top of the grit washer. Pipe connections shall project 6 inches above the grit washer and be flanged according to AWWA C110 and ANSI 16.1 to accept odor control piping and dampers.

4. Grit washer shall include a bolted inspection hatch on the lower portion of the washer chamber and a hinged inspection hatch with latch on the top of the chamber. All hatches shall include gaskets.
5. Screw auger shall turn in a stub shaft located on an end plate at the bottom of the grit auger, and shall include a bronze bushing, nylon sleeves, neoprene spring seals, and 316 stainless steel spring clips. The bushing and labyrinth seals shall prevent the ingress of grit and water. A grease fitting shall be provided at the bottom plate. In lieu of a grease fitting, a chilled cast iron stub shaft and a maintenance free ceramic sleeve may be provided.
6. A 3-inch drain and valve shall be provided near the bottom of the grit washer to drain the unit when not in service. The drain shall be hard-piped to the outlet pipe with a cleanout. The drain connection shall also be provided with a 1-inch flush connection with ball valve.
7. Organic Drain Motorized Ball Valve: Motorized ball valve shall be provided for 4-inch organics drain connection. Valves shall be Worcester Controls Model No. PT5966-X-SE, Stubbe valve, or equal. Valves shall be 3-piece, full port, with 316 stainless steel body, ball, and stem, and High-per Fill seat. Actuators shall be Worcester Controls Series 75, Auma, or equal, 120 volt, with combination NEMA 4 and NEMA 7 enclosures rated for Class I, Division 1, Groups C and D hazardous locations. Duty cycle shall be 25% with open and close times of 5 seconds each. Normally open and normally closed limit switches shall be provided for the actuator. Two limit switches at the actuator shall indicate open and closed positions of valve with LED indicator lights. The valve will be controlled from the SCADA system.
8. Grit Level Transmitter: Grit level transmitter shall be a hydrostatic level measurement by Vega model Vegabar 64, or equal, 4-20 mA output, powered with 24 VDC. The hydrostatic cell shall be factory mounted in the grit washer.
9. Provide a solenoid valve for wash water feed piping. Solenoid valve shall be Buerkert Type 5282 or equal with ability to adjust opening time, or as specified in Section 15050, slow closing, stainless steel, 120 volt, rated NEMA 7 (Explosion Proof). Wash water connection shall be provided with a water meter and pressure regulating valve. CONTRACTOR shall provide rotameter, pressure regulating valve, and pressure gauge on wash water connection as specified in Division 15.
10. The agitator and auger drive motors shall be protected from overtorque (high current draw) by current sensing relays furnished with the unit to the Division 16 Contractor for installation in the MCC. Relays shall be equipped with user adjustable trip current level and start time delay to avoid nuisance tripping during motor startup. Relays shall be as manufactured by Tsubaki, Model TSBSSXX Series shock relay, or equal. Coordinate exact model required with drive motor horsepower.

2.03 MOTORS

- A. Motors shall conform to all applicable requirements of NEMA, ANSI, IEEE, and NEC standards and shall be UL listed for the service specified.
- B. Motors provided for the equipment schedule below shall meet the following requirements. Motors shall not be loaded beyond nominal rating, not including service factor, at any design condition.
 1. Physical Construction:
 - a. Copper lead and windings with ball or roller bearings in end brackets of steel or cast iron or aluminum brackets with steel bearing sleeves. Motor leads shall have the same insulation class as the windings.

- b. Rotor bars shall be copper. Where installed in NEMA 4X and Class I, Division 1 locations, a 45% non-phosphorous silver copper brazing shall be applied.
 - c. Motor shaft shall be high strength steel protected by a bronze shaft sleeve secured to the shaft to prevent rotation. The maximum allowable no-load shaft run-out shall be 0.002-inch.
 - d. Motors shall be equipped with grease fittings and automatic grease reliefs. Bearings shall be prelubricated and field regreasable. Openings for addition of grease shall have grease fittings provided.
2. Mounting: Vertical.
 3. Enclosure: Severe duty TEEP meeting the requirements of Class I, Division 1 Groups C and D.
 4. Efficiency: Premium efficiency as noted in scheduled below.
 5. Service Factor: 1.15
 6. Power requirements: 60 Hz, three phase, 230/460 volt, factory-wired for 460 volt connection, $\pm 10\%$ voltage variation.
 7. Load type: Constant torque.
 8. NEMA Design: B.
 9. Insulation: Class F.
 10. Nominal operating speed: Single speed, 1800 rpm.
 11. Nameplate: Stainless steel engraved attached to motor frame or enclosure with stainless steel rivets.
 12. Conduit/Junction Box: Cast iron, diagonally split, fully rotatable, gasketed between cover and bar, and between box and frame. Motor lead opening in the frame shall also be gasketed. A clamp-type terminal shall be provided inside each motor conduit box for grounding.
 13. Accessories:
 - a. Over-sized motor junction box.
 - b. Lifting eyes.
 - c. Thermostats applied to motor windings, capable of shutdown and manual reset by external controls (by Division 16).
- C. Motor Schedule: If motor horsepower is increased to meet the requirements of this specification, CONTRACTOR is responsible for increasing all wiring, starters, drives, and other electrical components as required by Code, at no additional cost to OWNER.

Grit Washer	Horsepower	Nominal Speed	Efficiency	Starter Type
Grit Auger (GW-10-01)	1.5	1800	86.5%	FVR
Grit Agitator (GW-10-02)	0.75	1800	86.5%	FVNR

2.04 FINISHES

- A. It is the intent of this specification that all equipment, supports, and appurtenances shall be furnished factory shop-primed, clean, and ready to accept finish painting by CONTRACTOR with a minimal amount of surface preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9. Unless otherwise specified, mechanical equipment and accessories shall be furnished with all surfaces (except galvanized, stainless steel, rubber, copper, PVC) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation shall be done at such time during the assembly process to preclude damage to the equipment once assembled. Cleaned surfaces shall then be factory

shop-primed. Factory shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify.

- B. The equipment, after its fabrication, shall undergo a passivation (pickling) process to ensure maximum resistance to corrosion. All stainless steel components and structures shall be submersed in a chemical bath of nitric acid and hydrofluoric acid to remove any residues that may be present on the material as a result of forming, manufacture, or handling. After removal from the pickling bath, the equipment must be washed with a high-pressure wash of cold water to remove any remaining surface debris and promote the formation of an oxidized passive layer which is critical to the long life of the stainless steel.

2.05 CONTROLS

- A. Refer to Section 11331–Screening Equipment for control descriptions and equipment requirements. Equipment in this section and in Section 11331 shall be controlled from a single control panel (HCP-01).
- B. Equipment manufacturer shall review electrical wiring and control diagrams prepared by the Section 11331 contractor. Manufacturer shall provide written approval to CONTRACTOR with copy to ENGINEER and OWNER.

2.06 SPARE PARTS

- A. The following spare parts shall be provided: One perforated diaphragm (membrane) and one set of special tools.

2.07 ANCHOR BOLTS

- A. Provide all anchor bolts required for equipment furnished. Anchor bolts shall be 316 stainless steel of ample strength for the intended service. Provide anchor bolts in accordance with Division 5.

PART 3–EXECUTION

3.01 GENERAL

- A. Refer to requirements specified in Division 1 for equipment installation quality control, testing, supervision, startup, and operator training.
- B. A minimum of one trip and two days onsite shall be provided for start-up assistance and training services.

END OF SECTION

SECTION 11331

SCREENING EQUIPMENT

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: This section includes furnishing, installing, and placing into successful operation one mechanically cleaned step screen (MFS-10-01) and one screening washer press (SWP-10-01). All equipment and appurtenances shall be furnished by the same supplier. The following equipment items are specified in this section.
 - 1. Mechanical self-cleaned fine screen.
 - 2. Screenings wash press.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 SYSTEM DESCRIPTION

- A. Application: The screening equipment shall be installed in the Headworks Building as shown on drawings. The screen will be used to remove debris from raw sewage influent water. The raw sewage will be conveyed to screen via the gravity influent channel.
- B. Mechanically-Cleaned Step Screen (MFS-10-01) Design Requirements:
 - 1. Number of units: 1.
 - 2. Peak flow to screen: 7.0 mgd.
 - 3. Channel width: 2 feet.
 - 4. Channel depth: 7.71 feet.
 - 5. Screenings discharge height above operating floor level: 5.0 feet.
 - 6. Maximum upstream water level: 2.66 feet (@35% blinded).
 - 7. Clear opening between lamina: 1/4 inch.
 - 8. Angle of screen: 53 degrees.
 - 9. Maximum differential head the screen shall withstand: 5.0 feet (differential height between the upstream and downstream water levels).
- C. SWP-10-01 Design Requirements:
 - 1. Screening washer press (SWP-10-01) will be used to wash, compact, dewater, and convey the screenings discharged by the mechanically cleaned fine screen to a dumpster (provided by OWNER) at a rate up to 70 cubic feet per hour.
 - 2. Screenings discharged to the dumpster shall be reduced in volume a minimum of 70% and contain less than 65% moisture during normal operating conditions. Washer unit shall remove 90% of the feed organics material contained in screenings. Screenings shall pass the paint filter test (EPA Method 9095).

1.03 SUBMITTALS

- A. Submittals for motors associated with equipment specified in this section shall include data sheets from the motor manufacturer. Data sheets from the equipment manufacturer or supplier are not acceptable.

- B. Submit shop drawings under provisions of Section 01300–Submittals. Submittals shall include but not be limited to the following:
 - 1. Complete assembly and dimension drawings.
 - 2. Descriptive information on material and equipment furnished.
 - 3. Complete drawings and component cut sheets.

1.04 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2–PRODUCTS

2.01 MANUFACTURERS

- A. Mechanically cleaned step screen shall be Model SSF-HE 3500/426/6 manufactured by Huber Technology, Inc., Huntersville, North Carolina, or equal.
- B. Screening wash press shall be Model WAP 2 by Huber Technology, Inc., Huntersville, North Carolina, or equal.

2.02 CORROSION PROTECTION

- A. All stainless steel subassemblies shall be acid passivated after welding for corrosion resistance and to provide a superior surface finish. This shall be done by full dipping of weldments. After passivation, the weldments shall be thoroughly rinsed with clean water and allowed to air dry. Sandblasting, bead blasting, or grit blasting of stainless steel surfaces will not be allowed in lieu of acid passivation.

2.03 MECHANICALLY-CLEANED STEP SCREEN (MFS-10-01)

- A. General:
 - 1. The screen shall be designed to provide maximum solids filtration and thus maximize capture of debris and minimize rate of headloss through the screen.
 - 2. The maximum openings shall be 1/4 inch. The screen will normally be operated intermittently by means of differential head measurement.
The screen shall be mounted by fastening to the top of the channel and include a pivoting support arrangement to pivot the screen from the channel without dewatering the channel. The pivot shall be attached to the screen frame and top of the channel to allow the screen to be pivoted from its fixed position. The pivoting system shall be constructed of 304 stainless steel and complete as required to function in accordance with the specification. Routine service, repair or replacement of damaged parts, shall be possible with the screen in the channel.
 - 3. The use of roller chain, filter shafts, and rollers and/or two or more motors for screen rotation is not acceptable.
 - 4. Unit shall be designed so that maintenance of the drive mechanism can be accomplished at operating floor level. Screen elements shall be capable of removal at

the operating level without taking the screens out of the channel or effecting the continuous or intermittent rotation of the screen.

5. The screen shall be factory-assembled and shall be delivered to the site fully assembled (other than the motor/reducer unit, discharge chute, and support legs). It shall be capable of being set in place and field-erected by CONTRACTOR with minimal field assembly.

B. Mechanical Cleaned Screen Materials:

1. The step screen shall be manufactured from AISI 304 austenitic stainless steel shapes (rods, angles, and channels), pipes, and sheets. Welded fabrications involving plates thicker than 5/8 inch thick shall be manufactured from AISI 304 L stainless steel. All mechanical parts shall be designed to handle the forces that may be exerted on the screen during fabrication, shipping, erection, and proper operation according to the O&M manual.
2. Step screen shall be manufactured in a stainless steel only factory or other measures shall be taken to prevent contamination of the stainless steel with rusty dust.
3. Step screen shall undergo a passivation (pickling) process to ensure maximum resistance to corrosion. All stainless steel components and structures shall be submersed in a chemical bath of nitric acid and hydrofluoric acid to remove any residues that may be present on the material as a result of forming, manufacture, or handling. After removal from the pickling bath, the equipment shall be washed with a high-pressure wash of cold water to remove any remaining surface debris and promote the formation of an oxidized passive layer which is critical to the long life of the stainless steel.

C. Frame of Step Screen:

1. Frame shall be fabricated from AISI 304 stainless steel.
2. Frame shall be accurately set into position in the channel and shall be capable of supporting the entire screening assembly when suspended from the pivot shaft attached to the support legs. The screen shall be set at an angle of 53 degrees from the horizontal. Frame shall be sealed to the channel walls with rubber seals.

D. Step Screen Blades:

1. Moveable step blades shall be cut from cold-rolled stainless steel sheets. The rear face of the moveable step blade shall have a series of sawtooth patterns cut into the straight edge of the step blade to slice through any debris that may accumulate on the cross member supports for the stationary step blades.
2. The front face of the toe of the moveable step blade shall have angular cuts resulting in a sawtooth pattern similar to those described in 2.03, D, 1. The upper discharge end of the moveable step blade shall be fitted with a two-piece plastic jacket to provide additional support to the screenings to be discharged. The moveable step blades shall be mounted in a series of cross member brackets anchored to the moveable side plate.
3. Stationary step blades shall be manufactured from cold-rolled stainless steel sheets. The toe of the stationary step blades shall be extended forward to fasten the bottom step face blade and the alignment comb located at the top of the bottom step face plate. The stationary blades shall use spacers constructed of stainless steel. The stationary step blades shall be mounted in a series of cross member brackets anchored to the step screen frame.
4. The effective screening area of the step screen shall be produced by alternating stationary step blades with moveable step blades and spacing the step blades 1/4 inch (6 mm) apart. The open space between the lamina shall be maintained by

HDPE spacer inserts mounted along the length of the moveable step blades at a distance not less than 2 feet apart. The resulting effective screening area shall have a minimum of 70% free open area.

5. The movable step blades shall lift the screenings to the next higher stationary step with each rotation cycle of the gear motor. The number of rotation cycles performed in each operating cycle is dependent upon the hydraulic conditions in the channel. After completion of an operating cycle, the step blades shall come to rest in the home position so that the horizontal surface of the step blades are aligned across the width of the channel. A proximity sensor shall send a signal to the PLC when the moveable step blades are in their home position causing the gear motor to stop and hold the step blades in alignment.
6. Screens sizes SSF3500 and above shall utilize two sets of step blades consisting of upper and lower packages. The upper blade package shall consist of 3-mm-thick stainless steel blades and 3-mm-thick polypropylene blades to prevent debris falling into the channel prior to discharge.
7. Screens that do not provide the specified pronounced step profile over their entire length shall not be acceptable.

E. Bottom Step Face Blade and Flushing Pipe:

1. Step screen shall be designed with a blind face plate extending from the channel step to the screen to prevent grit deposits from accumulating below the step blades. The blind plate shall be manufactured from AISI 304 stainless steel plate and shall cover the width of the effective screening area. A lower grit flap or movable plates are not acceptable.
2. Provide stainless steel flushing pipe of sufficient diameter mounted parallel to the back of the face plate along the width of the channel to prevent heavy material from depositing below the step blades. The flushing pipe shall be supplied with perforations of sufficient diameter and spacing. The flushing pipe will be fed with potable water. The flushing pipe shall be fitted with a 1 1/4-inch-diameter solenoid valve controlling the feed water to the flushing pipe.

F. Home-Position Proximity Sensor:

1. Home-position proximity sensor shall send a signal to the PLC that shall cause the gear motor to stop the rotation of the moveable step blade package when it is aligned with the stationary step blade package. The signal shall be generated when the metal flag attached to the eccentrically rotated block passes the frame-mounted sensor.
2. Mounting mechanism of the sensor shall be adjustable to enable the moveable step screen package to be stopped in the proper location.
3. The proximity sensor shall be an inductive Telemecanique proximity sensor. The sensing distance of this sensor shall be 5/64 inch (2 mm).
4. Provide intrinsic safety barrier for proximity sensor as specified in Section 16940 to Division 16 system supplier.

G. Linkage System:

1. The step screen shall be designed with a linkage system on each side of the unit that transfers the rotation of the gear motor to the moveable step blade package. Each linkage system shall consist of an eccentrically rotated rectangular excenter block, a flange bearing, rocker arm assembly, moveable side plate, slewing bracket, linkage arms, and bushings. Chain or cable drives are not acceptable.
2. The steel screen linkage system shall be designed so that if the steel blades experience a jam, no damage to the screen will result. If a jam condition is

experienced the drive motor shall shut off and an alarm signal should be sent to the PLC.

3. Screens whose movable blades are not lifted in a parallel movement over their entire length, particularly screens whose blades glide in a horizontal movement over the channel floor, are not acceptable.

H. Gear Motor Drive Mechanism:

1. The drive unit shall be direct coupled to the screen drive shaft through the gear box. The gear box housing shall be constructed from ASTM A48, Class 30 cast iron. The drive unit shall be sealed from the screenings transport area with a stainless steel plate that is welded to the frame and forms the drive console.
2. Nominal and minimum motor efficiencies shall comply with NEMA MG 1. The gear box shall be designed for AGMA Class II, 24-hour duty.
3. The screen shall be equipped with electronic overload protection by a true-power monitor to stop the screen and initiate an alarm in the event of overload. Shear pins for overload protection are not acceptable.

- I. Covers: The step screen shall include AISI 304 stainless steel covers for odor control and general plant safety. The covers shall extend from the deck level to the top of the screen. The covers on the front of the screen shall be easily removable and shall include a keyed locking mechanism. The covers on the sides and the back of the screen shall be fastened in place by screws.

2.04 SCREENINGS WASH PRESS (SWP-10-01)

A. Screenings Wash Press Materials:

1. Screenings washer shall be manufactured from AISI 304 austenitic stainless steel shapes (rods, angles, and channels), pipes, and sheets. Welded fabrications involving plates thicker than 5/8 inch thick shall be manufactured from AISI 304 L stainless steel. All mechanical parts shall be designed to handle the forces that may be exerted on the screen during fabrication, shipping, erection, and operation.
2. Screenings washer shall be entirely manufactured in a stainless steel only factory or other measures shall be taken to prevent contamination of the stainless steel with rusty dust.
3. Screenings wash press shall undergo a passivation (pickling) process to ensure maximum resistance to corrosion. All stainless steel components and structures shall be submersed in a chemical bath of nitric acid and hydrofluoric acid to remove any residues that may be present on the material as a result of forming, manufacture, or handling. After removal from the pickling bath, the equipment shall be washed with a high-pressure wash of cold water to remove any remaining surface debris and promote the formation of an oxidized passive layer which is critical to the long life of the stainless steel.

B. Screenings Wash Press Body:

1. Screenings wash press body shall be fabricated from AISI 304 stainless steel. The screenings wash press body shall include a properly sized trough opening for screenings deposit. A level mounting flange shall be provided around the trough for the transitional hopper that directs the screenings into the trough of the screenings washer. The hopper shall be fabricated from stainless steel.
2. The screenings wash press body shall house the center-washing shafted screw, shall include wash water connections in the washing zone and in the screenings trough, and shall include connections to mount the drain pan.

3. The screenings wash press body shall include appropriately sized perforations in the washing and compaction zones.
4. The screenings wash press body shall be equipped with a minimum of six guide bars made of Hardox 400 or equal abrasion resistant plate. The guide bars shall be bolted from the outside of the tube for easy access and removal. The guide bars shall be at least 14 1/2 inches long and the thickness shall be a minimum of 1/4 inch. Welded guide bars shall not be acceptable.

C. Shafted Screw

1. Shafted screw shall transport screenings from the trough area through the washing zone and shall force the compacted screenings through the discharge pipe. The shafted screw shall be fabricated from AISI 304 stainless steel. The shaft shall receive wash water from the water manifold and shall introduce it into the washing zone through appropriately sized openings.
2. The screw flights shall be designed with sufficient thickness to handle all loads that will be experienced in the trough area, the washing area, the compression area, and the screenings discharge pipe. The last flight of the screw shall have a minimum 10-mm-thick layer of Hardox 400 or equal welded to the surface of the stainless steel flight to reduce wear resulting from compaction of the screenings.
3. A stainless-steel-backed brush with nylon bristles shall be attached to the flights of the shafted screw by means of stainless steel holder clips and fasteners along the entire length of the perforated washing zone.
4. A shaftless screw shall not be acceptable. A screw made of carbon steel shall not be acceptable.

D. Water Manifold and Water Connections

1. The screenings wash press shall be equipped with a manifold to supply water to the different washing inlet locations. The screenings wash press shall be provided with a minimum of three separate connections for injecting wash water into the screenings. One of the three injection locations shall be through the shaft of the screw to ensure that the wash water penetrates the entire screenings plug. The unit shall be designed to accept wash water from the plant's potable water.
2. Wash water connections shall be sized and positioned by the unit manufacturer. Maximum water consumption for the unit shall be 13 gallons per minute. Water pressure at the connection to the unit shall be minimum 30 psig.
3. The main wash water supply line to the unit shall be provided with a minimum of two 1-inch-diameter solenoid valves suitable for a maximum operating pressure of 125 psig. The solenoid valves shall be independently controlled by the PLC in the control panel (by Division 16). One solenoid valve shall control water supply to the inlet hopper and to the wash pan manifold. The second solenoid valve shall supply wash water to the drain pan.

E. Drain Pan:

1. Drain pan shall collect wash water filtrate. The drain pan shall be fabricated from stainless steel plate and shall be attached to the screenings wash press body with stainless steel clasps for easy removal.
2. The drain pan shall include a 3/4-inch threaded inlet connection for wash water from the manifold for flushing on one end. A 3 1/2-inch drain connection shall be provided at the lowest portion of the drain pan at its opposite end. Drain connection shall be mounted on side of drain pan.

- F. Screenings Discharge Pipe: Screenings discharge pipe shall be made of stainless steel and shall be connected to the screenings washer body with a minimum 8-inch-diameter flange. The diameter of a straight section of the discharge pipe shall increase in size to ease the transport of the screenings. The diameter of the conical discharge pipe's straight section shall increase to a minimum 12 inches. Bends in the discharge pipe shall be maximum 45 degrees and shall have a radius three times the pipe diameter.
- G. Gear Motor Drive Mechanism:
 - 1. The drive unit shall be direct coupled to the screen drive shaft through the gear box. The gear box housing shall be constructed from ASTM A48, Class 30 cast iron. The shaft-mounted geared motor shall have a torque support bolted to the body of the screenings washer. Units without a torque support shall not be acceptable.
 - 2. The gear box shall be designed for AGMA Class II, 24-hour duty.

2.05 MOTORS

- A. Motors shall conform to all applicable requirements of NEMA, ANSI, IEEE, and NEC standards and shall be UL listed for the service specified.
- B. Motors provided for the equipment scheduled below shall meet the following requirements. Motors shall not be loaded beyond nominal rating, not including service factor, at any design condition.
 - 1. Physical Construction:
 - a. Copper leads and windings with ball or roller bearings in end brackets of steel or cast iron or aluminum brackets with steel bearing sleeves. Motor leads shall have the same insulation class as the windings.
 - b. Rotor bars shall be copper. Where installed in Class I, Division 1 locations, a 45% nonphosphorous silver copper brazing shall be applied.
 - c. Motor shaft shall be high-strength steel protected by a bronze shaft sleeve secured to the shaft to prevent rotation. The maximum allowable no-load shaft runout shall be 0.002 inch.
 - d. Motors shall be equipped with grease fittings and automatic grease reliefs. Bearings shall be prelubricated and field regreasable. Openings for addition of grease shall have grease fittings provided.
 - 2. Mounting:
 - a. MFS-10-01 motor: Inclined.
 - b. SWP-10-01 motor: Horizontal.
 - 3. Enclosure: Hazardous location meeting the requirements of Class I, Division 1, Groups C and D.
 - 4. Efficiency: Premium efficiency as noted in schedule below.
 - 5. Service Factor: 1.15.
 - 6. Power requirements: 60 Hz, three-phase, 460-volt, $\pm 10\%$ voltage variation.
 - 7. Load type: Constant torque.
 - 8. NEMA Design: B.
 - 9. Insulation: Class F.
 - 10. Nominal operating speed: Single speed, 1800 rpm.
 - 11. Nameplate: Stainless steel engraved attached to motor frame or enclosure with stainless steel rivets.
 - 12. Conduit/Junction Box: Cast iron, diagonally split, fully rotatable, gasketed between cover and bar, and between box and frame. Motor lead opening in the frame shall also be gasketed. A clamp-type terminal shall be provided inside each motor conduit box for grounding.

13. Accessories:

- a. Oversized motor junction box.
- b. Lifting eyes.
- c. Thermostats applied to motor windings, capable of shutdown and manual reset by external controls (by Division 16).

- C. Motor Schedule: If motor horsepower is increased to meet the requirements of this specification, CONTRACTOR is responsible for increasing all wiring, starters, drives, and other electrical components as required by Code, at no additional cost to OWNER.

Equipment	Horsepower	Nominal Speed	Efficiency	Starter Type
MFS-10-01	2	1800 rpm	86.5%	FVNR
SWP-10-01	5	1800 rpm	89.5%	FVR

2.06 HEADWORKS CONTROL PANEL (HCP-01)

- A. Provide a NEMA 12, painted steel, wall-mounted Headworks Control Panel 1 (HCP-1) housing all controls necessary for fully automatic operation of the Mechanical Fine Screen (MFS-10-01), Screenings Wash Press (SWP-10-01), Grit Auger (GW-10-01), Grit Washer (GW-10-02), and all associated appurtenances. HCP-1 shall include, but not be limited to, a PLC, an OIP, a UPS, associated I/O modules, power supplies, control relays, auxiliary relays, intrinsic barrier relays, 120 V power distribution to associated instruments (i.e. solenoid valves, transmitters, etc.). Panel shall be a maximum of 36 inches wide by 66 inches tall by 18 inches deep. The control panel and all of the equipment in the panel shall meet the requirements of Section 11940—Controls and Instrumentation Equipment.
- B. This panel shall be used as a termination point for all transmitting and receiving equipment associated with the MCCs and the Headworks Building. All control algorithms and alarms described herein shall be programmed into this PLC. Refer to Section 11990—SCADA System I/O listing for all required I/O that shall interface with HCP-1. Provide all necessary hardware to accommodate the listed I/O. Provide spare I/O wired to terminal blocks as noted in the I/O list.
- C. Provide PLC programming and OIP graphics including, but not limited to, those noted below. Graphics shall use animated symbols and icons to represent the equipment. Tabular or text-based information will not be acceptable. If colors are used to display status information, a legend shall be included to identify the meaning of the colors. Provide the following as a minimum:
1. Screenings system overview graphic showing the status of the screen, wash press, grit auger, and grit washer as well as the channel level on each side of the screen.
 2. A detailed graphic for the screen, wash press, and grit auger/washer including H-O-A graphics for soft Hand-Off-Auto control selection and any associated equipment status or alarm status (i.e., home position, starter overload, motor overtemperature, E-stop, over-torque, jam, etc.). Detailed graphics shall also display call-to-run fail status and lapsed time for each motor.
 3. Setpoint graphics to allow the operator to change any operator-adjustable setpoint.
 4. An alarm history graphic showing active and historical alarms. For active unacknowledged alarms, the graphic shall include a description of the alarm and the date and time that the alarm occurred. For active acknowledged alarms, the graphic shall include a description of the alarm and the date and time that the alarm was acknowledged. Historical alarm graphics shall include a description of the alarm and the date and time that the alarm occurred, was acknowledged, and cleared.

5. All graphics shall be submitted for review with the submittal package.
- D. Level and flow transmitters LIT-10-01, LIT-10-02, LIT-10-03, and FIT-10-01 shall be mounted on the door of this panel. Provide fused 120 Vac power to the transmitters and electronic module. Provide terminations within the panel for the field cables of the associated transducers and sensors. Provide operator-adjustable High Influent Flow and Low Influent Flow alarm setpoints based on FIT-10-01.
- E. Produce a general/common equipment digital output for all alarms identified herein and denoted on the 11990 I/O list for HCP-1. This alarm shall include all alarms that already have a dedicated output from HCP-1 to the cellular modem.
- F. Provide intrinsic safety barrier relays for all screen, wash press, grit auger, and grit washer auxiliary control equipment wiring noted in Section 16940—Controls and Instrumentation, including those devices wired to the Main MCC.
- G. The Mechanical Fine Screen MFS-10-01 shall be controlled from this PLC with an OIP Hand-Off-Auto switch as follows:
1. In OIP Hand, the screen shall start and run continuously.
 2. In OIP Auto, the operator shall be able to select either a timed mode or a differential level mode of control for each screen as follows:
 - a. In timed mode, the screen shall be controlled from a repeat cycle timer within this PLC. There shall be an operator-adjustable "Off Time" (0 to 240 minutes) and On Time (0 to 60 minutes) within this PLC. There shall also be an operator-adjustable setpoint (0 to 20) for the number of steps (full rotations past the home position switch [ZS-10-01]) to be taken prior to a wash press sequence being initiated such that once the screen is started, it shall continue to operate until the step's setpoint is reached. Once the step setpoint is reached, the screen shall be shut down once it returns to the home position.
 - b. In the differential level mode, the differential level shall be calculated within this PLC based on the associated upstream and downstream level transducers. The screen shall be controlled based on the associated differential level (LIT-10-01) as follows: The differential level value shall be displayed at the OIT at all times. There shall be an operator-adjustable screen start level setpoint (inches) and a high water level (HWL) alarm setpoint (inches) for the screen based on the differential level transmitter's upstream level transducer. When the differential level rises above the start level setpoint for an operator-adjustable time delay (0 to 10 seconds), the screen shall start and run moving off the home position. There shall be an operator-adjustable number of steps to be taken setpoint such that once the step screen is started, it shall continue to operate until the step's setpoint is reached. Once the step's setpoint is reached, the screen shall be shut down once it returns to the home position, unless the water level in the channel is above the HWL alarm or the start level setpoints. In this case, the screen shall continue to operate until the water level falls below both of these two setpoints. Once below these setpoints, the screen shall be shut down once it returns to the home position.
 - c. There shall be an operator-adjustable high flow setpoint based on the plant influent flow, such that when the influent flow rises above this setpoint, the screen shall run continuously until the flow falls below the setpoint, at which time the screen shall resume control as described above. This control shall override both control modes described above.

3. System Supplier shall verify with the equipment manufacturer that the equipment controls are compatible with the wash press and mechanical fine screening equipment prior to startup.
 4. When the screen shuts down after running in the forward direction, the bottom flushing solenoid valve (SV-10-06) shall be opened for an operator-adjustable bottom open time timer (0 to 100 seconds). Once the bottom open time timer has expired, the bottom flushing solenoid valve shall be closed and the top solenoid valve (SV-10-07) shall be opened for an operator-adjustable top open time timer (0 to 100 seconds). Once the top open time timer expires, the top flushing solenoid valve shall close.
 5. 120 Vac power to the solenoid valves shall be from HCP-1 and shall be fused.
- H. The Screenings Wash Press (SWP-10-01) shall be controlled from this PLC with an OIP Hand-Off-Auto switch as follows:
1. In OIP Hand, the wash press shall start and run continuously in the forward direction.
 2. In OIP Auto, the wash presses shall operate in a batch mode as follows: In the batch mode, the screenings wash press shall be controlled from this PLC based on the total number of steps from the mechanical fine screen (based on the home position sensor ZS-10-01). The operator shall be able to select the number of steps before the wash press is called to operate. There shall be an operator-adjustable start delay (0 to 300 seconds) within this PLC that shall delay starting of the wash press once the step's setpoint is reached. The number of screen steps remaining before activation of the wash press and delayed start time remaining shall be indicated at the OIP. Once the start delay has expired, the wash press and four associated spray wash solenoid valves (SV-10-01 through SV-10-04) shall operate as follows:
 - a. Provide a user-configurable 8-step sequence for the motor and solenoid valves. Each step shall have an operator-adjustable (0- to 120-second) time duration. There shall also be a repeat-cycle set up such that the operator is able to select a repeat cycle start step (1 to 8) and a repeat cycle stop step (1 to 8), as well as the number of times to repeat the cycle (1 to 20). The sequence shall start at step one and continue on to the repeat-cycle stop step. The sequence shall then go back to the repeat-cycle start step, continue onto the repeat-cycle stop step for the set number of repeat cycle times. Once the number of repeat cycle times is equal to the set number of repeat cycles, the sequence shall continue on through step 8, at which time the sequence shall reset, the wash press shall shut down, and all associated solenoid valves shall close. The current step, remaining time for the current step, and number of repeat cycles remaining in the current sequence shall be displayed at the OIP. Default sequence shall be as recommended by the manufacturer.
 - b. The operator shall be able to select either stopped, forward, or reverse direction of the wash press and which of the associated solenoid valves are open for each step.
 - c. The operator shall be able to assign any or all of the solenoid valves to be open during each step.
 - d. The operator shall only be able to select one operating mode per step for the motor (stopped, forward, or reverse). The motor shall be allowed to completely stop before changing direction.
 - e. It shall be possible for the operator to enter a time duration of zero for any step in the sequence to skip that step.
 - f. In the event of a mechanical fine screen high upstream level condition from the level transducer (LIT-10-01) or backup HWL alarm float (LS-10-01), the batch mode of operation for the associated wash press shall be terminated immediately,

and after an operator-adjustable time delay (0 to 5 seconds), the wash press shall enter a storm mode and operate as follows:

- (1) In the storm mode, wash press shall start and run continuously in the forward direction, reversing for 3 seconds out of every 45 seconds of forward run time. The screen motor shall be allowed to completely stop before changing direction. The solenoid valves shall be energized continuously.
 - (2) In the event that the influent flow falls below the high flow mode setpoint, the storm mode of operation for the associated wash press shall terminate immediately and, after an operator-adjustable time delay (0 to 5 seconds), the wash press shall enter batch mode as described above.
- g. 120 Vac power to the solenoid valves shall be from HCP-1 and shall be fused.
- I. The grit washing system consists of the Grit Washer Agitator (GW-10-02), Grit Washer Auger (GW-10-01), Grit Pump (GP-10-01), Wash Water Solenoid Valve (SV-10-05), Organic Drain Motorized Ball Valve (MBV-10-01), and Grit Bed Level Probe (LIT-10-03). The grit washing system shall be controlled as described below. CONTRACTOR shall coordinate with the equipment supplier to provide exact logic required. The grit washing system shall be controlled from this PLC with a OIP Hand-Off-Auto switch as follows:
1. In OIP Hand, the grit wash water solenoid valve and organics drain valve shall open and the grit agitator and auger shall start and run continuously (in the forward direction) after an operator-adjustable delay (0 to 120 seconds).
 2. In OIP Auto, the grit washing system shall operate in a batch mode as follows:
 - a. Once a run signal is seen from the grit pump, the grit wash water solenoid valve (SV-10-05) shall open, and an operator-adjustable grit agitator start time delay (0 to 120 seconds) shall control when the agitator starts. Additionally, the organics drain valve (MBV-10-01) shall begin to cycle open and closed based on operator-adjustable open (0 to 15 seconds) and close time delays (0 to 300 seconds).
 - b. The grit washer auger shall operate independently of the grit washer agitator. The grit washer auger can be controlled via either a TIMED mode or LEVEL mode.
 - (1) In the TIMED mode, the auger shall be controlled by a repeat cycle timer within the associated PLC. The operator shall be able to select the time (0 to 60 minutes) between cycles. Once the cycle timer has expired, the auger shall be called to run for an operator-adjustable amount of time (0 to 60 minutes). Once the time has expired, the auger shall shut down and the repeat cycle timer should start timing a new cycle.
 - (2) In the LEVEL mode, the auger shall be controlled by the grit bed level sensor (LIT-10-03). There shall be two operator-adjustable setpoints associated with the grit level sensor: grit auger start while grit pump not running (0 to 36 inches) and grit auger start while grit pump is running (0 to 36 inches). The auger shall start once the level rises above the appropriate grit auger start setpoint. The auger shall shut down once the grit bed level falls below the appropriate operator-adjustable grit auger stop setpoint. There are grit auger stop setpoints for when the grit pump is running and not running (0 to 36 inches for both).
 - c. Upon shutdown of the grit pump, the grit washing system shall begin a shutdown sequence. If the auger is in operation, the auger should continue to operate until the timer expires or the grit bed level falls below the shutdown level, depending on the mode selected. Additionally, there shall be an operator-adjustable washing system shutdown delay (0 to 10 minutes) that will control when the agitator shuts down and the wash water motorized ball valve closes. The organics drain valve should remain open until its open time expires.

- d. In the event a grit washing system start signal (e.g. grit pump run signal) is detected during the agitator/wash water cycle or as long as the organic drain valve is opened, the washing sequence shall be terminated and restarted at the beginning of the sequence.
- e. 120 Vac power to the Wash Water Solenoid Valve (SV-10-05) and Organic Drain Valve (MBV-10-01) shall be from this HCP and shall be fused. The motorized ball valve requires power to open and power to close.
- f. In the event that the agitator or auger fails or is taken out of service (H-O-A switch at MCC or OIT not in Auto), the grit pump shall be shut down and an alarm shall be activated at the OIT.
- g. There shall be an operator-adjustable high grit level alarm setpoint based on the grit level sensor (LIT-10-03) that activates an alarm at the OIT indicating that the grit auger has clogged when the grit level rises above the high level alarm setpoint. The grit level sensor shall be hardwired to the supervisory control circuit via an intrinsic safety barrier in HCP-1.

2.07 INSTRUMENTATION

- A. Screenings Wash Press and Screen:
 - 1. Provide a current sensing relay for both the screen and wash press for the detection of a jam condition.
 - 2. The relay shall be configured by Division 11 and installed in the MCC by Division 16 contractor.
- B. Provide two proximity switches for monitoring torque overload on the left and right side of the screen. Provide intrinsic safety barriers for proximity switches as specified in Section 11940 or as recommended by the proximity switch supplier.

2.08 SPARE PARTS

- A. CONTRACTOR shall provide, along with the shop drawings, a list of the manufacturer's recommended spare parts for the specified equipment. The list shall include a description of each spare part, current pricing, and expected delivery time for each part. No spare parts shall be provided by CONTRACTOR/manufacturer as part of this Contract.

2.09 FINISHES

- A. It is the intent of this specification that all equipment, supports and accessories not constructed of stainless steel be furnished factory shop-primed, clean and ready to accept finish painting by CONTRACTOR, with a minimal amount of surface preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9. Unless otherwise specified, mechanical equipment and accessories shall be furnished with all surfaces (except galvanized, stainless steel, rubber, copper, PVC) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation shall be done at such time during the assembly process as to preclude damage to the equipment once assembled. Cleaned surfaces shall then be factory shop-primed. Factory shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR to verify. Motors and speed reducers shall be factory shop-primed and finished-painted using the manufacturer's standard paint system for the specified application.

2.10 ANCHOR BOLTS

- A. CONTRACTOR shall provide anchor bolts necessary for equipment furnished. Anchor bolts shall be Type 316 stainless steel and be of ample strength for the intended service. Provide anchor bolts in accordance with Division 5.

PART 3—EXECUTION

3.02 GENERAL

- A. Refer to requirements specified in Division 1 for equipment installation quality control, testing, supervision, start- up, and operator training.
- B. A minimum of one trip and two days onsite shall be provided for start-up assistance and operator training.

END OF SECTION

SECTION 11940

CONTROLS AND INSTRUMENTATION EQUIPMENT

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Controls and instrumentation equipment provided with equipment in Division 11.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 QUALITY ASSURANCE

- A. UL labels: All electrical equipment and material shall be listed and labeled by Underwriters Laboratories, except where UL does not include the equipment in their listing procedures. Electrical equipment shall include, but not be limited to, control panels, power supplies, controllers, relays, wire, selector switches, pilot lights, overcurrent devices, and connectors. Control panels shall bear a serialized UL label indicating that it is UL approved as an assembled unit. Panels which have individual components which are UL labeled, but do not have UL approval as an assembled unit are not acceptable.
- B. NEMA/ANSI Compliance: Comply with National Electrical Manufacturer's Association, American National Standards Institute and other standards pertaining to material, construction and testing, where applicable.
- C. Code Compliance: Comply with the National Electrical Code (NFPA 70) and any and all local codes as applicable to construction of electrical wiring devices, material, and equipment herein specified.

1.03 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's data, specifications, and installation recommendations for each item specified herein.
- B. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.
- C. Provide product data on all equipment and devices specified herein, as well as wiring schematics for all systems.
- D. Provide load calculations showing battery runtimes and UPS sizing including all equipment specified herein.

1.04 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 01300—Submittals.
- B. Include spare parts data listing, source, and current prices of replacement parts and supplies, and recommended maintenance procedures and intervals.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Store in a clean dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect equipment from dirt, water, construction debris, and traffic.
- B. Handle in accordance with manufacturer's written instructions. Lift only with lugs provided for the purpose. Handle carefully to avoid damage to equipment components, enclosure, and finish.

PART 2-PRODUCTS

2.01 EQUIPMENT ENCLOSURES

- A. New enclosures shall be front access only, minimum No. 12 gauge steel, hinged doors, rotating, lockable handle, three-point latch on each equipment compartment door (not screws or bolts), with top and bottom bolts actuated by one rotating handle on large doors. Quick-opening hasps may be substituted for rotating, lockable handle latch where approved by ENGINEER. Panels shall include door stop kit, data pockets for panel wiring diagrams, and minimum 18-inch fluorescent light and switch. Panels shall include nonfused main disconnect with interlock to prevent opening the panel with switch in "On" position. A defeater shall be provided to bypass this interlock, with handle lockable in "Off" position. Painting shall include phosphate treatment, zinc chromate iron oxide primer, baked rust-inhibiting enamel, and OWNER-selected exterior color. All doors and panels shall be gasketed, and panels installed outdoors or nonconditioned spaces shall be insulated. Enclosures shall be as manufactured by Hoffman or Saginaw. Enclosure rating shall be as follows, unless noted otherwise on the drawings, or in the associated specification section.
 - 1. Indoor and/or dry locations: NEMA 12.
 - 2. Corrosive and/or damp locations, including chemical rooms, belowgrade nonconditioned spaces, and outdoor locations: NEMA 4X stainless steel.
 - 3. Hazardous locations: NEMA 7 cast iron.
- B. The equipment mounted within the enclosures shall be mounted on the enclosure back panel, neatly organized, and shall be in accordance with the manufacturer's recommendations.
 - 1. All wiring within control panels shall be insulation-type MTW, minimum size 16 AWG. Wiring within the enclosure shall be routed through plastic wiring troughs with removable covers. Maximum fill for wiring troughs shall be 60%. Terminal blocks located adjacent to wiring troughs shall have a minimum of 1 1/2 inches between terminal block and trough. All wiring in control panels not in wiring troughs shall be bound with continuous-type spiral windings.
 - 2. All I/O devices shall be wired to DIN rail-mounted terminal blocks. Plastic wiring duct shall be as specified in Section 16120-Wire.
 - 3. Field wiring in dry locations shall be insulation-type THHN, minimum size 14 AWG. Field wiring in damp or wet locations shall be insulation type XHHW-2, minimum size 14 AWG. All field wiring shall terminate at rail-mounted terminal blocks. Field wiring terminals shall be clearly identified as to which I/O terminals they are wired. Wire markers shall be permanently attached, wraparound adhesive, or heat-shrink-type markers. Wire numbering preprinted on the conductor and individual wraparound numbers are not acceptable.

4. Jumpers between adjacent terminal blocks shall be copper jumper bars supplied by the terminal block manufacturer.
 5. All panels with DIN rail-mounted equipment shall include a minimum of 25% spare DIN rail space.
 6. In addition to spare I/O specified herein, provide a minimum of 25% spare hot and neutral terminals, wired to terminal strips. Spare terminals shall be provided for all-voltage sources within the panel (e.g., 120 V, 24 V).
- C. All wiring for new panels shall be done in the factory, Class II, Type C with master terminal strips for exterior connections. Terminal blocks shall be mounted either at the bottom or on the side of the enclosure, depending where the I/O conduits penetrate the enclosure. Splices are not allowed within enclosures or wireways. All enclosures must pass through doors to point of installation, and if enclosures are shipped in sections, all wiring and connections between sections shall be done by CONTRACTOR. All wiring shall be labeled at each end with corresponding numbers. This numbering shall be shown on the shop and record drawings.
- D. All door-mounted devices shall be furnished flush-mounted, and an exterior engraved phenolic nameplate worded by the manufacturer and reviewed by OWNER (upon receipt of shop drawings) shall be provided for each compartment, device, light, etc. All components within the enclosures shall be identified with interior-mounted engraved labels. Labels shall be installed on the enclosure back panel and not on the device or wireway. Devices shall be grouped for each device or unit being controlled.
- E. Equipment enclosures that include motor controllers shall have a main disconnect for the enclosure.

2.02 COMMON REQUIREMENTS ALL EQUIPMENT

- A. All indicating and recording devices shall be electric or electronic.
- B. Power supplies shall be protected against short circuits and contain their own overcurrent and overvoltage protection. Twelve and 24 Vdc power supplies shall be provided and installed in the enclosures for powering all analog input signals where required.
- C. All motor control power shall be 120-volt with suitable circuit protection fuses or breakers. Fuse holders shall be provided with integral LEDs to indicate when the fuse is blown.
- D. Devices powered at 120 volts from control panels shall be fused. This shall include, but not be limited to, solenoid valves, motor-operated valves, motorized ball valves, flow meters, and transducers/transmitters.
- E. Provide lightning protection, isolation transformers, and fused disconnects at each end of each power circuit, supervisory circuit, and local supervisory circuit with transformers and relays, if necessary, to obtain supervisory power. Lightning protection shall be completely solid-state and self-healing and not require the use of fuses. Lightning protection shall be as manufactured by Citel, Model DS4xS, or equal.
- F. Each panel shall have a GFI, duplex, 20-ampere, 120-volt receptacle.
- G. Control panels that include programmable or electronic controllers (PLCs) shall be provided with a true on-line Uninterruptible Power Supply (UPS) sufficient to power the control panel for 30 minutes. In panels with a UPS, control power shall be through the UPS

and shall be plug-connected. UPS power shall be provided, at a minimum, to the following components: PLC and I/O racks, power supplies for PLCs and I/O, indicating lights, devices associated with power fail and communication alarms, and power supplies for loop-powered instruments. UPS' provided in control panels with a PLC shall be provided with a relay card that provides a dry contact output to the PLC in the event that the UPS battery needs replacement. UPS shall be APC with relay I/O module, or Liebert, GXT2 with relay card. Provide a stand or shelf for the UPS so that the UPS does not sit on the bottom of the enclosure.

- H. Where PLCs or Operator Interface Panels (OIPs) are installed in control panels, two copies of all programs with associated passwords shall be turned over to OWNER at final completion. Copies shall be a bound hard copy and electronic compact disk.
- I. If enclosure and panel space is needed for future installation of devices, lights, etc., the enclosure and panel shall be constructed for such installation. Supports shall be provided for future equipment, and panel openings shall be made and covered with neat cover plates matching the panel.
- J. Control panels that include PLCs shall have an exterior panel-mounted receptacle and programming port mounted to the front or side of the panel, as applicable to the installation. Receptacle and programming port shall be provided to allow for PLC programming via laptop without opening the panel door. Programming port shall match that of the network being installed (e.g., Ethernet, data highway, etc.).
- K. CONTRACTOR shall furnish one complete extra set of fuses and similar parts which may need replacement in normal service and an identification list of all component parts and where they may be obtained for operating the system for 3 years from start-up.
- L. Where a certain accuracy of sensing and transmitting levels or flows and controlling operations are called for, means must be provided to read or determine that the levels or flows are within the limits or accuracy specified of the sensing, transmitting, and controlling devices. Where no accuracy is specified, but a knowledge of levels is necessary to set operating points, an indicating device of accuracy consistent with the operation of the system is required.
- M. All internal wiring shall be color-coded and numbered, and each wire shall be terminated on terminal blocks. Schematic and wiring layout drawings complying with Section 16941—Controls and Instrumentation Drawings which show all connections to external devices, a complete bill of materials, interior and exterior panel layouts, and a detailed description of operation, shall be submitted for each control panel.
- N. Each analog signal entering or leaving a supervisory control panel and leaving a building shall be provided with a surge protection device as manufactured by Citel, Model DLA-24D3, or equal. Each transmitter shall be provided with a surge protection device as manufactured by Citel, Model TSP15M on the output and Citel, Model No. DS4XS on the power supply, or equal.
- O. Float switches shall include time delays to prevent intermittent starting, stopping, and alarms because of bouncing floats.
- P. The PLC shall calculate cumulative totals for all runtimes, number of starts, flows, electrical values (kilowatt-hours), and chemical (weight) usage. Maximum, minimum, and running average for all analog inputs shall also be included as part of the cumulative total

algorithm. Cumulative totals shall totalize until manually reset by the operator. There shall be a manual reset for each signal. The PLC shall display the date of the last cumulative totalizer reset for each signal.

- Q. Each alarm shall be displayed on the OIP in a pop-up window that must be individually acknowledged. Alarms shall also be displayed on a scrollable OIP alarm summary screen with date and time stamp.

2.03 CONTROL PANEL DEVICES

- A. Overcurrent protection and disconnecting means for equipment shall be provided as specified in the specification section for the associated equipment. Molded case thermal magnetic circuit breakers shall include integral thermal and instantaneous magnetic trip in each pole. Nonfusible switch assemblies shall consist of quick-make, quick-break load interrupter enclosed knife switch with externally operable handle.
- B. Pushbuttons: Heavy-duty, oiltight (30 mm).
- C. Indicating Lights: Heavy-duty, oiltight, (30 mm), LED, push-to-test type.
- D. Selector Switches: Heavy-duty, oiltight (30 mm).
- E. General Purpose Relays: UL Listed with On-Off flag type or LED indicator.
- F. Timing Relays: UL Listed with On and Timing Out LEDs.
- G. Contactors shall be Allen-Bradley, Bulletin 509, or equal. IEC contactors are not allowed.
- H. Programmable Logic Controllers (PLCs) shall be Allen-Bradley Compact Logix 1400.
- I. Operator interface panels shall be Allen-Bradley Panelview Plus 6 1000.

2.04 WIRE AND CABLE MARKERS

- A. Wire and cable markers shall be permanently-attached, heat-shrink type labels.
 - 1. Sleeve: Permanent, PVC, white, with legible machine-printed black markings.
 - 2. Acceptable Manufacturers: Raychem Model D-SCE or ZH-SCE, Brady Model 3PS, or equal.
 - 3. Grounding Conductor: Provide green wire marker; minimum 2 inches wide.
- B. Wire or cable numbering preprinted on the conductor or cable insulation, flag-type labels, and individual wraparound numbers (such as Brady preprinted markers) are not acceptable. All wire markers shall be the same throughout the project.

PART 3—EXECUTION

3.01 GENERAL

- A. Refer to requirements specified in Division 1 for equipment installation, quality control, testing, supervision, start-up, and operator training.

3.02 INSTALLATION

- A. All control panels and equipment enclosures shall be cleaned of debris and wires neatly arranged with surplus length cutoff. Spare wires shall be labeled as "spare" and where the wires terminate.
- B. Where louvers are provided in enclosures or control panels, louvers shall be vacuumed free of all dust and dirt. Where air filters are provided in enclosures or control panels, all filters shall be replaced with new at the time of final completion.
- C. Equipment shall be thoroughly cleaned of all stains, paint spots, dirt, and dust. All temporary labels not used for instruction or operation shall be removed.
- D. All electrical equipment shall be provided with factory-applied prime finish, unless otherwise specified. If the factory finish on any equipment furnished by CONTRACTOR is damaged in shipment during construction, the equipment shall be refinished by CONTRACTOR. One can of touch-up paint shall be provided for each different color factory finish that is to be the final finished surface of the product.

3.03 WIRE IDENTIFICATION

- A. Conductors shall be grouped as to circuits and arranged in a neat manner. Phase identification shall be consistent throughout the system. All wiring labels shall be able to be read without removing wire management (i.e., wiring trough covers, spiral windings, etc.) or twisting the wire/cable.
- B. Power Conductor Insulation Color Code:
 1. 6 AWG and Larger: Provide general-purpose, flame-retardant, permanent tape at each termination.
 2. 8 AWG and Smaller: Provide conductors with color-coded insulation.
 3. Colors:

System	Conductor	Color
All Systems	Equipment Grounding	Green
120/240 Volts Single-Phase, Three Wire	Grounded Neutral	White*
	One Hot Leg	Black
	Other Hot Leg	Red
120/208 Volts Three-Phase, Four Wire	Grounded Neutral	White*
	Phase A	Black
	Phase B	Red
	Phase C	Blue
277/480 Volts Three-Phase, Four Wire	Grounded Neutral	White*
	Phase A	Brown
	Phase B	Orange
	Phase C	Yellow
Note: Phase A, B, C implies direction of positive phase rotation.		
*When installed as part of a 120-volt or 277-volt branch circuit, provide a color-coded stripe on the white neutral conductor insulation matching the branch circuit insulation.		

- C. Control Panel Control Conductor Insulation Color Code:
 1. All conductors shall have color-coded insulation.

2. Colors:

System	Conductor	Color
Supply Voltage	Ungrounded Circuit Conductors Neutral	Black White
Discrete 120-volt AC Input/Output	Control Circuit Conductor Neutral	Red White
Discrete 12/24-volt DC Input/Output	Control Circuit Conductor Common	Blue White with Blue Stripe
Conductors energized when the main disconnect is in the "off" position (e.g. foreign supply voltages)	Control Circuit Conductor AC Neutral DC Common Ground	Orange White White with Blue Stripe Green
Intrinsically Safe	Control Circuit Conductor DC Common	Light Blue White with Two Light Blue Stripes

D. Circuit Identification:

1. Identify power, instrumentation, and control conductors at each termination.
2. Conductors fed from remote panelboard circuits shall identify circuit matching the circuit directory designations, including the neutral conductor.
3. Control conductor identification shall match the associated terminal block label.

E. Data/Voice Cable and Communication Equipment Identification: All communication cables shall be labeled on both ends.

F. Terminal Block Identification:

1. Terminal blocks shall be labeled on both sides of each terminal block. Terminal block numbering shall match the numbers shown on the project-specific wiring diagrams.
2. Fused terminal blocks labels shall be located on top of the terminal blocks and include the fuse voltage and amperage rating.

G. Labeling Font Requirements:

1. The font for all conductor, cable, and device labels shall be Arial with black characters on white background, and minimum font size 12.
2. The text for all conductor, cable, and device labels shall be machine printed. Handwritten labels are not acceptable.

3.04 SYSTEM START-UP AND SUPPORT SERVICES

A. Final acceptance and payment for panels that include programmable controllers will not be made until the system has operated satisfactorily for a minimum of 30 consecutive days. System Supplier shall include in Bid field follow-up to ensure proper adjustments and operation during the first year following project final completion. Prior to beginning the 30-day test, the following criteria shall be met:

1. Satisfactory operation of I/O control loops.
2. Satisfactory operation of software.
3. Satisfactory operation of control program.
4. Satisfactory operation of peripheral equipment.
5. The necessary debugging programs have been performed.
6. Data output is reliable.
7. Control loops are operational.

8. Checking and calibrating of systems have been completed.
- B. System Supplier shall provide the following support services:
1. Field Service Engineer: Field Service Engineer shall be responsible for programming of system PLCs in the factory and at the site. Field Service Engineer shall be present for start-up of all systems and available throughout the entire construction process until final completion. Service technicians sent for system start-up will not be acceptable. Support shall include on-site time. Services shall include, but not be limited to:
 - a. Commissioning, installation, start-up, and testing of equipment.
 - b. Revising or rewriting manuals to incorporate an installed and accepted system.
 - c. On-site training.
 - d. Software modifications.
 2. In-Factory support shall include consultation following the acceptance testing and shipment. Services shall include, but not be limited to:
 - a. Researching and answering questions related to the system operation, documentation, and system use and functions.
 - b. Program modifications.
 - c. Revising or rewriting manuals.
 3. Post start-up support shall include follow-up services during the 1-year period following final acceptance. Service shall include follow-up recalibration and replacement of defective equipment, as well as additional training, software modifications, and control configurations as requested by OWNER. Enhancement hours and associated trips to the site shall be as specified in the individual specification sections.

END OF SECTION

STRAND ASSOCIATES, INC.
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CONTRACT NO. 1-2015
INDIANA AMERICAN WATER COMPANY - TWIN LAKES FACILITY
HEADWORKS CONTROL SYSTEM I/O LISTING - HEADWORKS CONTROL PANELS HCP-1 AND HCP-2

HCP	EQUIPMENT NAME	NUMBER	DI	DO	AI	AO	WIRE	COMMENTS
HCP-1	CONTROL POWER FAIL		1	0	0	0	2~#14	FROM CONTROL POWER RELAY IN THIS HCP
HCP-1	REPLACE UPS BATTERY		1	0	0	0	2~#14	FROM UPS IN THIS HCP
HCP-1	COMMUNICATION FAIL PILOT LIGHT		0	1	0	0	2~#14	TO PILOT LIGHT ON THIS HCP
HCP-1	NETWORK SWITCH FAIL		1	0	0	0	2~#14	FROM NETWORK SWITCH IN THIS HCP
HCP-2	CONTROL POWER FAIL		1	0	0	0	2~#14	FROM CONTROL POWER RELAY IN THIS HCP
HCP-2	REPLACE UPS BATTERY		1	0	0	0	2~#14	FROM UPS IN THIS HCP
HCP-2	COMMUNICATION FAIL PILOT LIGHT		0	1	0	0	2~#14	TO PILOT LIGHT ON THIS HCP
HCP-2	NETWORK SWITCH FAIL		1	0	0	0	2~#14	FROM NETWORK SWITCH IN THIS HCP
HCP-1	MECHANICAL FINE SCREEN NO. 1	MFS-10-01						
HCP-1	IN AUTO		1	0	0	0	2~#14	FROM H-O-A SELECTOR SWITCH AT UNIT VIA MAIN MCC
HCP-1	RUNNING		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	START/STOP		0	1	0	0	2~#14	TO STARTER IN MAIN MCC
HCP-1	STARTER OVERLOAD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	E-STOP ACTIVATED		1	0	0	0	2~#14	FROM E-STOP SWITCH VIA MAIN MCC
HCP-1	MOTOR OVERTEMP		1	0	0	0	2~#14	FROM MOTOR THERMOSTATS VIA MAIN MCC
HCP-1	MOTOR OVER-TORQUE	ZS-10-02/ ZS-10-03	1	0	0	0	2~#14	FROM MOTOR OVER-TORQUE PROXIMITY SWITCHES VIA MAIN MCC
HCP-1	MOTOR OVERCURRENT		1	0	0	0	2~#14	FROM MOTOR OVERCURRENT RELAY IN MAIN MCC
HCP-1	UPSTREAM HIGH WATER LEVEL	LS-10-01	1	0	0	0	2~#14	FROM FLOAT SWITCH IN SCREENING ROOM
HCP-1	UPSTREAM LEVEL	LIT-10-01	0	0	1	0	SH. PR.	FROM ULTRASONIC LEVEL TRANSMITTER ON HCP-1 DOOR
HCP-1	DOWNSTREAM LEVEL	LIT-10-02	0	0	1	0	SH. PR.	FROM ULTRASONIC LEVEL TRANSMITTER ON HCP-1 DOOR
HCP-1	HOME POSITION SWITCH	ZS-10-01	1	0	0	0	2~#14	FROM HOME POSITION SWITCH AT UNIT
HCP-1	BOTTOM SCREEN FLUSHING VALVE OPEN/CLOSE	SV-10-06	0	1	0	0	2~#14	TO BOTTOM SCREEN FLUSHING SOLENOID VALVE AT UNIT
HCP-1	TOP SCREEN FLUSHING VALVE OPEN/CLOSE	SV-10-07	0	1	0	0	2~#14	TO TOP SCREEN FLUSHING SOLENOID VALVE AT UNIT
HCP-1	SCREENINGS WASH PRESS NO. 1	SWP-10-01						
HCP-1	IN AUTO		1	0	0	0	2~#14	FROM H-O-A SELECTOR SWITCH AT MAIN MCC
HCP-1	RUNNING FORWARD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	RUNNING REVERSE		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	START/STOP FORWARD		0	1	0	0	2~#14	TO STARTER IN MAIN MCC
HCP-1	START/STOP REVERSE		0	1	0	0	2~#14	TO STARTER IN MAIN MCC
HCP-1	STARTER OVERLOAD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	E-STOP ACTIVATED		1	0	0	0	2~#14	FROM E-STOP SWITCH VIA MAIN MCC
HCP-1	MOTOR OVERTEMP		1	0	0	0	2~#14	FROM MOTOR THERMOSTATS VIA MAIN MCC
HCP-1	MOTOR OVERCURRENT		1	0	0	0	2~#14	FROM OVER-CURRENT RELAY IN MAIN MCC

STRAND ASSOCIATES, INC.
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CONTRACT NO. 1-2015
INDIANA AMERICAN WATER COMPANY - TWIN LAKES FACILITY
HEADWORKS CONTROL SYSTEM I/O LISTING - HEADWORKS CONTROL PANELS HCP-1 AND HCP-2

HCP	EQUIPMENT NAME	NUMBER	DI	DO	AI	AO	WIRE	COMMENTS
HCP-1	HOLLOW SHAFT SOLENOID VALVE OPEN/CLOSE	SV-10-01	0	1	0	0	2~#14	TO HOLLOW SHAFT SCREW SOLENOID VALVE AT UNIT
HCP-1	INLET HOPPER SOLENOID VALVE OPEN/CLOSE	SV-10-02	0	1	0	0	2~#14	TO INLET HOPPER SOLENOID VALVE AT UNIT
HCP-1	WASHING ZONE SOLENOID VALVE OPEN/CLOSE	SV-10-03	0	1	0	0	2~#14	TO WASHING ZONE SOLENOID VALVE AT UNIT
HCP-1	DEWATERING ZONE/DRAIN PAN SOLENOID VALVE OPEN/CLOSE	SV-10-04	0	1	0	0	2~#14	TO DEWATERING ZONE/DRAIN PAN SOLENOID VALVE AT UNIT
HCP-1	GRIT WASHER AUGER	GW-10-01						
HCP-1	IN AUTO		1	0	0	0	2~#14	FROM H-O-A SWITCH AT MAIN MCC
HCP-1	RUNNING FORWARD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	RUNNING REVERSE		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	START/STOP FORWARD		0	1	0	0	2~#14	TO STARTER IN MAIN MCC
HCP-1	START/STOP REVERSE		0	1	0	0	2~#14	TO STARTER IN MAIN MCC
HCP-1	STARTER OVERLOAD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	E-STOP ACTIVATED		1	0	0	0	2~#14	FROM E-STOP SWITCH AT UNIT
HCP-1	MOTOR OVERTEMP		1	0	0	0	2~#14	FROM MOTOR THERMOSTATS VIA MAIN MCC
HCP-1	MOTOR OVERCURRENT		1	0	0	0	2~#14	FROM MOTOR OVERCURRENT RELAY IN MAIN MCC
HCP-1	GRIT BED LEVEL	LIT-10-03	0	0	1	0	SH. PR.	FROM GRIT BED LEVEL TRANSMITTER ON HCP-1 DOOR
HCP-1	GRIT WASH AGITATOR	GW-10-02						
HCP-1	GRIT PUMP GP-10-01 RUNNING		1	0	0	0	2~#14	FROM HCP-2
HCP-1	IN AUTO		1	0	0	0	2~#14	FROM H-O-A SWITCH AT MAIN MCC
HCP-1	RUNNING		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	START/STOP		0	1	0	0	2~#14	TO STARTER IN MAIN MCC
HCP-1	STARTER OVERLOAD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-1	E-STOP ACTIVATED		1	0	0	0	2~#14	FROM E-STOP SWITCH VIA MAIN MCC
HCP-1	MOTOR OVERTEMP		1	0	0	0	2~#14	FROM MOTOR THERMOSTATS VIA MAIN MCC
HCP-1	MOTOR OVERCURRENT		1	0	0	0	2~#14	FROM MOTOR OVERCURRENT RELAY IN MAIN MCC
HCP-1	ORGANIC DRAIN VALVE OPEN	MBV-10-01	0	1	0	0	2~#14	TO MOTORIZED BALL VALVE AT UNIT
HCP-1	ORGANIC DRAIN VALVE CLOSE	MBV-10-01	0	1	0	0	2~#14	TO MOTORIZED BALL VALVE AT UNIT
HCP-1	ORGANIC DRAIN VALVE OPENED	MBV-10-01	1	0	0	0	2~#14	FROM MOTORIZED BALL VALVE AT UNIT
HCP-1	ORGANIC DRAIN VALVE CLOSED	MBV-10-01	1	0	0	0	2~#14	FROM MOTORIZED BALL VALVE AT UNIT
HCP-1	INSPECTION HATCH OPENED	ZS-10-04	1	0	0	0	2~#14	FROM LIMIT SWITCH ON INSPECTION HATCH AT UNIT
HCP-1	WASH WATER SOLENOID VALVE OPEN/CLOSE	SV-10-05	0	1	0	0	2~#14	TO WASH WATER SOLENOID VALVE AT UNIT
HCP-2	GRIT PUMP	GP-10-01						
HCP-2	IN AUTO		1	0	0	0	2~#14	FROM H-O-A SWITCH ON MAIN MCC
HCP-2	RUNNING		1	0	0	0	2~#14	FROM VFD IN MAIN MCC

STRAND ASSOCIATES, INC.
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CONTRACT NO. 1-2015
INDIANA AMERICAN WATER COMPANY - TWIN LAKES FACILITY
HEADWORKS CONTROL SYSTEM I/O LISTING - HEADWORKS CONTROL PANELS HCP-1 AND HCP-2

HCP	EQUIPMENT NAME	NUMBER	DI	DO	AI	AO	WIRE	COMMENTS
HCP-2	START/STOP		0	1	0	0	2~#14	TO VFD IN MAIN MCC
HCP-2	STARTER OVERLOAD		1	0	0	0	2~#14	FROM VFD IN MAIN MCC
HCP-2	E-STOP ACTIVATED		1	0	0	0	2~#14	FROM E-STOP SWITCH VIA MAIN MCC
HCP-2	MOTOR OVERTEMP		1	0	0	0	2~#14	FROM MOTOR THERMOSTATS VIA MAIN MCC
HCP-2	RUNNING		0	1	0	0	2~#14	TO HCP-1
HCP-2	GRIT TRAP	GT-10-01						
HCP-2	RUNNING		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-2	STARTER OVERLOAD		1	0	0	0	2~#14	FROM STARTER IN MAIN MCC
HCP-2	MOTOR OVERTEMP		1	0	0	0	2~#14	FROM MOTOR THERMOSTATS VIA MAIN MCC
HCP-1	NORMAL FLOW THROUGH FLUME	FIT-10-01						
HCP-1	INSTANTANEOUS FLOW		0	0	1	0	SH. PR.	FROM FLOW METER AT NORMAL FLOW FLUME
HCP-1	TOTAL FLOW		1	0	0	0	2~#14	FROM FLOW METER AT NORMAL FLOW FLUME
HCP-1	INSTANTANEOUS FLOW		0	0	0	1	SH. PR.	TO HCP-2
HCP-1	TOTAL FLOW		0	1	0	0	2~#14	TO HCP-2
HCP-2	NORMAL FLOW THROUGH FLUME	FIT-10-01						
HCP-2	INSTANTANEOUS FLOW		0	0	1	0	SH. PR.	FROM HCP-1 VIA FLOW METER AT NORMAL FLOW FLUME
HCP-2	TOTAL FLOW		1	0	0	0	2~#14	FROM HCP-1 VIA FLOW METER AT NORMAL FLOW FLUME
	TO CELLULAR MODEM							
HCP-1	NORMAL INSTANTANEOUS FLOW THROUGH FLUME		0	0	0	1	SH. PR.	TO CELLULAR MODEM BASED ON FIT-10-01
HCP-1	HCP-1 COMMON/GENERAL HEADWORKS EQUIPMENT ALARM		0	1	0	0	2~#14	TO CELLULAR MODEM
HCP-2	HCP-2 COMMON/GENERAL HEADWORKS EQUIPMENT ALARM		0	1	0	0	2~#14	TO CELLULAR MODEM- WIRE IN PARALLEL WITH HCP-1 GENERAL ALARM AT CELLULAR MODEM
HCP-1	HIGH WATER FLOAT - FLOOD SWITCH ACTIVATED		0	1	0	0	2~#14	TO CELLULAR MODEM BASED ON FLOAT SWITCH LS-10-01
HCP-1	LOW INFLUENT FLOW ALARM		0	1	0	0	2~#14	TO CELLULAR MODEM BASED ON LIT-10-01
HCP-1	HIGH FLOW ALARM		0	1	0	0	2~#14	TO CELLULAR MODEM BASED ON LIT-10-01
HCP-1	SPARE		8	8	2	2		
HCP-2	SPARE		4	4	1	1		
	TOTALS		61	37	8	5		

SECTION 13031

PARSHALL FLUME LINER

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: This section includes furnishing, installing, and placement into successful operation one Parshall flume liner as shown on the drawings and specified herein.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. U.S. Department of Agriculture Circular 843.

1.03 SYSTEM DESCRIPTION

- A. Application:
 - 1. The Parshall flume liner shall be used to measure wastewater flow.
 - 2. The Parshall flume liner shall be designed for continuous exposure to municipal wastewater slurries containing solids such as hair, grit, rags, grease, paper products, and organic solids. The liquid is expected to contain water, domestic wastes, industrial solvents, petroleum products, up to 30 ppm of ferric chloride, small amounts of aluminum sulfate, and dissolved hydrogen sulfide gas in concentrations up to 20 mg/L. Oxygen may be either present or absent. During the normal life of the laminants, they may be left in the dry condition for protracted periods. It is likely that dilute sulfuric acid will be present and will collect on any surface. Wastewater temperatures are expected to vary between 45°F and 85°F, and ambient air temperatures may range between -30°F and 100°F.

1.04 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01300—Submittals.
- B. Submit O&M manuals under provisions Section 01300—Submittals.

PART 2—PRODUCTS

2.01 MANUFACTURERS

- A. Parshall flume liners shall be Fischer and Porter Model 10F1940, Plasti-Fab, Inc., FRP Composites, Inc., or equal.

2.02 FLUME CONSTRUCTION

- A. Parshall flume liners shall be molded, fiberglass-reinforced polyester with sanitary satin finish on all surfaces exposed to flow. Liner shall be reinforced with not less than 30% fiberglass by weight.

- B. Flume shall be molded in one piece with ample wall thickness and reinforcing ribs to prevent distortion during shipment, installation, and operation. The flume shall be self-supporting and require no external supporting structure. Flume shall be equipped with removable top cross ties to facilitate installation. Flume shall include 2 1/2-inch flanges on bottom and sides to facilitate connection to concrete.
- C. Parshall flume liners shall have a throat width and height as indicated. Other dimensions of the Parshall flume liners shall conform with the standard design dimensions for flumes of the specified throat width stated in the U.S. Department of Agriculture, Soil Conservation Service, Circular No. 843.
- D. The Parshall flume liners shall have a stainless steel or fiberglass scale calibrated in feet, tenths, and hundredths of feet, and in million gallons per day (mgd), tenths, and hundredths of mgd. Scale shall be embedded in the side of the flume to allow for local calibration of instrumentation.

2.03 FLUME SIZING

- A. The Parshall flume shall have a throat width of 12 inches and a minimum height of 3 feet.

2.04 FINISHING

- A. Flume shall have coloration and protective coating built into flume construction and shall require no field finishing.

PART 3—EXECUTION

3.01 EQUIPMENT INSTALLATION

- A. The equipment specified in this article shall be installed by CONTRACTOR in accordance with the manufacturer's recommendations and under the guidance of the manufacturer's field representative. After completion of installation, CONTRACTOR shall submit a written certification by the manufacturer that the installation is in accordance with the manufacturer's recommendations.
- B. The Parshall flume liners shall be installed so that the entire floor of the converging section (crest) shall be within $\pm 1/8$ inch of perfect level and the walls shall be within $\pm 1/4$ inch of perfect vertical.
- C. CONTRACTOR shall grout flume into place. Flume shall be adequately braced to prevent distortion during pouring of grout. Grout shall be nonshrink type as specified in Division 3.
- D. CONTRACTOR shall install ultrasonic liquid level device as specified in Division 16 at location recommended by flume manufacturer.

3.02 FIELD QUALITY CONTROL AND DEMONSTRATION

- A. Provide manufacturer's services for the following:
 - 1. Start-up.

2. Field Testing. Equipment manufacturer shall provide a written report covering checkout, testing, inspections, and start-up, and shall identify any deficiencies noted. Report shall be submitted to ENGINEER. CONTRACTOR shall be responsible for correcting all deficiencies noted in report.

- B. Minimum Service Requirements: Start-up and Field Testing: One full day on-site for each flume.

3.03 ADJUSTING, CLEANING AND PROTECTION

- A. CONTRACTOR shall provide final adjusting, cleaning, and protection in accordance with Division 1. CONTRACTOR shall make all final adjusting on equipment as required by manufacturer. CONTRACTOR shall leave equipment in a clean condition.

END OF SECTION

SECTION 13131

POLE BUILDING

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
- B. Work included:
 - 1. Providing and installing a pre-engineered pole building. CONTRACTOR shall design all portions of the building.
 - 2. Framing and other building components are specified in other sections of the specifications. CONTRACTOR shall provide all necessary components for a complete, weathertight installation.
- C. The intent of these specifications and drawings is to establish a quality and performance level for structural design, material, durability, and workmanship.
- D. The building shall be the design of a manufacturer who is regularly engaged in the fabrication of pre-engineered structures. All materials shall be new, unused, and free from defects.

1.02 REFERENCES

- A. "Cold Formed Steel Design Manual"—American Iron and Steel Institute.
- B. ASTM A792/A792M—Steel Sheet, Aluminum–Zinc Alloy Coated by the Hot-Dip Process.
- C. NFPA—National Design Specifications for Wood Construction.
- D. The following criteria shall also be applicable in other phases of design:
 - 1. 2014 Indiana Building Code.
 - 2. ASTM Standards.

1.03 BUILDING DESCRIPTION

- A. The building has a 15-foot truss bearing height.
- B. The main roof slope shall be 3 inch in 12.
- C. The drawings show an embedded pole foundation. Lateral loads perpendicular and parallel to the ridge shall be carried through frame action with knee bracing, as necessary, at ± 13 feet above the floor.
- D. CONTRACTOR shall design and provide any necessary expansion joints.

1.04 DESIGN LOADS

- A. The basic design loads shall include live and wind in addition to dead load. All other design loads, whether they be of static, dynamic or kinetic nature, shall be considered as auxiliary loads.

- B. Vertical Live Loads:
 - 1. Purlins shall be designed for snow loads and minimum live loads in accordance with the 2014 Indiana Building Code uniformly distributed over the roof area which they support.
 - 2. Primary frames shall be designed for snow loads and minimum live loads in accordance with the 2014 Indiana Building Code uniformly distributed over the roof area which they support and for concentrated loads shown on the drawings.
 - 3. All of the above loads to be in addition to the applicable dead loads and shall be applied to the horizontal projection of the roof.
- C. Wind and Seismic Loads: All wind and seismic loads on the structure shall be determined and applied as horizontal and uplift forces in accordance with the 2014 Indiana Building Code.
- D. Auxiliary Loads: Other superimposed static loads due to equipment shall be considered as part of the design requirements and combined with the normal design loads.
- E. Combination of Loads: The combining of loads for design purposes shall be in accordance with the 2014 Indiana Building Code.
- F. Minimum pole embedment and encasement are shown on the drawings and shall be verified by the building designer.
- G. Certification: After the awarding of the Contract, complete structural analysis shall be submitted by the building manufacturer to ENGINEER.
- H. Structural Design:
 - 1. Perform calculations using diaphragm design analysis. Incorporate bracing as required if building exceeds diaphragm requirements.
 - 2. Comply with AF&PA "National Design Specification for Wood Construction (NDS)."
 - 3. Trusses:
 - a. Limit deflection for live or snow loads to $L/240$ for overhangs and trusses not supporting ceilings.
 - b. Comply with appropriate NDS and Truss Plate Institute (TPI) standards.
 - 4. Metal Roof and Wall Panels:
 - a. Design in accordance with AISI "Specifications for the Design of Light-Gauge, Cold-Formed Steel Structural Members" and in accordance with sound engineering methods and practices.
 - 5. Plywood or Oriented Strand Board Sheathing: Comply with APA "Plywood Design Specification."

1.05 SUBMITTALS

- A. Submittals shall be in accordance with provisions of Division 1.
- B. Product Data: Provide data on profiles, component dimensions, woodgrade and treatment, fasteners, and wall and roof panels.
- C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections, attachments, openings, and loads; wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage, provide licensed/registered professional seal and signature.

- D. Provide structural calculations and certification stamped by an engineer licensed in the State of Indiana.

1.06 WARRANTIES

- A. Treated wood columns shall be warrantied against decay for 50 years.
- B. Siding shall be warranted against fading of more than 6 MBS units over a 10-year period, chalking in excess of a numerical rating of 6 over a 10-year period, and checking, cracking, and peeling for a period of 20 years.
- C. Roofing shall be warranted watertight for a period of 10 years.

PART 2–PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. The products of the following manufacturers, or equal, are acceptable, provided that they comply with the remainder of this specification:
 - 1. Lester Buildings.
 - 2. Cleary Building Corporation.
- B. These products are set up as a standard of quality. Other manufacturer's products will be accepted if they are equal in quality.

2.02 MATERIALS

- A. Treated Columns: The structural columns shall be a nailed laminated column consisting of No. 1 Southern Pine Lamina. Each lamination shall extend from footing to eave without splice. All laminations shall be pressure treated prior to assembly in accordance with the AWPA Standard to a net retention of 0.60 pounds per cubic foot with chromated copper arsenate. Lamination shall be of adequate size and number to resist design loads.
- B. Framing Lumber: See Section 06112–Wood Framing and Sheathing. All lumber below truss bearings shall be treated in accordance with AWPA Standard to a net retention of 0.60 pounds per cubic foot with chromated copper arsenate Type III.
 - 1. Provide stainless steel fasteners and truss plates.
- C. Roof Trusses: See Section 06193–Plate Connected Wood Trusses.
- D. Wall and Roof Covering and Supports:
 - 1. Wall and Roof Panels:
 - a. Exterior wall and roof panels shall be Fabral Grandrib 3 Plus. Steel shall be 29 ga.
 - b. The covering width and configuration of the panel shall be the building manufacturer's standard provided all design criteria, including deflection, is met or exceeded.
 - c. Panels shall be prepainted with Enduracote paint system. Color shall be selected by OWNER from manufacturer's standard colors.
 - 2. Girts:
 - a. The girt's configuration and thickness shall be the building manufacturer's standard provided all design criteria, including deflection and girt spacing, is met.

- b. Based on a simple span, the deflection of the girts (supporting the wall covering) shall not exceed 1/180 of its span when supporting the applicable design load previously described.
 - c. Provide blocking and support at all openings.
- E. Blown-In Insulation: Provide 6 inches of blown-in insulation over vapor barrier and above truss bearings. Vapor barrier shall be as specified in Section 07191–Vapor Barrier. Blown-in insulation shall be Insul-Safe III by Certainteed, or equal. Six-inch layer of insulation shall have a minimum R-13 value.
 - 1. Thermal Resistance: R-6 (R-1.06).
 - 2. Facing 0.0015-inch white polypropylene film, fiberglass scrim reinforcement, and 12-pound craft paper. 3-mil cross laminated high density polyethylene.
 - 3. Physical Properties:
 - a. Flame Spread, ASTM Be 84: Less than 25.
 - b. Smoke Developed, ASTM Be 84: Less than 50.
 - c. Water Vapor Transmission, ASTM Be 96: 0.02 Perms (1.15 ng/(Pa s m²).
 - d. Light Reflectivity, ASTM C 523, illuminant D-6500: 87%.
- F. Accessories:
 - 1. Soffit and Fascia: Provide manufacturer's standard vented aluminum soffits and fascia as indicated on the Drawings.
 - 2. Provide ridge vent along entire ridge line as indicated on the drawings.
 - 3. Other Accessories: Overhead doors, passage doors, gutters, heating and ventilation equipment, and electrical equipment, etc., are specified elsewhere in these specifications.

PART 3–EXECUTION

3.01 EXAMINATION

- A. Verify that site conditions are acceptable for erection/installation of pre-engineered wood building system.
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory conditions.
- C. Commencement of work by erector/installer is acceptance of site conditions.

3.02 ERECTION-STRUCTURAL FRAMING

- A. Erect in accordance with manufacturer's instructions and approved shop drawings.
- B. Provide temporary erection and wind load bracing to maintain structure plumb and in alignment until installation of permanent bracing and/or roofing and wall coverings are completed.
- C. Do not field cut or alter structural members without approval of ENGINEER and manufacturer.

3.03 INSTALLATION

- A. Metal Roofing:
 - 1. General: Install in accordance with manufacturer's instructions. Secure to structural framing aligned, level and plumb. Space fasteners as shown on Erection Drawings.
 - 2. Sidelap: Minimum one full corrugation. Install sealant in sealant groove.
 - 3. Endlap: 12 inches. Secure together over and to structural members.
 - 4. Accessories: Install as shown on Erection Drawings.
- B. Metal Siding:
 - 1. General: Install in accordance with manufacturer's instructions. Secure to structural framing aligned, level and plumb. Space fasteners as shown on Erection Drawings.
 - 2. Sidelap: Minimum one full corrugation
 - 3. Field cut endwall panels to match roof slope.
 - 4. Fasteners: Wall panel-to-structural connections shall be made with stainless steel fasteners.
 - 5. Accessories: Install as shown on Erection Drawings.
- C. Insulation: Follow manufacturer's instructions for the type(s) of insulation specified.
 - 1. Insulation with tabs: Overlap tabs and secure to provide continuous vapor barrier.
 - 2. Fill miscellaneous voids and cavity spaces to ensure continuously insulated envelope.
- D. Personnel Doors: Follow manufacturer's instructions.
- E. Joint Sealant Materials:
 - 1. Preparation: Clean joints and surfaces to receive sealants of foreign materials.
 - 2. Apply sealant with caulking gun using sufficient pressure to completely fill joints and ensure full contact of sealant to joint sides.
 - 3. Tool surface smooth and uniform, free of ridges, sags and air pockets.
 - 4. Clean sealant from adjacent surfaces.
- F. Openings:
 - 1. All openings in metal wall panel for all trades shall be done by the erector. All openings with any dimension 6 inches or larger shall be framed to provide adequate support.
 - 2. All openings shall provide complete structure support and be sealed for weathertightness.

3.04 CLEANING

- A. Clean surfaces soiled by work as recommended by manufacturer.
- B. Touch up abrasions and other defects on pre-painted metal panel surfaces with same type of primer and paint as original finish.
- C. Remove surplus material and debris from site.

END OF SECTION

SECTION 15050

PIPING AND APPURTENANCES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. All piping and valves of every description except for pipe as specified in Division 2, and piping and appurtenances as specified in Division 11.
 - 2. Concrete foundations and anchor bolts for all equipment furnished under this section.
 - 3. Piping connections to all equipment, whether furnished under this section or not.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 SUBMITTALS

- A. Applicable provisions of Section 01300–Submittals cover requirements for shop drawings and Operation and Maintenance Manuals.
- B. General arrangement drawings, including support system of 3 inches or larger interior and 3 inches or larger exterior (aboveground) ductile iron, PVC, stainless steel and welded steel piping, shall be submitted to ENGINEER for approval. Shop drawings for all interior and aboveground exterior piping shall be two-line drawings drawn to scale. Drawings shall include proposed materials, length, location, and elevation of pipe, fittings, supports, and valves and appurtenances. Plug valve orientation, including operator and plug orientation, shall be shown on drawings.
- C. Grooved joint couplings and fittings shall be referred to on arrangement drawings and product submittals, and be identified by the manufacturer's listed model or series designation.

PART 2–PRODUCTS

2.01 MATERIALS OF CONSTRUCTION

- A. Materials of Construction: All materials used in the manufacture, assembly, and painting of piping and valves in contact with water shall be compatible with potable water supplies and in contact with chemical feed systems shall be compatible with the chemicals being used. All glues, solvents, solders, etc., shall likewise be compatible. For instance, no lead-base solders shall be used. Products used in potable water systems shall be UL classified in accordance with ANSI/NSF-61 for potable water service and shall meet the low-lead requirements of NSF-372.
- B. Size and Type:
 - 1. All materials shall conform to the size and type shown on the drawings or called for in the specifications.

2. In joining two dissimilar types of pipe, standard fittings shall be used when available. In the event standard fittings are not available, the method of joining shall be selected by CONTRACTOR and submitted for review by ENGINEER.
- C. Piping appurtenances shall be made of the materials specified. All appurtenances not designated as to type shall be subject to approval of ENGINEER. All grooved joint couplings and fittings shall be of the same manufacturer.

2.02 PIPE AND PIPE FITTINGS

- A. Ductile Iron Piping and Ductile Iron Fittings:
 1. Unless otherwise shown or specified, all piping 3 inches in diameter or larger shall be ductile iron conforming to ANSI/AWWA C151/A21.51, with flanged or grooved joints as shown on the drawings. Unless otherwise shown or specified, all piping shall be minimum special thickness Class 53 with a minimum rated working pressure of 250 psi for flanged pipe. Pipe wall thickness shall be furnished as required by AWWA C115 for flanged piping; AWWA C606 for grooved piping; special thickness Class 53 minimum unless otherwise shown or specified. Manufacturers of flanged pipe and fittings shall be certified to NSF 61 by an ANSI-accredited third-party certification organization.
 2. The words "Ductile Iron" and the weight and class of pipe shall be plainly marked on each piece of pipe.
 3. All flanged sections of pipe shall be made up in strict accordance with AWWA C115 specifications. No field make-up flanges will be allowed unless strictly conforming to AWWA C115 with facing done after turning pipe through flange.
 4. Flanged joints shall conform to AWWA C110, C111, and C115, and shall be compatible with ANSI B16.1 Class 125. Flanges shall be ductile iron. Flanged gaskets shall be minimum 1/8-inch, full-face, rubber-ring, Toruseal, Flange-Tyte, Maloney, or equal, gaskets. Thicker gaskets shall be provided as recommended by the manufacturer to meet joint tolerance. Flange bolts shall be standard zinc-plated steel with hex head and hex nuts for the rated working pressure and installation conditions specified or shown.
 5. Flanged fittings shall be of ductile iron with ductile iron flanges. Flanged fittings shall conform to AWWA C110 and ANSI B16.1, as applicable, with a minimum rated working pressure of 150 psi.
 6. All ductile iron fittings shall be American, Clow, Griffin, Tyler, U.S. Pipe, or equal. No compact fittings are allowed.
 7. See Section 02600 for ductile iron wall pipe requirements.
 8. Unless otherwise specified, all ductile iron piping and fittings shall be cement mortar lined and asphaltic-coated inside. Cement mortar lining shall be in accordance with AWWA C104. Asphaltic coating shall conform to applicable standards herein for the pipe and fittings. Exterior exposed, submerged, and interior piping shall be furnished with outside surfaces prepared by abrasive blasting in accordance with NAPF 500C-03. Cleaned surfaces shall then be shop-primed. Shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline or Tnemec 140-1255 Beige Pota-Poxprimer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify. It is the intent of this specification that all piping, supports, and appurtenances shall be furnished shop-primed, clean, and ready to accept finish painting by CONTRACTOR with a minimal amount of surface preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9.

9. Grooved Piping System:

- a. A grooved piping system may be used in place of flanges on applicable piping systems and where approved by ENGINEER (valves shall remain flanged unless approved). Housing shall be manufactured from ductile iron conforming to ASTM A536. The bolts and nuts shall be of track design and, unless otherwise required, shall be made of electroplated steel to conform to or exceed the requirements of ASTM A449 and A183. Gaskets shall be FlushSeal and conform to the requirements of ASTM D2000. Grooves cast or subsequently cut into ductile pipe, fittings, or other components shall conform to AWWA C606. All pipe used in a grooved piping system shall be gauged and shall pass a roundness test. A rigid joint system shall be used unless otherwise approved by ENGINEER.
- b. Fittings shall be ductile, ASTM A536, conforming to the requirements of AWWA C110/ANSI A21.10 for center to end dimensions, and AWWA C110/ANSI A21.10 or AWWA C153 for wall thickness, and AWWA C606 rigid radius grooving dimensions for end preparation.

B. PVC Piping:

1. Unless otherwise shown or specified, all piping smaller than 3 inches shall be constructed of PVC.
2. PVC material shall conform to ASTM D1784, Class 12454-B. PVC piping and fittings shall be PVC 1120, Schedule 80, high impact pipe conforming to ASTM D1785 with bells conforming to ASTM D2672. Solvent weld fittings shall conform to ASTM D2467, and for threaded, ASTM D2464.
3. All piping shall be approved for use by the National Sanitation Foundation. All pipe delivered to the job site shall be properly marked for type, grade, and design stress rating. Expansion joints shall be provided where needed. In general, all joints shall be solvent weld, except where flanges are required or as shown on the drawings or where transition to another pipe material is required. Underground gravity pipe shall be installed in compliance with ASTM D2321 except as otherwise specified herein. Underground pressure piping shall be installed in compliance with ASTM D2774.

C. Drain, Waste, and Vent (DWV) Piping:

1. All building DWV piping and aboveground conductor and clearwater piping located in or within 2 feet of buildings or buried under slabs may be PVC pipe as specified herein.
2. Sanitary DWV piping shall be Schedule 40 PVC conforming to Class 12454-B, ASTM D1785, and ASTM D2665. Fitting patterns shall conform to ASTM D3311, primers shall conform to ASTM F656, and solvent cement shall conform to ASTM D2564.
3. Sanitary building sewers that penetrate exterior foundation walls shall be ductile iron from 2 feet beyond the exterior wall.
4. Aboveground PVC shall not be used where smoke generation, noise transmission, or physical abuse/durability are an issue.

2.03 VALVES

A. Plug Valves:

1. Shutoff valves in ductile iron lines containing wastewater and all grit lines and drainage lines shall be DeZURIK Series PEF 100% port Eccentric, Val-Matic Cam-Centric Series, or equal. Shutoff valves in 2 1/2 inches or smaller air piping shall be DeZURIK PEC Eccentric, Val-Matic Cam-Centric Series, or equal.

2. Eccentric-type valves shall be nonlubricated rectangular-ported with resilient faced plugs and end connections as shown on the drawings. The plug profile shall be of a cylindrical eccentric shape so that the vertical face of the plug is straight and the horizontal face is eccentrically curved in relation to the plug shafts. Segmented ball valves with spherical plugs shall not be acceptable. Port areas shall be at least 100% (PEF) through 20 inches of full pipe area. Valve bodies shall be of ASTM A126, Class B cast iron. Resilient plug facings shall be chloroprene or Buna-N, suitable for use with wastewater. For grit service, valve shall be PEC with soft rubber lined body and hard rubber bushings. The valve shall be oriented with the shaft horizontal, seat upstream, and plug above flow stream when open.
3. Valves shall be furnished with corrosion-resistant seats, replaceable oil-impregnated permanently lubricated 316 stainless steel sleeve-type bearings and grit shaft seals on both upper and lower bearing journals that comply with the latest edition of AWWA C507 and C504. All valves shall include grease fittings on upper and lower journals. Bodies of 3-inch and larger valves shall be furnished with a minimum 1/8-inch-thick machined smooth-welded overlay seat of not less than 90% nickel. Seat area shall be raised surface completely covered with weld to ensure that the plug face contacts only nickel. Sprayed or screwed-in seats are not acceptable. Valve shaft seals for valves 4 inches and larger shall be of the type using a stuffing box and pull-down packing gland. Shaft seals shall be designed for replacement with the line pressurized at design pressure with the plug in both the open and closed position. For submerged service, or in valve manholes, valve vaults, or underground utility structures, valves shall have stainless steel bolts.
4. The design of the valve and stuffing box assembly shall be such that the packing can be adjusted or completely replaced without disturbing any part of the valve or operator assembly except the packing gland follower. Stuffing boxes shall have a depth sufficient to accept at least four rings of Buna-N vee-type packing. Valve seating adjustment shall be accomplished without removing the valve from the pipe line and with pressure in the line. For lever-operated valves, the plug position retention friction device shall consist of an adjustable phenolic cone that clamps on the plug shaft or a moly sheath. Metal-to-metal friction devices shall not be acceptable.
5. Valve working pressure ratings shall be 175 psi for valves through 12 inches and 150 psi for valves 14 inches through 24 inches. Valves shall provide drip-tight shutoff up to the full pressure rating.
6. All plug valves for buried service/grit service, all plug valves 8 inches in diameter or larger, all plug valves with direct pressure greater than 75 psi or reverse differential pressure greater than 25 psi, and all plug valves for any gas or digester gas service 4 inches in diameter or larger shall have worm gear actuators. All gearing shall be enclosed in a semisteel housing and be suitable for running in a lubricant with seals provided on all shafts to prevent entry of dirt and water into the actuator. The actuator shaft and the quadrant shall be supported on permanently lubricated bronze bearings. Actuators shall indicate valve position. Buried or submerged valves shall be supplied with actuators suitable for direct burial or submergence, shall be mounted on a gasketed and totally enclosed actuator mounting bracket, and shall have a totally enclosed and gasketed cover. All other valves shall be furnished with lever actuators. Supply one lever for every four valves of like size furnished. All valves 3 inches and smaller shall have individual levers. Valves not in reach of the floor (7 feet to centerline or greater) shall have chain wheel worm gear actuators. Right angle actuators shall be furnished, if required, because of valve position. Supply sufficient galvanized or electroplated chain with chain wheel so loop through chain wheel is within 3 feet of floor. All underground valves shall be equipped with cast iron telescopic adjustable

valve boxes and covers. Buried or submerged service valves shall be supplied with 316 stainless steel bolts and hardware for both valve and actuator.

7. Extension stems and other accessories shall be provided as shown on the drawings and as required to allow easy access for operation of valves within reach from walkways or other access points. Extend operators to at least 24 inches above walkways. Extension stems for quarter-turn plug valves shall be fabricated from 2-inch pipe, and extensions stems for gear-operated valves shall be fabricated from steel or stainless steel rod. Extension stems, stem guides, and related hardware and accessories for submerged valves shall be stainless steel. Stems shall be provided with 2-inch operating nut or other mechanism as shown on the drawings. Stem guides shall be provided as recommended by the manufacturer. Maximum unsupported length of stem shall be limited to an l/r ratio of 200.
8. Asphaltic varnish and coal tar coating are not allowed on interior valves. Exterior buried valves shall be fusion-bonded epoxy-coated or epoxy-coated as specified in Division 9. Interior and exterior exposed valves shall be furnished with all surfaces (except galvanized or stainless steel) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation shall be done at such time during the assembly process as to preclude damage to the valves once assembled. Cleaned surfaces shall then be shop-primed. Shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, one coat of Tnemec No. 141 Pota Pox 80 epoxy primer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify. A fusion-bonded epoxy system is an acceptable alternative to the specified primer. It is the intent of this specification that all valves, supports, and appurtenances shall be furnished shop-primed, clean, and ready to accept finish painting by CONTRACTOR with a minimal amount of surface preparation. Except as noted below, valve interior shall be shop-primed and finish painted with epoxy painting system or fusion-bonded epoxy system as specified above. Preparation and painting shall conform to all requirements and provisions specified in Division 9.

B. Check Valves:

1. Except where noted, check valves in ductile iron lines carrying liquid shall be GA Industries Figure 230-DS, Apco Model 250 LS by DeZURIK, (outside lever and spring), GA Industries Figure 220-DS, Apco Model 250 LW by DeZURIK, (lever and weight), or equal, 150 psi, ductile iron or iron body, bronze or stainless trimmed, swing check. Two levers and springs, heavier springs and/or additional weights shall be used if necessary to stop slamming.
2. Asphaltic varnish and coal tar coating are not allowed on check valves. Exterior of cast iron or steel valve body shall be furnished with all surfaces (except galvanized or stainless steel) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation shall be done at such time during the assembly process as to preclude damage to the valve once assembled. Cleaned surfaces shall then be shop-primed. Shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, one coat of Tnemec No. 141 Pota Pox 80 epoxy primer, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify. A fusion-bonded epoxy system is an acceptable alternative to the specified primer. It is the intent of this specification that all valves, supports, and appurtenances shall be furnished shop-primed, clean, and ready to accept finish painting by CONTRACTOR with a minimal amount of surface

preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9.

- C. Solenoid Valves: Except where otherwise shown or specified, solenoid valves for water services shall be normally closed, 2-way pilot-operated, slow closing solenoid valves, ASCO Red Hat II 8221 Series, or equal. Valves on seal water systems shall fail open. Valve shall be brass body with Buna-N disc. Enclosure shall be rated for NEMA 4X. Valve shall be operated on 120 Vac, 60 Hz power supply. Valve shall be rated for a maximum operating pressure differential of 150 psi. Unit shall be CSA certified and UL listed.
- D. Miscellaneous Valves, Strainers, Hose Bibs, and Valve Boxes:
 - 1. Shutoff valves in nonpotable water lines smaller than 2 1/2 inches shall be Nibco T-585 (threaded), Nibco S-585 (solder joint), or equal, full port ball valves. Provide extended stems for valve operators installed with insulated pipe.
 - 2. Shutoff valves in PVC piping shall be hand-operated 150 psi union-type PVC ball valves, Chemtrol TU Series Tru-bloc, Walworth Series 8927, or equal. Valves and all components including O-rings shall be compatible with chemicals in piping. PVC valves and union shall not be painted.
 - 3. Y-strainers in nonpotable water piping shall have cast iron bodies, stainless steel 20 mesh screens, Watts, or equal. Y-strainers in chemical lines shall be transparent PVC, Asahi, or equal, True Union strainer. Provide 20 mesh PVC mesh screens. Strainers used for hypochlorite service shall have Teflon O-rings.
 - 4. As shown on the drawings, supply curb stop shutoff valves for NPW yard piping. Curb stops in NPW yard piping shall be Ford B44-777M ball valves with Minneapolis-type curb boxes complete with lid and 6-foot stationary rod, or equal. Provide two 4-foot shutoff keys to operate valves. Lids shall have the word "WATER" cast into the top of the covers or shall be blank. Curb stops shall be placed on minimum 3 cubic feet of concrete placed on undisturbed earth.
 - 5. Hose Bibs:
 - a. Hose bibs providing nonpotable water shall be provided with a removable key handle.
 - b. Exterior hose valves shall be Woodford Model 65, Watts, or equal, freezeless wall hydrants with integral ASSE 1019 backflow preventer outlet, permanent valve seat, and brushed chrome exterior face with 3/4-inch outlet garden hose threads and 3/4-inch inlet. Provide loose key operator with each exterior hose bib.
 - c. Interior hose valves shall be Woodford Model 24, Watts, or equal. Provide 3/4-inch garden hose thread, 3/4-inch inlet, and ASSE 1011 approved backflow preventer outlet. Interior hose valves shall be equipped with approved vacuum breaker, Watts 8A, Nidel Model 34H, or equal. Provide metal handle and chrome plate finish. Provide loose key with each faucet.
 - 6. Valves in NPW piping used for fluid control as shown on the drawings shall be Nibco, or equal, globe valves rated for 200 psi WOG. Valves shall be bronze with TFE disc.

2.04 PIPING APPURTENANCES AND MISCELLANEOUS MATERIALS

- A. General: Piping appurtenances shall be made of the materials specified. All appurtenances not designated as to type shall be subject to approval of ENGINEER.
- B. Nonpotable Water and Caution Signs: Place nonpotable water signs permanently mounted at every hose bib, hydrant, or faucet on the nonpotable water system. Sign shall include as a minimum the wording "NOTICE, NONPOTABLE WATER, DO NOT DRINK." Signs shall be Brady Safety sign, or equal, minimum size 6 inches by 10 inches,

constructed of fiberglass. Mount signs on building wall or structures with stainless steel screws or fasteners. At yard hydrant, provide post-mounted signs on steel U-channel posts.

- C. Mechanical Seals: Mechanical seals shall be 316 stainless steel Link Seal, or equal. Link seals shall be provided with 316 stainless steel bolts, nuts, and fasteners. Sleeve diameter shall be provided and mechanical seals installed as recommended by the manufacturer.
- D. Pressure Gauges: Provide a pressure gauge on each new pump discharge piping. Pressure gauges shall be Ashcroft, or equal, and shall have scale in psi with a maximum range equal to twice the normal operating pressure indicated in the submersible pump equipment specifications. Gauges shall have 4-inch minimum diameter stainless steel case, shall be connected to a mineral-oil filled diaphragm housing to separate the gauge from liquid in discharge line, and shall have accuracy of $\pm 1\%$. Provide isolation valve and union at connection to pipe to allow the gauges to be removed while the line is under pressure. Gauges shall be mounted to permit pressure readings from above.
- E. Service Saddle: Service saddles shall have a ductile iron body per ASTM A536 and have two carbon steel bales. Bales, washers and nuts shall be electro-galvanized with dichromate seal. Gasket shall be of Nitrile rubber and NSF61 listed. Saddle shall be Smith-Blair, Style 313, or equal.
- F. Tapping Sleeve: Tapping sleeve body and neck shall be made of heavy 18-8 Type 304 stainless steel. Flange shall, studs, nuts and washers shall be 304 stainless steel. Gasket shall be 1/4-inch thick, gridded and have a molded outlet ring to ensure effective sealing. It shall be SSF 61-G Nitrile. All welded stainless steel surfaces shall be fully passivated. Sleeve shall be Smith-Blair Style 663, or equal.

PART 3-EXECUTION

3.01 GENERAL

- A. Refer to requirements specified in Division 1 for equipment installation, quality control, testing, supervision, start-up, and operator training.

3.02 INSTALLATION

- A. Interior or Exposed Piping:
 - 1. Provide pipe supports for all piping. Pipe support spacing and type shall, at a minimum, conform to manufacturer's recommendations unless more restrictive requirements are specified or shown on the drawings. All interior or exposed pipelines shall be securely supported by adjustable saddles, brackets, or adjustable hangers supported directly by concrete, masonry work, or tile. Strap hangers, tin clips, or U-hooks will not be acceptable. Piping shall be supported, even though not shown on the drawings, using base fittings and concrete pads to 6 inches above the floor, Anvil 264, B-line, or equal, adjustable pipe saddle stand with floor flange to 6 feet above the floor, and supporting clamps or inserts more than 6 feet above the floor. In general, the maximum spacing of supports shall not exceed 10 feet on centers. Stainless steel supports and fasteners shall be used in submerged locations, tanks, wet wells, screening and grit facilities, sludge dewatering or thickening facilities, or as indicated. Piping shall be adequately supported and braced to resist thrust at bends, rubber expansion joints, and joints. Insulation saddles shall be used at supports of

- insulated piping. CONTRACTOR shall furnish and place hangers, supports, wall pipes, and sleeves in the forms before concrete is poured wherever needed or shown on the drawings.
2. All piping shall be adequately supported and braced to resist thrust at bends and joints. Use base elbows, poured concrete, or rod ties. The weight of the piping shall be supported independently of connected equipment.
 3. All supports and parts shall conform to the latest requirements of ASME B31 and shall have a structural safety factor of 5. Accurate weight balance calculation shall be made by CONTRACTOR to determine the required supporting force at each hanger location and the pipe weight load at each equipment connection. CONTRACTOR shall be responsible for the installation and application of the supports. Pipe hangers shall be capable of supporting the pipe weight load in all conditions of operation. The hangers shall allow free expansion and contraction of the piping to prevent excessive stress in the piping. Where vertical movement up to 1/8 inch is anticipated, a precompressed variable spring support shall be used. Rigid hangers shall be provided with a means of vertical adjustment after erection. Where horizontal piping movements are greater than 1/2 inch, or where the hanger rod angularity from vertical is greater than 4 degrees from hot to cold position of the pipe, the hanger pipe and structural attachments shall be offset in a manner that the rod is vertical in the hot position. Hangers and supports shall be spaced in accordance with ASME B31 and as indicated in this specification. Pipe supports shall be placed before and after a valve, expansion joint, or equipment so stress will not be transferred to them.
 4. CONTRACTOR shall provide calculations of pipe supports if requested by ENGINEER.
 5. All carbon steel parts shall be furnished with all surfaces (except galvanized or stainless steel) prepared in accordance with near white grade SSPC Specification No. 10 removing all dirt, rust scale, and foreign materials. Surface preparation of all carbon steel parts shall be performed at such time during the assembly process as to preclude damage to the equipment once installed and assembled. Cleaned surfaces shall then be shop-primed. Shop-priming shall be with one coat of Tnemec N69-1255 Hi-Build Epoxoline primer, Tnemec 140-1255 Beige Pota-Pox, or equal, applied to a minimum of 5.0 mils dry thickness. Primer used shall be compatible with proposed finish coats; CONTRACTOR shall verify. It is the intent of this specification that all equipment, supports, and appurtenances shall be furnished shop primed, clean, and ready to accept finish painting by CONTRACTOR with a minimal amount of surface preparation. Preparation and painting shall conform to all requirements and provisions specified in Division 9.
 6. The following maximum spacings shall be provided for supports:

MAXIMUM HORIZONTAL PIPE HANGER AND SUPPORT SPACING

Nominal Pipe or Tube Size	Copper Tubing		Ductile Iron (See Note 1) ft	PVC/CPVC Pipe (See Note 2) ft
	Water Service ft	Vapor or Air Service ft		
1/4	5	5		
3/8	5	6		Continuous
1/2	5	6		Continuous
3/4	5	7		Continuous
1	6	8		4
1 1/4	7	9		4
1 1/2	8	10		4

Nominal Pipe or Tube Size	Copper Tubing		Ductile Iron (See Note 1) ft	PVC/CPVC Pipe (See Note 2) ft
	Water Service ft	Vapor or Air Service ft		
2	8	10		4
2 1/2	9	10		4
3	10	10		4
4	10	10	10	4
5	10	10	10	4
6	10	10	10	9
8	10	10	10	9
10	10	10	10	10
12	10	10	10	10
14			10	10
16			10	10
18			10	10
20			10	
24			10	
30			10	
36			10	
42			10	

Note 1: Provide at least one hanger per pipe length located as close to the flange or joint on barrel as possible.

Note 2: Spacing is based on Schedule 80 at 100°F. For Schedule 40 or higher temperatures, provide shorter span. Consult local plumbing code and manufacturer's recommendations as required. Minimum spacing requirements shall govern.

7. The length of hanger span and support spacing in the above table refers to straight lengths of pipe. When there are changes of direction in pipe, two supports shall be placed less than three-fourths the full span in the table. When practical, a hanger shall be located immediately adjacent to a change in direction of piping. Where there are concentrated loads between supports such as valves, spacing shall be based on load calculations rather than this table.
8. Provide saddles or shields under or around piping between hanger and supports for all insulated piping to prevent crushing of insulation. Provide stainless steel pipe shields under aeration stainless steel piping to prevent indentation of piping from the support or clamp.
9. Anchored supports shall include a stainless steel U-bolt and nuts bolted to the wall bracket.
10. Exposed piping shall run straight, in neat parallel lines, and shall be located far enough from walls, ceilings, and floors to permit access for covering of pipe and painting work. Care shall be taken in laying out piping so that there is no interference with the proper location of piping for other purposes or other equipment and shall be run with regard to the requirements of each service.
11. Piping shall not interfere with headroom or clear floor space. Unless otherwise shown, piping shall run exposed in buildings, except in finished areas. Unless otherwise shown, small water piping in finished areas shall be concealed in interior walls, above

suspended ceilings, or under floors where possible. Water piping shall not be installed in exterior walls, unless otherwise shown or noted on the drawings. Joints shall not be used under floor slabs. Unless otherwise shown, piping under floor slabs shall clear floor slabs or footings by a minimum of 6 inches. Pipes under floors shall have a minimum of 6 inches of sand cover. Plates shall be provided on all uncovered pipes passing through floors, walls, and ceilings constructed of materials other than poured concrete. Plates shall be on exposed sides and shall be chrome-plated, spring and snap type.

12. Except for flanged piping, an ample number of standard weight ground joint unions and a shutoff valve shall be provided in all pipelines and at all equipment. CONTRACTOR shall provide 3/8-inch tapped and plugged connections in suction and discharge of all pumps for testing.
 13. The appropriate number, size, and lengths of spool pieces and flange fillers needed for plumbing and leveling any existing piping shall be included in the price bid.
 14. On clear liquids and on lines carrying solids where neither side of the pipeline drains, the valve shall be positioned so that the seat end of the valve is downstream of the shutoff pressure. The highest pressure should always be on the back side of the plug, except for a valve installed in a vertical pipe. On sludge or slurry lines where one side of the line normally drains, it is preferential to install the seat end of the valve upstream so that the valve cavity drains empty. Where possible in horizontal pipelines, the valve shall be installed with the axis of the plug horizontal and the plug in the top of the valve when in the open position. In vertical pipelines carrying sludge or slurries, the seat end shall be at the top of the valve.
 15. The locations and elevations of existing piping are approximate. Any changes in the pipe location or elevation shall be reviewed by ENGINEER.
 16. CONTRACTOR shall submit shop drawings showing new pipe routing and existing pipe removal. CONTRACTOR shall be responsible for final pipe routing and shall route new piping as required to minimize conflicts. Piping shown on the drawings is approximate only. Not all existing piping, conduit, equipment, etc., are shown on the drawings. CONTRACTOR shall field-verify locations. CONTRACTOR shall reroute existing piping, conduit, etc., as indicated or as required to install new piping or equipment. CONTRACTOR shall remove and relocate existing pipe supports as required to install new piping. CONTRACTOR shall provide all piping, fittings, flange fillers, and other appurtenances as required to provide functional system at no additional cost to OWNER.
- B. Plug Valve Installation: Whenever possible, CONTRACTOR shall install plug valves shaft in horizontal and plug above flowline when in the open position. Valve installation shall be in accordance with manufacturer's requirements.
- C. Wall and Other Pipe Penetrations:
1. CONTRACTOR shall furnish and place hangers, supports, wall pipes, sleeves, and floor boxes in the forms before concrete is poured wherever needed or shown on the drawings.
 2. Where pipes pass through concrete members without wall fittings shown, CONTRACTOR shall provide sleeves in the forms for the piping, unless otherwise shown on the drawings. The sleeve diameter shall not exceed the pipe o.d. plus 2 inches (or the pipe flange o.d. plus 1 inch, as applicable), unless otherwise shown on drawings. If the concrete members are to be watertight, the annular space around the pipe shall be sealed with a mechanical seal. Sleeves shall be steel unless noted otherwise and shall include minimum 1-inch waterstop. For copper pipe, provide an elastomeric sleeve on pipe where it passes through walls or slabs.

3. Where plain wall pipes are shown or indicated on the drawings, CONTRACTOR may substitute a flanged end wall pipe, if desired, for the purposes of pressure testing specified herein.
 4. Where pipe passes through nonwatertight walls, the annular space shall be grouted full. Where pipes pass through nonwatertight floors, the sleeve shall extend 1 inch above the finished floor elevation. The annular space shall remain open, except the annular space between a rated space (example—Class 1, Division 1, Group D hazardous location) and a nonrated space shall be sealed with a mechanical seal.
 5. Where pipes pass through a roof, they shall be run through an approved roof penetration with flashing and counter flashing.
 6. Where new pipes go through existing watertight concrete members, CONTRACTOR shall core a hole through the member, unless otherwise shown on the drawings. The annular space between the concrete and pipe shall be sealed with a mechanical seal. Where new pipes go through existing nonwatertight concrete or masonry members, holes shall be cored and annular space between the concrete and the pipe shall be grouted full (walls or floors at rated spaces) or remain open (floors at nonrated spaces). Prior to any coring, CONTRACTOR shall locate reinforcing steel in the member and shall consult with ENGINEER to determine optimal location for the core. Plug abandoned pipes and wall pipes, after pipe and fittings removal flush to the concrete surface, with nonshrink grout, to achieve a watertight seal.
 7. Nonshrink grout shall be as specified in Division 3.
 8. No chases or recesses shall be made in poured concrete for pipe installation, and no pipe shall run in poured concrete unless called for in the drawings or specifications or permitted by ENGINEER. The cutting or core drilling of concrete for pipe shall be avoided wherever possible, and in no case where such cutting or core drilling is necessary shall reinforcing rods be cut or disturbed without requesting the opinion of ENGINEER. All openings for pipe work shall be neatly patched in a workmanlike manner.
- D. Cleaning and Disinfection: All equipment and materials shall be clean before installation. CONTRACTOR shall disinfect and flush the potable water system before it is put online. Water main shall be disinfected according to AWWA C651.

3.03 FIELD QUALITY CONTROL

- A. CONTRACTOR shall include the cost of all testing, cleaning, and disinfection in the price Bid.
- B. All work shall be inspected, tested, and approved by the appropriate authorities and in accordance with federal, state, and local rules and regulations. All work shall also be tested as specified in this section. Unless indicated by ENGINEER in writing before testing begins, all tests shall be witnessed by ENGINEER and others as necessary. Test results shall be recorded, and reports or appropriate certificates shall be submitted to ENGINEER in triplicate.
- C. All piping shall be tested. All piping, interior or exposed, shall be subject to test before being covered with insulation or paint. All piping and appurtenances shall be watertight or airtight and free from visible leaks.
- D. All piping shall be flushed or blown out after installation and prior to testing. CONTRACTOR shall provide all necessary piping connections, water, air, test pumping equipment, water meter, bulkheads, valves, pressure gauge and other equipment,

materials, and facilities necessary to complete the specified tests. CONTRACTOR shall provide all temporary sectionalizing devices and vents for testing.

- E. Pressure Tests: The test pressure in all lines shall be held for one hour during which time the leakage allowance shall not exceed that specified. In case repairs are required, the pressure test shall be repeated until the pipeline installation conforms to the specified requirements. Pumps, air compressors, instrumentation, and similar equipment shall not be subjected to the pressure tests.

Fluid Abbreviation or Name	Minimum Test Pressure in psi	Test Medium	Leakage Allowance Designation
Odor Control	25	Air	"B" ⁽²⁾
D	10	Water	"A"
NPW	50	Water	"A"
GR	150	Water	"A"

¹ Leakage allowance Designation "A" shall mean zero leakage.

² Leakage allowance Designation "B" shall mean a loss of pressure of not more than 5% during the test period.

END OF SECTION

SECTION 15195

PIPING AND EQUIPMENT IDENTIFICATION

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: Perform all work required to furnish and install equipment, valve, pipe, and wire identification with supplementary items necessary for proper installation as specified herein, or shown on the drawings. CONTRACTOR shall identify all equipment, valves, piping, and wires.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.

PART 2–PRODUCTS

2.01 NAMEPLATES

- A. Type “A” Nameplates:

Use: Fans.

Unit heaters, etc.

Size: 4 inch by 4 inch.

Material: 3-layer laminated Micarta.

Background Color: Black.

Character Color: White.

Character Size: 1 1/4 inches.

Engraving: Equipment label.

Mounting Location: Equipment–Top wireway.

- B. Type “B” Nameplates:

Use: Identify control stations, thermostats, etc.

Size: 3/8 inch by 2 inch.

Material: 3-layer laminated Micarta.

Background Color: Black.

Character Color: White.

Character Size: 1/8 inch.

Engraving: Control station number or equipment controlled.

Mounting Location: Device front at top.

2.02 LABELING TAGS

A. Labeling Tags:

Use: Field-mounted devices (Limit switches, Natural gas pressure regulators, etc.).

Size: 1 inch by 3 inch.

Material: 1/32-inch-thick stainless steel.

Character Size: 1/4 inch.

Engraving: As requested by ENGINEER.

B. Valve Tags:

1. All new valves shall be tagged. All slide gates shall also be tagged. CONTRACTOR shall provide on valves, engraved 2 1/2-inch by 2 1/2-inch plastic laminated tags, Seton "Setonply Series M4550-H," or equal. Nomenclature for tagging (letters and numbers) will be provided by ENGINEER. Colors will be selected by OWNER. CONTRACTOR shall affix tags to valves with Brady 38091, or equal, stainless steel wire and Brady 38090, or equal, zinc wire clamps.
2. Valve tags shall be fastened next to valve box cover on valve manholes with stainless steel fasteners. Each slide gate groove shall be labeled with tags using stainless steel fasteners.

2.03 WIRE MARKERS

- A. Wire markers shall be permanently attached wraparound adhesive, sleeve- or heat-shrink-type labels. Wire numbering preprinted on the conductor, flag-type labels, and individual wraparound numbers (such as Brady preprinted markers) are not acceptable.
- B. Wire markers shall be specifically printed for this project using a wire marker printer. Handwritten markers are not acceptable.

2.04 PIPE MARKERS

- A. Manufacturers: Marking Systems, Inc., Seton Name Plate Company, W.H. Brady Company, or equal.
- B. Pipe markers shall conform to ANSI A13.1. Arrow markers must have same ANSI background colors as their companion pipe markers or be incorporated into the pipe identification marker.
- C. Plastic Pipe Markers: Factory-fabricated, flexible, semirigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.
- D. Pipe markers and arrow markers also shall be provided for all piping systems.
- E. Use Seton Setmark type SNA or Brady Snap-on type identification for all piping systems, up through 6 inches. For piping systems larger than 6 inches, use Seton or Brady strap-on markers, or similar, by Marking Services, Inc. Self-adhesive labels are not acceptable. Provide lettering in accordance with table below.

PIPE MARK SIZE CHART

Outside Pipe Diameter (Including Covering)	Minimum Length of Label Field Color (Inch)	Minimum Height of Letters (Inch)
3/4 inch to 1 1/4 inch	8	1/2
1 1/2 inch to 2 inch	8	3/4
2 1/2 inch to 6 inch	12	1 1/4
8 inch to 10 inch	24	2 1/2
Over 10 inch	32	3 1/2

PART 3—EXECUTION

3.01 INSTALLATION

- A. Installation shall meet or exceed all applicable federal, state, and local requirements and referenced standards and conform to code and ordinances of authorities having jurisdiction.
- B. Degrease and clean surfaces to receive nameplates.
- C. Install nameplates parallel to equipment lines.
- D. Affix nameplates with stainless steel screws or sticky-back adhesive.
- E. Affix labeling tags with permanent bonding cement or locking wire ties. Provide 3/8-inch hole to accommodate wire tie.
- F. Prepare and install neatly typed directions in all panels, including existing panels, where work is done under this Contract.
- G. Four-inch-round, 4-inch-square, and 4 11/16-inch junction boxes concealed above ceilings may be identified with neat lettering on the cover with a permanent-type black marking pen.

3.02 WIRE IDENTIFICATION

- A. Provide wire markers on each conductor in panelboard gutters, pull boxes, control panels, thermostats, junction boxes, and at load connection. Identify with branch circuit or feeder number for power circuits and with control wire number as indicated on schematic and interconnection diagrams for control wiring. Wire markers shall be permanently attached wraparound adhesive or heat-shrink-type markers. Wire numbering preprinted on the conductor, individual wraparound numbers, and flag-type labels are not acceptable.
- B. Conductors in pull boxes, motor control centers, control panels, cabinets, and panelboards shall be grouped as to circuits and arranged in a neat manner. All conductors of a feeder or branch circuit shall be grouped, bound together with nylon ties, and identified. Phase identification shall be consistent throughout the system.

3.03 PIPE MARKERS

- A. Install pipe markers in accordance with manufacturer's instructions.

- B. Install in clear view and align with axis of piping.
- C. All pipes shall be labeled with a minimum of two labels in each room, crawl space, or compartment. Locate identification at maximum 20-foot centers on straight runs, including risers and drops adjacent to each valve and tee, at each side of penetration of structure or enclosure, and at each obstruction. Labels shall be abbreviated as noted under fluid abbreviations on drawings.
- D. All piping containing or transporting hazardous or corrosive chemicals shall be identified with labels every 10 feet and with at least two labels in each room, closet, or pipe chase.
- E. Labels shall identify fluid being conveyed and include flow direction arrow. Provide a double-ended arrow marker when flow can be in either or both directions.
- F. Indicate delivered water temperature on domestic hot water supply and return lines.
- G. CONTRACTOR shall include a schedule in its submittal identifying the various pipe designations, abbreviations, and labeling scheme. Colors, text, and piping abbreviations are to be selected by OWNER.

END OF SECTION

SECTION 15290

HEATING, AIR CONDITIONING, AND VENTILATION INSULATION

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes:
 - 1. Rigid board fiberglass insulation.
 - 2. Adhesives, mastic, sealants, and reinforcing materials.
 - 3. Jacketing.
 - 4. Accessories.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. All material, installation, and workmanship shall comply with the applicable requirements and standards addressed within the following references:
 - 1. ASTM B117—Standard Practice for Operating Salt Spray (Fog) Apparatus.
 - 2. ASTM C168—Standard Terminology Relating to Thermal Insulation.
 - 3. ASTM C272—Water Absorption of Core Materials for Sandwich Constructions.
 - 4. ASTM C533—Calcium Silicate Block and Pipe Thermal Insulation.
 - 5. ASTM C547—Standard Specification for Mineral Fiber Pipe Insulation.
 - 6. ASTM C518—Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - 7. ASTM C591—Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation.
 - 8. ASTM C612—Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
 - 9. ASTM C916—Standard Specification for Adhesives for Duct Thermal Insulation.
 - 10. ASTM C1071—Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material).
 - 11. ASTM C1290—Standard Specification for Flexible Fibrous Glass Blanket Insulation Used to Externally Insulate HVAC Ducts.
 - 12. ASTM C1427—Standard Specification for Extruded Preformed Flexible Cellular Polyolefin Thermal Insulation in Sheet and Tubular Form.
 - 13. ASTM D1000—Methods for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications.
 - 14. ASTM E84—Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 15. ASTM E96—Standard Test Methods for Water Vapor Transmission of Materials.
 - 16. FED L-P-535E: Plastic Sheet (Sheeting): Plastic Strip: Poly (Vinyl Chloride) And Poly (Vinyl Chloride-Vinyl Acetate), Rigid.
 - 17. EPA Method 8260B—Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry (Gc/Ms).
 - 18. NFPA 262—Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.

1.03 SUBMITTALS

- A. Submit a schedule of all insulating materials shall be used on the project, including adhesives, fastening methods, and fitting materials, along with material safety data sheets and intended use of each material. Include manufacturer's technical data sheets indicating density, thermal characteristics, jacket type, and manufacturer's installation instructions.

1.04 GENERAL REQUIREMENTS

- A. Unless otherwise indicated, all pipe and duct covering, jackets, insulation, vapor barriers, adhesive, and mastics shall have flame spread rating of 25 or less and smoke spread rating of 150 or less when tested in accordance with ASTM E84.

PART 2-PRODUCTS

2.01 RIGID BOARD FIBERGLASS INSULATION

- A. Acceptable manufacturer is Manville Spin-Glas Series 814, Owens Corning Type 703, or Knauf Insulation Board.
- B. Insulation shall be mineral fiber type conforming to ASTM C612.
- C. Minimum nominal density shall be 3 lbs/ft³.
- D. K-factor shall not exceed 0.23 (btu-in)/(hr-ft²-°F) at 75°F mean.
- E. Insulation shall be rated for service to 450°F.

2.02 ADHESIVES, MASTIC, SEALANTS, AND REINFORCING MATERIALS

- A. Products shall be compatible with surfaces and materials on which they are applied, and shall be suitable for use at operating temperatures of systems to which they are applied.
- B. All adhesives used for ductwork insulation shall conform to ASTM C916, Type II.
- C. Fiberglass Insulation Adhesive. Acceptable Manufacturers: Foster 85-60, Childers CP-127, and Duro Dyne SSG.

2.03 JACKETING

- A. Self-Adhering Jackets (SAJ):
 - 1. Acceptable manufacturers are 3M VentureClad 1577CW, or equal.
 - 2. Jackets shall be 5-ply, self-adhering multiple laminated waterproofing material with reflective aluminum foil, high density polymer films and cold weather acrylic adhesive providing zero (0.0) moisture permeance.
 - 3. Minimum material thickness shall be 6 mils.
 - 4. Minimum puncture resistance shall be 25 lbs conforming to ASTM D1000.

2.04 ACCESSORIES

- A. All products shall be compatible with surfaces and materials on which they are applied, and be suitable for use at operating temperatures of the systems to which they are applied.
- B. Adhesives, sealants, and protective finishes shall be as recommended by insulation manufacturer for applications specified.
- C. Insulation bands shall be 3/4-inch wide, constructed of aluminum or stainless steel. Minimum thickness shall be 0.015-inch for aluminum and 0.010-inch for stainless steel.
- D. Staples shall be clinch style.
- E. Tack fasteners shall be stainless steel ring grooved shank tacks.
- F. Joint sealants shall be non-shrinking and permanently flexible.

PART 3—EXECUTION

3.01 GENERAL

- A. All insulation damaged during construction shall be replaced in accordance with these specifications.
- B. All insulation shall be applied in accordance with the manufacturer's written recommendations. Destructive methods such as sheet metal screws are not acceptable. All pipe insulation shall be installed with joints butted firmly together.
- C. Install insulation with smooth and even surfaces. Poorly fitted joints or use of filler in voids will not be accepted. Provide neatly beveled and coated terminations at all nameplates, uninsulated fittings, or at other locations where insulation terminates.
- D. All duct insulation shall be continuous through walls, ceiling or floor openings and through sleeves.

3.01 RIGID BOARD FIBERGLASS INSULATION INSTALLATION:

- A. Provide finished edges at all access doors and ends of insulation.
- B. Provide additional insulation trim pieces over flanged ductwork joints to completely insulate and seal to the thickness specified.
- C. For exterior ductwork, insulate duct such that minimum thickness is maintained and is sloped/peaked to shed water.
- D. Flexible connections from ducts to HVAC equipment shall not be insulated.

3.02 PROTECTIVE JACKET INSTALLATION

A. Self-Adhering Jackets (SAJ):

1. Install according to manufacturer's recommendations. Cut allowing minimum 4-inch overlap on ends and 6 inches on longitudinal joints. Align parallel to surface. Remove release paper and press flat to surface to avoid wrinkles. Rub entire surface for full adhesion and sealing at joint overlaps. On exterior applications, provide a bead of compatible caulk along exposed edges.
2. Wrap elbows, fittings, valves and butt joints with two layers of vapor retarding tape. Vapor retarding tape shall be compatible with the jacket material used.

3.03 DUCTWORK INSULATION:

- #### A. Provide insulation on new and existing remodeled ductwork as indicated in the following schedule:

Service	Insulation	Jacket	Thickness
Exposed Supply Ducts in Mechanical Rooms	Rigid Board Fiberglass	SAJ	2.0"
Intake and Exhaust Damper Frames	Rigid Board Fiberglass	SAJ	2.0"

END OF SECTION

SECTION 15400

PLUMBING

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. All material and piping for plumbing.
 - 2. Concrete foundations and anchor bolts for all equipment furnished under this section.
 - 3. Piping connections to all plumbing equipment, whether furnished under this section or not.
- B. Related Sections and Divisions: Applicable provisions of Division 1 and Section 15050 shall govern work in this section.

1.02 SYSTEM DESCRIPTION

- A. Design Requirements: Provide lead-free pipe, fittings, appurtenances, and fixtures in accordance with the Reduction of Lead in Drinking Water Act and NSF/ANSI 372.

PART 2–PRODUCTS

2.01 PLUMBING SPECIALTIES

- A. Unless otherwise specified, valves shall be provided in accordance with Section 15050–Piping and Accessories.
- B. Floor Drains:
 - 1. All floor drains shall be furnished and installed with all options and accessories required for a leak-free installation within the particular construction in which they are to be mounted.
 - 2. Floor drains for piping 4 inches and under shall be Zurn ZN-550, Wade W-1300, or equal, and for piping larger than 4 inches Zurn ZN-505, Wade W-1240, or equal.
 - 3. Each drain shall be provided with a trap. A minimum of one cleanout shall be provided for each single or common leader.
- C. Cleanouts:
 - 1. Manufacturers shall be Zurn, Wade, Smith, Josam, Kusel, or equal.
 - 2. Each cleanout shall be gas- and watertight.
 - 3. Interior concrete floor areas: Enameled cast iron body with round or square adjustable scoriated polished nickel bronze cover, tapered threaded ABS closure plug. Zurn ZN-1400.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Unless otherwise specified, installation of piping shall be in accordance with Section 15050—Piping and Appurtenances.
- B. Plumbing system shall be installed with hangers and supports in accordance with the Plumbing Code. Insulation saddles shall be used at supports of insulated piping.
- C. Plumbing system shall be installed in accordance with local plumbing requirements and applicable portions of the 2014 Indiana Building Code. Where requirements conflict, the stricter standard shall apply.
- D. Install all piping, conduit, and accessories to permit access to equipment for maintenance. Coordinate the exact location of wall and ceiling access panels and doors with the general contractor, making sure that access is available for all equipment and specialties. Where access is required in plaster walls or ceilings, furnish the access doors to the general contractor.
- E. CONTRACTOR shall identify piping, valves, and outlets in accordance with Division 9 and Section 15195—Equipment Identification.
- F. Install plumbing equipment where indicated in accordance with manufacturer's recommendations. Coordinate equipment location with piping, ductwork, conduit, and equipment of other trades to allow sufficient clearances. Locate equipment and arrange plumbing piping to provide access space for servicing all components.
- G. Each piece of trim shall be furnished whether specifically mentioned or not, in order to provide a complete first-class installation. Furnish and install all required water, waste, soil and vent connections to all plumbing fixtures, together with all fittings, supports, fastening devices, cocks, valves, traps, etc. leaving all in complete working order.

3.02 TESTING AND CLEANING

- A. General:
 - 1. All new piping shall be tested. All piping, interior or exposed, shall be subject to test before being covered with insulation or paint. All piping and appurtenances shall be watertight or airtight and free from visible leaks.
 - 2. All piping shall be flushed or blown out after installation and prior to testing. CONTRACTOR shall provide all necessary piping connections, water, air, test pumping equipment, water meter, bulkheads, valves, pressure gauge and other equipment, materials, and facilities necessary to complete the specified tests, flushing, sterilization, and inspection. CONTRACTOR shall also provide all temporary sectionalizing devices and vents as required.
 - 3. All new and parts of existing altered, extended, or repaired plumbing system piping shall be tested and inspected for leaks and defects. Piping being tested shall not leak nor show any loss in test pressure for duration specified.
 - 4. In cases of minor installation and repairs where specified water and/or air test procedures are deemed impractical, CONTRACTOR shall obtain written approval from ENGINEER to perform alternate testing and inspection procedures. Alternate testing

- and inspection procedures for minor installation and repairs shall include visual evaluation of installed components by ENGINEER during a simulation of use.
5. The water used for tests shall be obtained from a potable source of supply.
 6. Prepare testing reports. If testing is performed in segments, submit separate report for each segment, complete with diagram or clear description of applicable portion of piping. After inspection has been approved or portions thereof, certify in writing the time, date, name, and title of the persons reviewing the test. This shall also include the description of what portion of the system has been approved. A complete record shall be maintained of all testing that has been approved and shall be made available at the jobsite. Upon completion of the work, all records and certifications approving testing requirements shall be submitted to ENGINEER before final payment is made.
 7. Verify systems are complete, flushed, and clean prior to testing. Isolate or remove components subject to damage or not rated for test pressure. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. Leave piping uninsulated, uncovered, and unconcealed until it has been tested and approved. Where any portion of piping system must be concealed before completion of entire system, the portion shall be tested separately as specified for the entire system prior to concealment. CONTRACTOR shall expose all untested covered or concealed piping.
 8. Gauges used for testing shall have increments as follows:
 - a. Tests requiring a pressure of 10 psi or less shall use a testing gauge having increments of 0.10 psi or less.
 - b. Tests requiring a pressure of greater than 10 psi but less than or equal to 100 psi shall use a testing gauge having increments of 1 psi or less.
 - c. Tests requiring a pressure of greater than 100 psi shall use a testing gauge having increments of 2 psi or less.
 9. Separately test above- and belowground piping.
 10. Do not introduce test water into piping systems when exposure to freezing temperatures is possible.
 11. Do not introduce test water into sections of piping located above existing sensitive areas and/or equipment that may be damaged or contaminated by water leakage. Coordinate with OWNER to determine areas and/or equipment considered as being sensitive.
 12. Defective work or material shall be reworked and replaced and inspection and test repeated. Repairs shall be made with new materials. Pipe dope, caulking, tape, dresser couplings, etc., shall not be used to correct deficiencies.
 13. CONTRACTOR shall be responsible for cleaning up any leakage during flushing, testing, repairing, and disinfecting to the original condition any building parts subjected to spills or leakage.
 14. If required for the additional pressure load under test, provide temporary restraints at fittings or expansion joints. Backfill underground pressure mains prior to testing with the exception of thrust restrained valves that may be exposed to isolate potential leaks.
 15. For hydrostatic tests, use clean water and remove all air from the piping being tested by means of air vents or loosening of flanges/unions. Measure and record test pressure at the high point in the system.
 16. For air or nitrogen tests, gradually increase the pressure to not more than one-half of the test pressure; then increase the pressure in steps of approximately one-tenth of the test pressure until the required test pressure is reached. Examine all joints and connections with a soap bubble solution or equivalent method. System will not be approved until it can be demonstrated that there is no measurable loss of test pressure during the test period.

B. Drainage and Vent System:

1. Subject gravity drainage and vent piping and joints to a vertical water column pressure of at least 10 feet. If after 2 hours, the level of the water has been lowered by leakage, the leaks must be found and stopped and the water level shall again be raised to the level described and the test repeated until, after a 2-hour retention period, there shall be no perceptible lowering of the water level in the system being tested.
2. Piping located above sensitive areas and/or equipment that may be damaged or become contaminated because of test water leakage shall be tested with air. Air test may also be performed when allowed by ENGINEER. Isolate the test section from all other sections and slowly fill pipe with oil-free air until there is a uniform gauge pressure of 5 pounds per square inch. The air pressure shall be regulated to prevent the pressure inside the pipe from exceeding 5.0 psig. This pressure shall be held for a test period of at least 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperature or the seating of gaskets shall be made prior to the beginning of the test period.
3. Should the completion of these tests leave any reasonable question of a doubt relative to the integrity of the installation, additional tests or measures shall be performed to demonstrate the reliability of these systems to the complete satisfaction of ENGINEER.
4. Test plugs must extend outside the end of pipe to provide a visible indication for removal after the test has been completed.
5. Each floor drain P-trap that has successfully passed pressure testing shall be proven clean and free of debris as follows:
 - a. An inspection request shall be submitted to OWNER, identifying the quantity and location of drain(s) to be inspected.
 - b. Vacuum out each floor drain P-trap. A visual inspection of the trap shall be performed to verify that the trap is debris free.
 - c. Perform a free-flowing test by pouring two 5-gallon buckets of water down the floor drain.
 - d. After confirming that the floor drain trap is clean and free of debris, ensure that the trap is filled with water.
 - e. At the discretion of ENGINEER, a visual inspection of the trap using a sewer scope may be required in addition to, or in lieu of, a vacuum procedure.
6. OWNER may require that any portion of the drainage, waste, and vent systems installed be proven undamaged, clean and free of debris. Verification of the interior condition of piping shall be accomplished using a sewer scope or other method as determined by ENGINEER.

END OF SECTION

SECTION 15835

TERMINAL HEAT TRANSFER UNITS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Electric heaters.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. NFPA 70—National Electric Code.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300—Submittals.
- B. Drawings and specifications are based on the scheduled manufacturer and model number. CONTRACTOR shall be responsible for the cost of any changes because of substitutions or alternates of other manufacturers or model numbers including, but not limited to, structural, mechanical, and electrical work. CONTRACTOR shall pay all costs for revisions of drawings by ENGINEER. Any changes shall be coordinated and provided at no additional cost to OWNER.

1.04 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2—PRODUCTS

2.01 ELECTRIC HEATERS

- A. CONTRACTOR shall provide electric heaters of the type, size, capacity, and accessories as listed on the equipment schedule. All units shall be UL listed.
- B. All electric unit heaters shall be factory-assembled and tested.
- C. Electric Unit Heaters (Explosion-proof):
 - 1. Acceptable manufacturers are Chromalox, QMark, or equal.
 - 2. The cabinet shall be constructed of heavy gauge epoxy-coated steel with a louvered grille and wall-mounting bracket.

3. Unit shall include an epoxy-coated aluminum propeller fan with direct-drive, totally enclosed motor for operation in a Class I, Division 1, Groups C and D hazardous environment.
4. Unit shall include a manual reset thermal cutout to protect the element, and a thermal fan delay.
5. Line voltage thermostat shall be provided by Division 16 contractor.
6. Unit-mounted equipment disconnect shall be provided by manufacturer suitable for Class I, Division 1, Groups C and D locations.
7. Mount bottom of units 8 feet 0-inch above finished floor.
8. Heat exchanger shall be sealed liquid-to-air-type with a field-replaceable immersion heating element. Heat transfer fluid shall be propylene glycol. Heat exchanger shall include a pressure relief valve. Heat exchanger shall be of 316 stainless steel construction with aluminum fins.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Install equipment in accordance with manufacturer's recommendations and local codes, including minimum mounting heights above floor.
- B. CONTRACTOR shall provide all mounting hardware and accessories necessary to complete installation.
- C. Installation of all equipment furnished under this Contract shall be supervised by a qualified representative of the equipment manufacturer. All equipment shall be placed in operation, and plant operators shall be trained to the satisfaction of OWNER by a qualified representative of the equipment manufacturer. OWNER may videotape training presentations given by manufacturer's representatives. Final payment for various items of equipment will not be made by OWNER until the equipment is operating to their satisfaction.

END OF SECTION

SECTION 15860

HVAC FANS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Centrifugal inline fans.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. AMCA 99—Standards Handbook.
- B. AMCA 210—Laboratory Methods of Testing Fans for Aerodynamic Performance Rating.
- C. AMCA 300—Reverberant Room Method for Sound Testing of Fans.
- D. AMCA 301—Method for Calculating Fan Sound Ratings from Laboratory Test Data.
- E. NFPA 70—National Electrical Code.
- F. NEMA MG 1—Motors and Generators.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300—Submittals.
- B. Submittal shall include fan-specific performance curves showing airflow, head, and motor horsepower.

1.04 QUALITY ASSURANCE

- A. Fans shall bear AMCA-certified rating seals.

1.05 DELIVERY, STORAGE AND HANDLING

- A. All fans shall be stored and handled in accordance with manufacturer's instructions.
- B. Motors, shafts, and bearings shall be protected from weather and dust.

1.06 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2-PRODUCTS

2.01 CENTRIFUGAL INLINE FANS

- A. Acceptable manufacturers are Greenheck, Cook, or Twin City Fans.
- B. Centrifugal inline fans shall be of drive type indicated on drawing schedules. Fan performance shall be as indicated on equipment schedules. Fans shall be UL listed.
- C. The fan wheel shall be centrifugal with backward-inclined blades. The fan wheel shall be statically and dynamically balanced.
- D. The fan shall be quiet-operating and vibration-free. Fan performance shall include AMCA-certified air and sound ratings and AMCA seal. Furnish and install spring-type vibration isolators provided by fan manufacturer.
- E. The fan shaft shall be mounted in prelubricated ball bearing pillow blocks. Bearings shall be sealed and have a minimum L₁₀ life of 100,000 hours.
- F. The fan housing shall be all aluminum construction with square inlet and discharge collars. Provide access panels for servicing drives and motors. All fasteners shall be either stainless steel or aluminum.
- G. Fans shall be mounted on vibration isolators furnished by fan manufacturer.
- H. Belt drives shall have a sliding or pivoting motor plate for belt tensioning. The belt and motor shall be totally enclosed by a guard with tachometer holes. The motor shall be mounted out of the airstream. The fan motor shall be explosion-proof and NEMA-approved ball-bearing type. Starters and disconnects shall be provided as a part of Division 16.
- I. Each fan and motor combination shall be capable of delivering 110% of air quantity scheduled at scheduled static pressure. The motor furnished with the fan shall not operate into the motor service factor when operating under these conditions.
- J. Provide a fan and motor suitable for Class I, Division 1 environments where schedules indicate. Fans used in Class I, Division 1 environments shall be equipped with nonsparking fan wheels with AMCA B rating.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions and drawings.
- B. CONTRACTOR shall provide all mounting hardware and accessories necessary to complete installation.
- C. Provide flexible duct connections on inlet and outlet of all fans.

- D. Drawings and specifications are based on the scheduled manufacturer and model number. CONTRACTOR shall be responsible for the cost of any changes because of substitutions or alternates of other manufacturers or model numbers. CONTRACTOR shall pay all costs for revisions of drawings by ENGINEER. Any changes shall be coordinated and provided at no additional cost to OWNER.
- E. Installation of all equipment furnished under this Contract shall be supervised by a qualified representative of the equipment manufacturer. All equipment shall be placed in operation, and plant operators shall be trained to the satisfaction of OWNER by a qualified representative of the equipment manufacturer. OWNER may videotape training presentations given by manufacturer's representatives. Final payment for various items of equipment will not be made by OWNER until the equipment is operating to their satisfaction.

END OF SECTION

SECTION 15890

DUCTWORK

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included: Metal ductwork.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASTM A36–Standard Specification for Carbon Structural Steel.
- B. ASTM A167–Standard Specification for Stainless and Heat-Resisting Chromium Nickel Steel Plate, Sheet, and Strip.
- C. ASTM A480–Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
- D. AWS D9.1–Sheet Metal Welding Code.
- E. NFPA 90A–Installation of Air Conditioning and Ventilating Systems.
- F. NFPA 90B–Installation of Warm Air Heating and Air Conditioning Systems.
- G. SMACNA–HVAC Air Duct Leakage Test Manual.
- H. SMACNA–HVAC Duct Construction Standards–Metal and Flexible.
- I. UL 181–Factory-Made Air Ducts and Connectors.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300–Submittals.

1.04 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700–Contract Closeout.
- B. Record actual locations and sizes of ducts and duct fittings. Record changes in fitting location sizes and types. Show additional fittings used.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with SMACNA–HVAC Duct Construction Standards–Metal and Flexible.

1.06 REGULATORY REQUIREMENTS

- A. Construct ductwork to NFPA 90A standards.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not install duct sealants when temperatures are less than those recommended by sealant manufacturers.
- B. Maintain recommended minimum temperatures during and after installation of duct sealants.
- C. Ductwork shall be stored indoors or in durable, waterproof, abovegrade packing.

PART 2-PRODUCTS

2.01 MATERIALS

- A. All sheet metal used for construction of duct shall be 24 gauge, or heavier, except for round ductwork 12 inches and smaller shall be 26 gauge where allowed by SMACNA.
- B. Stainless Steel Ducts: ASTM A240/A240M and A480/A480M, Type 304 or 316 as indicated on drawings.
- C. All fasteners shall be 316 stainless steel unless otherwise indicated.
- D. Duct sealant shall be United McGill United Duct Sealer, or equal, for indoor applications and United McGill Uni-Weather Duct Sealer, or equal, for outdoor applications. Sealant shall be UL classified for flame and smoke development and shall be suitable for mating materials.
- E. Hanger rod shall be 316 stainless steel; threaded both ends, threaded one end, or continuously threaded.
- F. All ductwork in corrosive or Class 1, Division 1 areas shall be stainless steel. Material proposed shall be compatible with corrosive vapors present in environment.

2.02 DUCTWORK FABRICATION

- A. Field and Shop Fabricated Ductwork (Rectangular):
 - 1. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards—Metal and Flexible. Provide duct material, gages, reinforcing, and sealing in accordance with SMACNA Standards for 2-inch static rating, 2,500 fpm velocity, and duct seal Class A.
 - 2. Construct Ts, bends, and elbows with radius of not less than 1 1/2 times width of duct on centerline. Where not possible, rectangular elbows may be used with turning vanes in accordance with Section 15910—Ductwork Accessories.
 - 3. Increase duct sizes gradually, not exceeding 15 degree divergence wherever possible; maximum 30 degree divergence upstream of equipment and 45 degree convergence downstream.

4. Provide 45 degree expanded entry takeoffs unless otherwise indicated. Flange ductwork for attachment to grille registers and outlets, unless otherwise detailed.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install and seal ducts in accordance with SMACNA HVAC Duct Construction Standards—Metal and Flexible.
- C. Provide openings in ductwork to accommodate testing equipment and controllers. Where openings are provided in insulated ductwork, install a metal insulation sleeve of same material as ductwork.
- D. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities. Make all necessary incidental changes in cross-section, offsets, etc., to avoid interference with other equipment and supports.
- E. Use double nuts and lock washers on threaded rod supports.
- F. Duct shall be supported so that no hanging equipment fasteners or accessories penetrate ductwork.
- G. During construction, provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.

END OF SECTION

SECTION 15910

DUCTWORK ACCESSORIES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Flexible duct connections.
 - 2. Duct screens.
 - 3. Dampers and Actuators..
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. NFPA 90A—Installation of Air Conditioning and Ventilating Systems.
- B. SMACNA—HVAC Duct Construction Standards—Metal and Flexible.
- C. UL 33—Heat Responsive Links for Fire-Protection Service.
- D. UL 555—Fire Dampers and Ceiling Dampers.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300—Submittals.
- B. Damper submittals shall include actual pressure drop, free area, and torque requirements for each type of damper provided.

1.04 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700—Contract Closeout.
- B. Record actual locations of flexible duct connections, dampers, and screens.

PART 2—PRODUCTS

2.01 FLEXIBLE DUCT CONNECTIONS

- A. Flexible duct connections in rated spaces shall be Ventfabrics, Inc. "VentelTM", or equal, Teflon fluorocarbon resin-coated glass fabric. Fabric shall be suitable for continuous operation up to 500°F. Fabric shall have zero leakage at ±8 inches water column.

2.02 DUCT SCREENS

- A. Provide screens equal to Ryerson Ryex Standard, 3/4 inches, 12 gauge sheet metal with border frame for protection on open duct inlets and outlets, and as indicated on the drawings. Frame and screen shall be stainless steel.

2.03 DAMPERS AND ACTUATORS

- A. Outside Air Intake and Exhaust Outlet:
 - 1. Dampers for corrosive and Class I, Division 1 environments shall be TAMCO Series 9000 SW provided with an anodized coating and stainless steel linkage.
 - 2. Dampers shall be parallel blade.
 - 3. Extruded aluminum (6063T5) damper frame shall be thermally broken, minimum 0.080 inch thickness. Damper frame to be 4 inches deep and shall be insulated with polystyrene on four sides. Damper shall be rated at a leakage of less than 8.0 cfm per square foot at 4.0 inches of water column pressure differential at 20°F.
 - 4. Blades to be extruded aluminum (6063T5), internally insulated with non-CFC, expanded polyurethane foam and shall be thermally broken. Complete blade shall have an insulating factor of R-2.29 and a temperature index of 55.
 - 5. Blade gaskets shall be extruded EPDM; blade seals shall be silicone.
 - 6. Shaft to actuator shall be hex type, material to match damper construction.
 - 7. Side seals shall be silicone.
 - 8. Dampers shall be flanged to duct type. Clear opening in damper shall be same size as ductwork.
- B. Actuators:
 - 1. Actuators shall be Belimo NFBUP, Honeywell MS4110, or Siemens GCA, maintenance-free actuator rated at minimum 88 in-lb. of torque. Dampers shall be power-to-open, spring-closed unless otherwise specified. Provide auxiliary switch where noted on drawings. Actuator shall be capable of accepting 120-volt power for operation and control.
 - 2. Actuators shall include electronic overload protection and visual position indication throughout range of motion.
 - 3. Actuators shall include a manual override via a manufacturer-supplied hex crank.
 - 4. Where actuators are located in Class I, Division 1 rated spaces, provide Belimo ZS260 or equal, explosion-proof housing for actuators.
 - 5. All actuators shall be direct-coupled to damper and mounted outside the air stream.
 - 6. If auxiliary switch is not used, terminate cord in nearest junction box.
 - 7. All actuators shall be of the same manufacturer. Manufacturer shall be responsible for furnishing quantity of actuators required to meet minimum damper torque rating, plus an additional 10% torque.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA HVAC Duct Construction Standards—Metal and Flexible. Refer to Section 15890—Ductwork for duct construction and pressure class.

- B. Provide flexible connections immediately adjacent to equipment in ducts associated with fans and motorized equipment. Metal-to-metal gap shall be approximately 4 inches.

END OF SECTION

SECTION 15940

AIR OUTLETS AND INLETS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Louvers.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ADC 1062—Certification Rating and Test Manual.
- B. AMCA 500—Test Method for Louvers, Dampers, and Shutters.
- C. ARI 650—Air Outlets and Inlets.
- D. ASHRAE 70—Method of Testing for Rating the Air Flow Performance of Outlets and Inlets.
- E. NFPA 90A—Installation of Air Conditioning and Ventilating Systems.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300—Submittals.
- B. Submittal shall include a louver schedule that includes louver model, screen type, louver size, finish type, free area, face velocity, and pressure drop for each louver.
- C. For product requiring color selection, provide a hard copy color chart to OWNER for color selection.

1.04 QUALITY ASSURANCE

- A. Performance of air terminals shall be in accordance with ADC 1062.
- B. Louvers shall be tested and certified in accordance with AMCA 500 and shall bear the AMCA seal.

PART 2—PRODUCTS

2.01 LOUVERS (EXTRUDED ALUMINUM)

- A. Acceptable louvers are Greenheck ESD 635, or equal. See drawings for sizes and locations.

- B. Blades and frame shall be extruded aluminum 6063-T5 alloy and 0.08 inch thickness.
- C. Blades shall be 35 degree drainable type spaced at 4 inches on center. Louver shall be capable of a velocity of 1,077 fpm with no water penetration. Performance shall include AMCA-certified air and moisture penetration data and louver shall bear the AMCA seal. Vertical and horizontal mullions and connections between panels shall not be exposed.
- D. Provide channel frame unless noted otherwise on the drawings.
- E. Provide aluminum screen on louver in accordance with louver schedule on drawings. All fastenings shall be stainless steel or aluminum in accordance with louver schedule on drawings.
- F. Louver free area shall be equal to or greater than attached ductwork and damper free area.
- G. Louvers shall be furnished with 3 coats of 70% Kynar 500 finish with custom color selected by OWNER. Submit manufacturer's standard color chart with shop drawings.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Install louvers in accordance with manufacturer's recommendations and drawing details.

END OF SECTION

SECTION 15990

TESTING, ADJUSTING, AND BALANCING

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Balancing air systems.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ASHRAE 11—Practices for Measurement, Testing, Adjusting, and Balancing of Building Heating, Ventilation, Air Conditioning, and Refrigeration Systems.
- B. SMACNA—HVAC Systems Testing, Adjusting, and Balancing.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300—Submittals.
- B. Prior to final balancing, submit a preliminary report that includes the following information for all control modes.
 - 1. For each supply, return and exhaust register, and ceiling outlet:
 - a. Room number.
 - b. Type of register and outlet and catalog size.
 - c. Air flow factor.
 - d. Design CFM and velocity.
 - e. Actual CFM and velocity.
 - f. Percent of design CFM.
 - g. Room pressure relationship.
 - 2. For each fan:
 - a. Unit number.
 - b. Fan size and wheel type.
 - c. Motor horsepower.
 - d. Motor nameplate voltage and amps.
 - e. Design CFM and static pressure.
 - f. Actual CFM and static pressure.
 - g. Actual fan RPM (pump RPM).
 - h. Actual motor voltage and amps (each phase).
- C. Provide summary sheet describing mechanical system deficiencies. Describe objectionable noise or drafts found during testing, adjusting, and balancing. Provide recommendations for correcting unsatisfactory performances, and indicate whether modifications required are within the scope of the Contract, are design-related, or installation-related. List instrumentation used during testing, adjusting, and balancing procedures.

- D. Upon completion of final balancing, provide updated report indicating changes to system during final balancing for all control modes including updated airflows, pressures, velocities, etc. Final report shall be submitted prior to substantial completion.

1.04 QUALITY ASSURANCE

- A. Obtain services of an independent testing organization to perform testing and balancing work. The organization shall have a certified membership in the Associated Air Balance Council (AABC) or certification by the National Environmental Balancing Bureau (NEBB).
- B. Balancing procedures shall be observed by Division 15 contractor, OWNER, or ENGINEER. Balancing report must include verification of observation by any of the parties listed above.

PART 2-PRODUCTS

2.01 BALANCING EQUIPMENT

- A. CONTRACTOR shall have the following minimum equipment for balancing systems:
 - 1. Duct air velocities below 1,000 fpm: Pitot tube and Micro-Manometer or Alnor velometer and duct-jet using zero to 1,000 fpm range.
 - 2. Water Flows: Ultrasonic Dopler Flow Meter for water systems.
 - 3. Supply Register Velocities: Alnor velometer and applicable jet or Anemotherm.
 - 4. Fan Rotative Speed: Timec tachometer or RPM counter and stop watch (1-minute reading, minimum).
 - 5. Contact pyrometer 0 to 300°F range.
 - 6. Amprobe model RS-3, or equal.
 - 7. Calibrated pressure gauge (0 to 100 feet water head).
 - 8. Inclined manometer 0 to 30 inches of water.
 - 9. Instruments used for measurements shall be accurate, and calibration shall be calibrated by the manufacturer or an AABC-approved method.
 - 10. Instruments shall be applied in accordance with manufacturer's instructions.
- B. All instruments used for measurements shall be accurate, and calibration histories for each instrument to be available for examination upon request. Calibration and maintenance of all instruments to be in accordance with the requirements of NEBB or AABC Standards.

PART 3-EXECUTION

3.01 PRELIMINARY BALANCING

- A. Provide an experienced installer to check the air distribution system for completion to be sure that the test openings and volume dampers indicated on the drawings or called for in the specifications are installed, that dampers are in the open position, that the fans operate properly during all control modes, and that the system is ready for balancing. Add test openings, volume dampers, air scoops, deflectrols, turning vanes, etc., as required. Adjust and change fan drives and belts, remove and reinstall ceilings, air terminals, access doors, and air devices as required to balance the system. Maintain the air handling equipment in good operating condition during the testing and balancing procedures.

3.02 ROOM AIR PRESSURE RELATIONSHIPS

- A. The balancing contractor shall pay special attention to specific room pressure relationships specified. Rooms indicated to be positive or negative shall be balanced such. Rooms indicated to be positive shall have 10% more supply air than return/exhaust air quantities. Rooms indicated to be negative shall have 10% more exhaust than supply air quantities. The balancing contractor shall adjust and change fan drives to provide this feature regardless of plan air quantities noted on drawings.

3.03 SCHEDULE OF TOLERANCES

- A. Final air system measurements shall be within the following range of specified cfm:
 - 1. Fans: 0% to +10%.
 - 2. Supply grilles, registers, diffusers: 0% to +10%.
 - 3. Return/exhaust grilles, registers: 0% to -10%.
 - 4. Room pressurization air: -5% to +5%.

3.04 GENERAL REQUIREMENTS

- A. Perform testing, balancing, and adjusting procedures in accordance with AABC or NEBB, unless specified below.
- B. Contact the Division 15 contractor for assistance in operation and adjustment of controls during testing, adjusting, and balancing procedures. Cycle controls and verify proper operation and setpoints. Include in report description of temperature control operation for all control modes and any deficiencies found.
- C. Permanently mark equipment settings, including damper and valve positions, control settings, and similar devices allowing settings to be restored. Set and lock memory stops.
- D. Division 15 contractor to correct any installation deficiencies found by the test and balance agency that were specified and/or shown on the Contract Documents to be performed as part of that division of work including sheave and pulley replacement. Test and balance agency will notify the project representative of these items and instructions will be issued to the Division 15 contractor for correction of the deficient work.
- E. In areas with suspended ceilings, remove ceiling tiles to accomplish balancing work. Replace tiles when work is complete. If ceiling tile is damaged during balancing, it shall be balancing contractor's responsibility to replace at no additional cost to OWNER.

END OF SECTION

SECTION 16010

GENERAL ELECTRICAL REQUIREMENTS

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes general requirements for all electrical work.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern Work in this section.

1.02 REFERENCES

- A. ANSI/NFPA 70—National Electrical Code.
- B. ANSI/IEEE C2—National Electrical Safety Code.

1.03 CONTRACT DOCUMENTS

- A. Any equipment roughed in improperly and/or not positioned on implied centerlines or as dictated by good practice shall be repositioned at no cost to OWNER.
- B. The drawings are generally diagrammatic, and CONTRACTOR shall coordinate the Work so that interferences are avoided. Provide all offsets in conduit, fittings, etc., necessary to properly install the work. All offsets, fittings, etc., shall be provided without additional expense to OWNER.
- C. Classified locations, where referenced in the Specifications or on the Drawings, shall be as defined in the NEC.

1.04 REGULATORY REQUIREMENTS

- A. Conform to ANSI/NFPA 70.
- B. Conform to ANSI/IEEE C2.
- C. The rules and regulations of the federal, state, local, and civil authorities and utility companies in force at the time of execution of the Contract shall become a part of this specification.
- D. Obtain electrical permits and inspections from authority having jurisdiction. Costs for permits and inspections shall be by CONTRACTOR.

1.05 CODES AND ORDINANCES

- A. CONTRACTOR is expected to know or to ascertain, in general and in detail, the requirements of all codes and ordinances applicable to the construction and operation of systems covered by this Contract. CONTRACTOR shall know or ascertain the rulings and

interpretations of code requirements being made by all authorities having jurisdiction over the work to be performed by them.

- B. In preparing Bid, CONTRACTOR shall include the cost of all items and procedures necessary to satisfy the requirements of all applicable codes, ordinances, and authorities, whether or not these are specifically covered by the drawings and specifications. All cases of serious conflict or omission between the drawings, specifications, and codes shall be brought to ENGINEER's attention, as herein before specified. CONTRACTOR shall carry out work and complete construction as required by applicable codes and ordinances and in such a manner as to obtain approval of all authorities whose approval is required.
- C. When requested by ENGINEER, CONTRACTOR shall provide written calculations to show compliance with applicable codes or the Contract Documents. This shall include, but not be limited to, conduit and wire sizing, junction and pull box fill and sizing, manhole/handhole sizing, conductor derating, and voltage drop. CONTRACTOR shall indicate calculation method used as well as compliance with applicable code, drawing, or specification.

1.06 EQUIPMENT PROVIDED UNDER OTHER DIVISIONS

- A. Included in this Contract are electrical connections to equipment provided under other divisions. CONTRACTOR shall refer to final shop drawings for equipment being furnished under other divisions, for exact location of electrical equipment, and the various connections required.

1.07 ELECTRICAL DISTRIBUTION SYSTEM

- A. Provide a complete electrical distribution system consisting of components indicated on the drawings or specified herein including, but not limited to:
 - 1. Feeders, branch wiring, and electrical distribution equipment.
 - 2. All control wiring.
 - 3. Access panels and access doors for access to equipment installed by Division 16.
 - 4. Wiring between system components if equipment is not prewired.
 - 5. Lighting fixtures, lighting controls, and associated wiring.
 - 6. Support system design and supports for electrical raceways.
 - 7. Code-required disconnects.
- B. CONTRACTOR shall connect the following equipment furnished by Divisions 2, 5, 8, 11, and 15 consisting of components indicated on the drawings or specified herein, including, but not limited to:
 - 1. Unit heater fans.
 - 2. Pumps, starters, and control panels.
 - 3. Air exhaust fans.
 - 4. Overhead door motors.
 - 5. Motor-actuated valves.
 - 6. Solenoid valves.
- C. Provide balancing and adjusting of electrical loads.
- D. CONTRACTOR shall instruct OWNER's representative in the operation and maintenance of all equipment. The instruction shall include a complete operating cycle on all apparatus.

- E. Provide miscellaneous items for a complete and functioning system as indicated on the drawings and specified herein.
- F. A partial list of work not included in Division 16 is as follows: Painting (except as otherwise specified herein).

1.08 NOISE

- A. Eliminate any abnormal noises that are not considered by ENGINEER to be an inherent part of the systems as designed. Abnormal buzzing in equipment components will not be acceptable.

1.09 DRAWINGS

- A. The drawings indicate approximate locations of the various items of the electrical systems. These items are shown approximately to scale and attempt to show how these items should be integrated with building construction. Locate all the various items by on-the-job measurements in conformance with Contract Documents and cooperation with other trades.
- B. Prior to locating equipment, confer with ENGINEER as to desired location in the various areas. In no case should equipment locations be determined by scaling drawings. Relocate equipment and bear cost of redoing work or other trades' work necessitated by failure to comply with this requirement.
- C. In certain instances, receptacles, switches, light fixtures, or other electrical devices and equipment, etc., may be relocated. Where relocation is within 10 feet of location shown on the drawings, and when CONTRACTOR is informed of necessary relocation before work is begun on this portion of the job, the relocation shall be at CONTRACTOR's expense.
- D. The drawings are schematic in nature and are not intended to show exact locations of conduit, but rather to indicate distribution, circuitry, and control.

1.10 EXISTING UNDERGROUND UTILITIES

- A. Record drawings of existing underground electrical utilities are not available for this facility. CONTRACTOR shall excavate and verify the location of all underground electrical prior to installing new electrical equipment. This shall include, but not be limited to, feeders to structures and equipment, branch circuit wiring, phone and communication cabling, instrument wiring, and control wiring. CONTRACTOR shall temporarily relocate existing underground electrical to keep the existing facility in operation and for any new construction, and all costs for relocating existing electrical shall be included in the Bid.

1.11 SUBMITTALS

- A. CONTRACTOR shall submit to ENGINEER for approval prior to beginning work, shop drawings on the equipment and materials proposed to be furnished and installed. See Section 01300–Submittals for requirements.
- B. CONTRACTOR shall, in addition, submit drawings and/or diagrams for review and for job coordination in all cases where deviation from the Contract drawings are contemplated because of job conditions, interference or substitution of equipment, or when requested by

ENGINEER for purposes of clarification of CONTRACTOR's intent. CONTRACTOR shall also submit detailed drawings, rough-in sheets, etc., for all special or custom-built items or equipment. Drawings and details under this section shall include, but not be limited to, the following, where applicable to this project:

1. Electrical interconnection wiring diagrams; see Section 16480–Motor Control and Section 16940–Controls and Instrumentation.
 2. Major feeder routing in plan and elevation, including service entrance raceways and cable.
 3. Equipment room layouts showing exact locations and arrangements of equipment, conduit, wiring, etc., and clearances.
- C. These drawings and diagrams shall show applicable electrical switch and breaker sizes as well as the manufacturer's name and catalog number for each piece of equipment used.
- D. Equipment and material submittals must show sufficient data to indicate complete compliance with Contract Documents as follows:
1. Proper sizes and capacities.
 2. That the item will fit in the available space in the manner that will allow proper service. Provide 1/4-inch scale plan view and elevations of all electrical equipment showing equipment layouts and clearances.
 3. Construction materials and finishes.
- E. When the manufacturer's reference numbers are different from those specified, provide correct cross-reference number for each item. The shop drawings shall be clearly marked and noted accordingly.
- F. When equipment and items specified include accessories, parts, and additional items under one designation, shop drawings shall be complete and include all components.
- G. See additional requirements of shop drawings under Division 1–General Requirements.

PART 2–PRODUCTS

2.01 STANDARD PRODUCTS

- A. All equipment and products shall be of new manufacture per applicable specifications.
- B. All equipment shall be UL and NEMA approved.
- C. Unless specified otherwise, major distribution equipment such as panelboards, motor control centers, motor starters, VFDs, SPD, transformers, etc., shall each be by the same manufacturer.
- D. All equipment and wiring shall be selected and installed for conditions in which it will perform (e.g., general purpose, weatherproof, raintight, explosionproof, dustproof, or any other special type).

2.02 SUBSTITUTION OF MATERIALS AND EQUIPMENT

- A. While it is not the intention of OWNER to discriminate against any manufacturer of equipment which may be equivalent to specified equipment, a strict interpretation of such

equivalency will be exercised in considering any equipment offered as a substitute for specified equipment. CONTRACTOR shall submit with each request for approval of substitute material or equipment sufficient data to show conclusively that it is equivalent to that specified in the following respects:

1. Performance:
 - a. Capacity at conditions and operating speeds scheduled shall be equal to or greater than that of the specified equipment.
 - b. Energy consumption at the point of rating shall not exceed that of the specified equipment.
 - c. Vibration and noise production at the point of rating shall not exceed that of the specified equipment.
 2. Materials of construction.
 3. Gauges, weights, and sizes of all portions and component parts.
 4. Design arrangements, methods of construction, and workmanship.
 5. Coatings, finishes, and durability of wearing parts.
 6. National reputation of the manufacturer as a producer of first quality equipment of the type under consideration.
 7. Availability of prompt, reliable, and efficient service facilities franchised by or affiliated with the equipment manufacturer. This shall include the maintenance of local stocks of critical replacement parts equal to those maintained for the specified equipment.
- B. Requests for substitution shall include CONTRACTOR's reason for the request.
- C. If ENGINEER does not consider the items equivalent to those specified, CONTRACTOR shall provide those specified.
- D. See General Conditions for additional requirements.

PART 3-EXECUTION

3.01 CONTINUITY OF SERVICE

- A. CONTRACTOR shall provide and maintain continuous services (power, controls, alarms, etc.) during the entire construction period.
- B. No service shall be interrupted or changed without permission from OWNER. Written permission shall be obtained before any work is started.
- C. When interruption of service is required, all persons concerned shall be notified and a prearranged time agreed upon. Notice shall be a minimum of 72 hours prior to the interruption.

3.02 CLEANUP AND REMOVAL OF RUBBISH

- A. All lighting and appliance panelboards, switchboards, MCCs, VFD enclosures, motor starter and disconnect switch enclosures, junction boxes, and pullboxes shall be cleaned of debris and wires neatly arranged with surplus length cut off before installation of covers.
- B. Where louvers are provided in switchgear, MCCs, or transformer enclosures, louvers shall be vacuumed free of all dust and dirt. Where air filters are provided in equipment such as

control panels, motor control centers and transformers, CONTRACTOR shall replace all filters with new at the time of final completion.

- C. All lighting fixture lenses and lamps (interior and exterior fixtures) shall be cleaned at the time of installation, and all lens exteriors shall be cleaned just prior to final inspection.
- D. Equipment shall be thoroughly cleaned of all stains, paint spots, dirt, and dust. All temporary labels not used for instruction or operation shall be removed.

3.03 CONCRETE WORK

- A. All cast-in-place concrete for new electrical equipment bases shown on the drawings shall be provided by CONTRACTOR, except where specifically noted to be provided by others. All new equipment shall be set on 3 1/2-inch minimum leveling slabs including MCCs, free-standing enclosures, switchgear, etc. Pads shall be 3 inches larger than equipment being supported.
- B. Concrete shall comply with Section 03300—Cast-In-Place Concrete.
- C. Provide all anchor bolts, metal shapes, and templates to be cast in concrete or used to form concrete for support of electrical equipment.

3.04 PAINTING

- A. All painting of electrical equipment shall be done by CONTRACTOR unless equipment is specified to be furnished with factory-applied finish coats.
- B. All electrical equipment shall be provided with factory-applied prime finish, unless otherwise specified.
- C. If the factory finish on any equipment furnished by CONTRACTOR is damaged in shipment or during construction, the equipment shall be refinished by CONTRACTOR.
- D. One can of touch-up paint shall be provided for each different color factory finish which is to be the final finished surface of the product.

3.05 CAULKING

- A. Caulk with a caulking sealant where indicated on the electrical drawings or hereinafter specified.
- B. Caulking sealant shall be silicone construction sealant as manufactured by General Electric or two-part polysulfide conforming to the requirements and bearing the seal of the Thiokol Chemical Corporation.
- C. Caulking sealant shall contain no acid or ingredients that will stain stone, corrode metal, or have injurious effect on painting. It shall be colored to match adjacent surroundings.
- D. Caulking shall be performed by craftsman skilled at such work.

3.06 BUILDING ACCESS

- A. CONTRACTOR shall arrange for the necessary openings in the building to allow for admittance of all apparatus.
- B. When the installation requires openings and access through existing construction and the openings are not provided, CONTRACTOR shall provide the necessary openings.

3.07 COORDINATION

- A. Provide wiring for all motors and all electrically powered or electrically controlled equipment.
- B. All starters, VFDs, disconnects, relays, wire, conduit, push buttons, pilot lights, and other devices for the power and control of motors or electrical equipment shall be provided by CONTRACTOR except as specifically noted elsewhere in these specifications or on the drawings.
- C. Where starters, VFDs, or other devices are provided by others, they shall be connected and wired by CONTRACTOR.
- D. CONTRACTOR's drawings and specifications shall show number and horsepower rating of all motors furnished, together with their actuating devices. Should any change in size, horsepower rating, or means of control be made to any motor or other electrical equipment after the Contract is awarded, any additional costs because of these changes shall be the responsibility of CONTRACTOR.
- E. All motors shall be provided for starting in accordance with local utility requirements and shall be compatible with starters or VFDs as specified herein or under the various trades' sections of these specifications.
- F. CONTRACTOR shall provide all line voltage power and control wiring (100 volts and above), including temperature control wiring for operation, control, and supervision of all motorized equipment, including wiring between motor starters, VFDs, and control devices as specified herein and as shown on the drawings. Low-voltage control wiring (below 100 volts) shall be provided by CONTRACTOR supplying the equipment that has low-voltage wiring, unless otherwise noted. CONTRACTOR shall provide raceways for ALL low-voltage wiring.
- G. CONTRACTOR shall connect and wire all apparatus according to approved wiring diagrams furnished by the various trades.
- H. Motors 1/2 hp and larger shall be NEMA rated 460 volts, three-phase, 60 Hz, unless otherwise shown. Motors 1/3 hp and below shall be 115 volts, single-phase, 60 Hz, unless otherwise shown.

3.08 EXCAVATION AND BACKFILL

- A. Backfilling of all trenches beneath concrete floor and stair slabs within building shall be accomplished with gravel fill and shall be specially compacted to same density as surrounding area. Backfill of exterior trenches shall be compacted granular fill, unless otherwise noted. Compaction shall meet the requirements of Section 02222–Excavation,

Fill, Backfill, and Grading. Refer to Section 16110—Conduit for additional requirements associated with PVC conduit installed in earth.

- B. Lines passing under foundation walls shall have a minimum of 1 1/2-inch clearance.
- C. Care shall be taken to ensure no disturbance of bearing soil under foundations.
- D. CONTRACTOR shall follow underground pipe runs where possible to avoid additional rock excavation. See Division 2 for rock excavation requirements.

3.09 EQUIPMENT ACCESS AND LOCATION

- A. CONTRACTOR shall coordinate work of this division with that of other divisions so that all systems, equipment, and other components of the building will be installed at the proper time, will fit the available space, and will allow proper service access to those items requiring maintenance. This means adequate access to all equipment not just that installed under this division. Any components for the electrical systems that are installed without regard to the above shall be removed and relocated as required to provide adequate access at CONTRACTOR's expense.
- B. Where various items of equipment and materials are specified and scheduled, the purpose is to define the general type and quality level, not to set forth the exact trim to fit the various types of ceiling, wall, or floor finishes. Provide materials that will fit properly the types of finishes actually installed.
- C. All equipment, junction and pull boxes, and accessories shall be installed to permit access to equipment for maintenance. Any relocation of conduits, equipment, or accessories to provide maintenance access shall be accomplished by CONTRACTOR at no additional cost.
- D. Electrical equipment, devices, instruments, hardware, etc., shall be installed with ample space allowed for removal, repair, calibration or changes to the equipment. Ready accessibility to equipment and wiring shall be provided without moving other equipment that is to be installed or that is already in place.
- E. Locate electrical outlets and equipment to fit the details, panels, decorating, or finish of the space. ENGINEER shall reserve the right to make minor position changes of the outlets before the work has been installed. Verify door swings before installing room lighting switch boxes, and install boxes on the latch side of door unless noted otherwise.

3.10 WORKMANSHIP

- A. Install work using procedures defined in NECA Standard of Installation.
- B. Location of process equipment as shown on the drawings is approximate.
- C. Utilization equipment and control devices required under these specifications shall be mounted in a code-approved manner.
- D. Locations of utilization equipment and control devices as shown on the drawings are within 10 feet of actual positions. Any mounting of this equipment within this 10-foot distance will be performed at no additional cost to OWNER.

- E. Unless otherwise noted, equipment shall be fastened to building structure or equipment framework and not placed on the floor.
- F. Where materials, equipment apparatus, or other products are specified by manufacturer, brand name, and type or catalog number, such designation is to establish standards of desired quality and style and shall be the basis of the Bid.
- G. Materials and equipment of the types for which there are National Board of Fire Underwriters Laboratories (UL) listings shall be so labeled and shall be used by CONTRACTOR.

3.11 AREA CLASSIFICATION

- A. As noted on the drawings.

3.12 MODIFICATIONS TO EXISTING CONSTRUCTION

- A. Alterations:
 - 1. Alter, extend, and reconnect conduits as necessary.
 - 2. Reconnect existing conduits that were reused, cut, or exposed because of construction as quickly as possible.
 - 3. Where wiring is involved, new wires shall be "pulled in" between the nearest available accessible reused outlets to the extent allowed by the governing code.
 - 4. Provide new conduits for wires if they cannot be "pulled in" to existing conduits.
 - 5. All new conduits, wiring, and electrical items shall be connected to the existing systems so as to function as a complete unit.
 - 6. Where existing electrical equipment, devices, fixtures, electrically operated items, etc., interfere with any remodeling work, they shall be removed and reinstalled in another location to avoid such interferences. All existing and relocated equipment shall be left in good operating condition.
- B. CONTRACTOR shall remove all electrical equipment, conduit, and wiring associated with the structures, equipment, and control systems specified herein and/or shown on the Drawings to be removed.
- C. Include in Bid removal of existing electrical material and equipment as specified hereinafter, as noted on the drawings, or as needed by field conditions.
- D. Provide stainless steel cover plates for all existing recessed outlet and junction boxes not being reused. Seal or cap all existing conduit penetrations not being reused.

END OF SECTION

SECTION 16110

CONDUIT

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Rigid metal conduit and fittings.
 - 2. Rigid aluminum conduit.
 - 3. PVC externally and internally coated galvanized rigid metal conduit.
 - 4. Polyvinyl chloride conduit and fittings.
 - 5. Liquidtight flexible metal conduit and fittings.
 - 6. Conduit seals and special fittings.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ANSI C80.1—Electrical Rigid Steel Conduit (ERSC).
- B. ANSI C80.5—Electrical Rigid Aluminum Conduit (ERAC).
- C. ANSI/NEMA FB 1—Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.
- D. NEMA RN 1—Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal.

1.03 QUALITY ASSURANCE

- A. Manufacturers of Raceways: Firms regularly engaged in the manufacture of electrical raceways of the types and capacities required whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 5 years of successful installation experience on projects with electrical wiring installation work similar to that for the project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) and any and all local codes as applicable to construction and installation of electrical wiring devices, material, and equipment herein specified.
- D. UL Labels: Provide electrical cable, raceways, wire, connectors, outlets, switches, etc., which have been listed and labeled by Underwriters Laboratories.
- E. Prior to shipment to the site, all conduit provided shall be new, unused material and may not have been stored outdoors or exposed to weather.

- F. NECA Standard: Comply with applicable portions of National Electrical Contractor's Association's "Standard of Installation."

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Provide color-coded thread protectors on the exposed threads of threaded rigid metal conduit.
- B. Handle conduit carefully to prevent end damage and to avoid scoring the finish.
- C. Store conduit inside and protect from weather. When necessary to store outdoors, elevate well above grade and enclose with durable, waterproof wrapping.

PART 2–PRODUCTS

2.01 RIGID METAL CONDUIT AND FITTINGS

- A. Rigid Steel Conduit: ANSI C80.1. Heavy wall seamless tubing with hot-dipped galvanized coating.
- B. Conduit bodies for rigid steel conduit shall be as manufactured by Appleton, Form 35, or equal, and be constructed of stamped steel for sizes 2 inches and under, and cast malleable iron for sizes over 2 inches. Conduit bodies shall have built-in pulling rollers, domed gasketed covers, and stainless steel screws. Covers for conduit bodies must have bolts that thread into the conduit body. Snaptight and wedgenut covers are not allowed. CONTRACTOR shall select body style and size according to application.
- C. Rigid Aluminum Conduit: ANSI C80.5. Heavy wall.
- D. Conduit bodies for rigid aluminum conduit shall be as manufactured by Appleton, Form 85, or equal, and be constructed of pressure-cast, copper-free aluminum for sizes 2 inches and under, and sand-cast, copper-free aluminum for sizes over 2 inches. Conduit bodies shall have built-in pulling rollers, domed gasketed covers, and stainless steel screws. Covers for conduit bodies must have bolts that thread into the conduit body. Snaptight and wedgenut covers are not allowed. CONTRACTOR shall select body style and size per application.
- E. PVC-coated conduit and fittings shall be internally and externally hot dipped galvanized rigid metal conduit with hot dipped galvanized threads and PVC coating. PVC coating shall be UL listed with rigid metal conduit as the primary means of corrosion protection for the conduit, and PVC coating shall have an external 40 mil thickness with an internal 2 mil urethane coating. Acceptable manufacturers shall be Plasti-bond RedH₂OT by Robroy Industries, Ocal-Blue by Thomas & Betts, or equal. PVC-coated conduit and fittings shall meet the following listings and manufacturing standards, without exception. All installers shall be field-certified from the factory for installation and shall provide proof of certification:
 - 1. Federal Specification WW-C-581 E.

2. ANSI C80.1.
3. UL6.
4. NEMA RN1.

- F. Conduit bodies for PVC-coated rigid conduit shall be as manufactured by Plasti-bond RedH₂O^T by Robroy Industries, Ocal-Blue by Thomas & Betts, or equal, and have a 40 mil PVC exterior coating and 2 mil red urethane interior coating. Conduit bodies shall be Form 8 style or pulling elbow and include pulling rollers, domed, gasketed covers and stainless steel screws. Covers for conduit bodies must have bolts that thread into the conduit body. Snaptight and wedgenut covers are not allowed. CONTRACTOR shall select body style and size according to application.
- G. Fittings and Conduit Bodies: ANSI/NEMA FB 1; threaded-type material to match conduit. Split couplings are not allowed.
- H. Supports: One-hole or two-hole pipe straps may be used for surface-mounted conduit. Where one-hole straps are used, provide conduit clamp and back spacer. Where standoffs are required, provide pipe straps and supporting devices as specified in Section 16190—Supporting Devices. Support material shall match that of the conduit type provided.

2.02 POLYVINYL CHLORIDE CONDUIT (PVC) AND FITTINGS

- A. Conduit: Heavy wall rigid, Schedule 40, Schedule 80 where noted, UL listed for underground, encased, and aboveground applications. PVC conduit installed in exterior locations shall be UV resistant.
- B. Conduit bodies for PVC conduit shall be as manufactured by Carlon, or equal, and be suitable for use with Schedule 40 or Schedule 80 PVC conduit. Conduit bodies shall have smooth hubs, textured lids, and foam-in-place gaskets. CONTRACTOR shall select body style and size per application.
- C. Supports: Two-hole nonmetallic clamps or conduit support straps may be used for surface-mounted conduit. Where standoffs are required, provide pipe straps and supporting devices as specified in Section 16190—Supporting Devices. Support material shall match that of the conduit type being provided.

2.03 LIQUIDTIGHT FLEXIBLE METAL CONDUIT AND FITTINGS

- A. Conduit: Spiral-wound, electrogalvanized, single-strip steel with integral grounding conductor continuously enclosed within the entire length of the convolutions. The flexible PVC jacket shall be sunlight resistant, flame retardant, and resistant to damage from mild acids. Conduit shall be UL listed, Type LA, or equal.
- B. Fittings: UL listed with thermoplastic elastomer sealing gasket.
1. Provide stainless-steel fittings outdoors and in NEMA 4X locations, unless noted otherwise.
 2. Provide electro-zinc plated steel fittings in all other areas, unless otherwise noted.

2.04 FLEXIBLE CONDUIT COUPLINGS (HAZARDOUS LOCATIONS)

- A. Flexible conduit in hazardous locations shall be liquidtight, stainless steel and be rated for use in Class I locations. Outer braid and end fittings shall be stainless steel with flexible brass inner core. An insulated ground conductor shall be installed in all couplings.
- B. Couplings shall be as manufactured by Crouse Hinds EC Series, or Appleton EX Series.

2.05 CONDUIT SEALS AND SPECIAL FITTINGS

- A. Conduit seal-offs for Class I Locations: Robroy Industries Plasti-Bond Red H₂OT Series EYS seal fittings and Crouse Hinds "Chico A" sealing compound, Arrow-Hart, or equal.
- B. Conduit Seals: Duct sealing compound, OZ Gedney Type DUX, or equal.
- C. Expansion Fittings: Crouse Hinds or Robroy type XJG, or equal, for rigid, IMC, or PVC-coated rigid conduit. Crouse Hinds, type XD, or equal for PVC conduit.
- D. Expansion Deflection Fittings: O-Z type "DX," Crouse Hinds, type XD (PVC conduit only), or Appleton.
- E. Ground Bushings: Crouse Hinds Model GLL, or equal.
- F. Mechanical Seals: 316 stainless steel, Link Seal, or equal. Link seals shall be provided with 316 stainless steel bolts, nuts, and fasteners.
- G. Watertight Hubs: Diecast, insulated and gasketed, rated for wet or dry locations indoors or outdoors. Watertight hubs shall be Appleton HUB, Crouse-Hinds Myers Hubs, or equal.
- H. Conduit Plugs: Kwik N Sure pipe plug as manufactured by Cherne Industries, or equal. Plug shall include natural rubber O-ring with galvanized wing nut and hex nut.

PART 3-EXECUTION

3.01 CONDUIT SIZING, ARRANGEMENT, AND SUPPORT

- A. Size conduits for branch circuit conductors, control wires, and instrumentation cables so as to have not less than 25% spare capacity after installation; 3/4 inch minimum size. Minimum size for flexible metal conduit is 1/2 inch except 3/8 inch for lighting fixtures. Minimum size for liquidtight flexible metal conduit is 1/2 inch.
- B. Maintain at least 1 inch of separation between conduit sizes to 1 1/2 inches and 2 inches between conduits 1 1/2 inches or larger. Maintain 1 foot of separation between signal conduits (below 100 volts) and power conduits (100 volts and above).
- C. All conduit shall be supported in accordance with the NEC and as specified herein. This shall apply to all conduit types, including flexible conduit.
- D. Provide for the proper application, installation, and location of inserts, supports, and anchor bolts for a satisfactory raceway system. Where any component of the raceway system is damaged, replace or provide new raceway system.

- E. Run conduits concealed to avoid adverse conditions such as heat and moisture, to permit drainage, and to avoid all materials and equipment of other trades. Maintain a minimum clearance of 6 inches from all hot water pipes, flues, or any high-temperature piping or ductwork.
- F. Conduits shall be attached to building surfaces and not suspended unless installed in a Unistrut-type conduit rack as specified herein. Individual conduits shall not be suspended. Clevis hangers are not allowed.
- G. Center conduit in structural slabs (other than topping), clear of reinforcing steel and spaced on centers equal to or exceeding three times the conduit diameter. Outside diameter of conduit shall not exceed one-third the slab thickness for each run of conduit 1 1/4 inches or larger. Provide shop drawings when it will be installed in structural slabs. Conduits shall not be run in slabs-on-grade or structural topping slabs.
- H. Independently support or attach the raceway system to structural parts of construction in accordance with good industry practice. Conduits through roofs shall be equipped with pitch pockets.
- I. Conduit installed in metal stud walls must be secured to prevent rattling.
- J. Conduit attached to building surfaces that may be damp shall be spaced out to avoid rust and/or corrosion using fittings approved for the use. Use back straps on all conduit in damp or wet locations, or mount conduit with Unistrut straps, or equal. Watertight hubs shall be used in all damp locations. Damp locations shall include, but not be limited to, all basement areas, tunnel areas, washdown areas, garage areas, all wet wells and dry wells, all areas below grade, and exterior locations.
- K. Conduits shall be securely fastened to building structure at intervals not exceeding 8 feet or closer, if necessary. Where hangers are necessary, 3/8-inch rod/eyelets/rings/or trapeze type in Unistrut channel and pipe clamps shall be used. Wire or perforated strap iron is not acceptable. PVC conduit shall be securely fastened to building structure at intervals not exceeding 3 feet.
- L. Vertical conduit runs 1 1/4 inches and larger passing through floors shall be supported at each floor with conduit riser grips.

3.02 GENERAL CONDUIT INSTALLATION REQUIREMENTS

- A. Interior conduit shall be run concealed in walls, building cavities, chases, attic spaces, and buried below floor slabs. Exterior conduit shall be buried below grade and concealed in structure walls. Exposed conduit runs shall be avoided. Conduit may be run exposed only where it is impossible to conceal.
- B. Conduit may be run exposed on the underside of precast or poured concrete floor slabs or in basements. Run exposed conduit grouped and parallel or perpendicular to construction. Do not route exposed conduits over boilers or other high-temperature machinery nor in contact with such equipment. All conduit shall be run exposed in structures below grade.
- C. All conduit installed below grade shall be buried a minimum of 2 feet 0 inches. All conduit installed below floor slabs shall be buried a minimum of 1 foot below slab.

- D. PVC conduit installed in earth (interior and exterior) shall be bedded in compacted sand with a minimum of 6-inch cover on all sides.
- E. In all PVC conduit runs below grade 200 feet and longer, PVC coated rigid steel conduit shall be used for all 90 degree bends.
- F. Ream conduit smooth at ends, cap upon installation, rigidly attach to structural parts of the building, and securely fasten to all outlet boxes, panel cabinets, junction boxes, pull boxes, splicing chambers, safety switches, and all other components of the raceway system.
- G. Where conduits installed through roofs serve heating, ventilating, and air-conditioning equipment, conduits may not be routed through ductwork or chases; conduits shall penetrate the roof and be equipped with pitch pockets.
- H. Provide spare capped conduits for flush-mounted panelboards consisting of three 3/4-inch conduits from the panelboard to the ceiling space above and three 3/4-inch conduits from the panelboard to the ceiling space below the floor slab.
- I. Conduits installed for future equipment or electrical work shall be cut off and capped flush with finished floor. Conduit ends shall have threaded fittings to accommodate future conduit installation.
- J. Provide all empty raceways 2 1/2 inches and over with No. 10 galvanized fishwire, and nylon cord for conduits smaller than 2 1/2 inches. Empty raceways and fishwire/nylon cord shall be identified with permanent label, and label shall include conduit termination point. All empty conduits shall be threaded, capped and flush with finished floor or wall. Exposed conduits shall be threaded and capped.
- K. Provide a 3/4-inch conduit from the telephone equipment room to the water service entrance.
- L. Provide conduit raceway for exposed cables that are not UV resistant. This shall include, but not be limited to, instrument wiring, motor terminators, pump cables, float cables, etc.
- M. Conduit seals shall be provided for intrinsically safe circuits, where conduits pass from the interior to exterior of the building, where conduits enter a room which at any time is a low or high temperature room, where conduits enter a room which at any time is subject to internal air pressures above or below normal, any conduit entering a wet location, and any conduit entering a NEMA 4X area.
- N. Liquidtight flexible conduit shall be installed in such a manner that liquids tend to run off the surfaces and not drain toward the fittings.
- O. All runs of flexible conduit and flexible couplings in Classified locations to equipment and devices shall be as short as practicable, of the same size as the conduit it extends, and with enough slack to reduce the effects of vibration to a minimum. A minimum of 18 inches of flexible conduit shall be installed for each motor.
- P. Provide conduit expansion-deflection fittings as specified herein in all conduit runs where movement perpendicular to axis of conduit may be encountered.

- Q. Conduits shall be pitched so that drainage is toward handholes and away from all structures. Add handholes as required.
- R. Conduit bends for PVC conduit shall be made using a hot box, heat blanket, or glycol bender. Open flame or point heat sources of any type are not allowed.
- S. The PVC-coated rigid conduit manufacturer's touch-up compound shall be used on all conduit interior and exterior bare steel exposed because of nicks, cuts, abrasions, thread cutting, and reaming; minimum six coats.
- T. Where below-grade PVC conduit is connected to rigid metal conduit, the length of PVC conduit shall be a minimum of 10 feet. For short, below-grade conduit runs where required lengths of rigid metal conduit limit the length of PVC conduit to less than 10 feet, rigid metal conduit shall be used for the entire run.
- U. Conduit bodies shall not be used for antenna cable routing. Provide pull boxes sized as required for antenna cable bending radius.

3.03 CONDUIT PENETRATIONS AND TERMINATIONS

- A. Where fittings are brought into an enclosure with a knockout, a gasket assembly consisting of an O-ring and retainer shall be installed on the outside. Fittings shall be insulated throat type.
- B. Conduit penetrations for control panels or enclosures containing electronic equipment shall utilize watertight hubs and enter the sides or bottom of the enclosure. Conduits shall not penetrate the top of the enclosure.
- C. Conduit penetrations for all exterior enclosures (e.g., disconnects, junction boxes, control panels) shall utilize watertight hubs and enter the sides or bottom of the enclosure. Conduits shall not penetrate the top of the enclosure.
- D. Provide conduit expansion fittings as specified herein in all conduit runs that cross a structural expansion joint, for conduits protruding from duct banks that are routed above grade and into structures, and for conduits protruding from earth where the conduit is terminated within 5 feet of finished grade.
- E. All conduits that protrude from poured concrete shall be PVC-coated rigid conduit. Conduit shall extend continuously (i.e., no joints) a minimum of 4 feet beyond the poured concrete (both sides).
- F. Conduits passing through masonry, concrete, or similar construction shall be cast in place using PVC-coated rigid conduit extending completely through the construction.
- G. Where above-grade conduits pass through cores in existing structures or through masonry walls, grout openings between conduit and walls or floors with sand cement mortar.
- H. Where wall penetrations through existing walls are below grade, cored openings shall be sealed with waterproof mechanical seals. Cores shall be pitched slightly such that conduit slopes away from building. Sleeve diameter shall be provided and mechanical seals installed as recommended by the manufacturer. Conduit shall extend continuously (i.e., no joints) a minimum of 4 feet beyond the wall (exterior).

- I. All spare conduits that terminate in a building or structure below grade shall be plugged with conduit plugs as specified herein.

3.04 CONDUIT INSTALLATION IN HAZARDOUS LOCATIONS

- A. All conduits installed in or passing through “hazardous locations” as defined by the NEC, NFPA, or as noted on the drawings, shall be installed with seal-offs as specified herein.
- B. All conduits in hazardous locations shall be installed in accordance with the NEC.
- C. Conduits for intrinsically-safe circuits shall be dedicated to intrinsically-safe wiring. Conduits shall be installed and identified by labeling or color coding in accordance with Article 504 of the NEC.

3.05 CONDUIT INSTALLATION SCHEDULE

- A. The following schedule lists specific conduit types allowed in designated areas. Those areas not listed under a specific conduit type shall not have that type of conduit installed:
 - 1. Rigid steel:
 - a. Structural slabs.
 - b. Interior locations requiring mechanical protection.
 - c. All exposed interior locations.
 - d. All concealed interior locations.
 - e. Class I, Division 2 locations.
 - 2. Rigid aluminum:
 - a. All exposed interior locations.
 - b. Interior locations requiring mechanical protection.
 - c. Exterior locations (except in earth and at Chlorine contact tanks) and locations exposed to weather.
 - d. Class I, Division 2 locations.
 - e. Above suspended ceilings.
 - f. All locations where attached to aluminum railings or aluminum structural members.
 - g. Where noted on the drawings.
 - 3. PVC-coated rigid steel:
 - a. Class I, Division 1 locations.
 - b. Conduits protruding from concrete.
 - c. Interior and exterior locations requiring mechanical protection.
 - d. Earth.
 - e. Exterior locations and locations exposed to weather.
 - f. Within 6 feet of building or structure footing, wall, or manhole/handhole.
 - g. Conduits within manholes.
 - 4. PVC:
 - a. Earth, except within 6 feet of a building or structure footing, wall, or manhole/handhole. PVC conduit under pavement or roadways shall be Schedule 80.
 - b. NEMA 4X areas (indoors only).
 - c. Service entrance ground conductors.
 - d. Buried below slabs on grade.
 - e. Concrete encased duct banks (Schedule 40 or Schedule 80).
 - 5. Liquidtight flexible metal conduit not over 3 feet in length for final connections to:
 - a. Equipment in wet locations.
 - b. Equipment with sliding bases or flexible positioning.

- c. Equipment with vibration isolation mounting.
- d. Equipment housing ferromagnetic cores or with integral moving components capable of generating noise or vibrations, including transformers and motors.
- e. All pumps and associated equipment.

END OF SECTION

SECTION 16111

UNDERGROUND CONCRETE DUCT BANKS

PART 1—GENERAL

1.01 DESCRIPTION

- A. Work Included: Provide all labor, materials, equipment and incidentals as shown on the drawings, specified and required to furnish and install underground concrete duct banks.
- B. Coordination: Duct bank routing on the drawings is diagrammatic. Coordinate installation with piping and other underground systems and structures and locate clear of interferences.

1.02 QUALITY ASSURANCE

- A. Reference Standards: Comply with applicable provisions and recommendations of the following, except where otherwise shown on the drawings or specified.
 - 1. National Electrical Code/NFPA 70.
 - 2. National Electrical Safety Code, (NESC).

1.03 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.
- B. Shop Drawings: Submit for approval the following:
 - 1. Layouts showing the proposed routing of duct banks and the locations of manholes, handholes and areas of reinforcement.
 - 2. Profiles of duct banks showing crossings with piping and other underground systems.
 - 3. Cross sections of each unique duct bank segment with all conduits identified.
 - 4. Installation procedures.
- C. Record Drawings: Include the actual routing of underground duct runs on record drawings in accordance with Section 01700—Contract Closeout.

PART 2—PRODUCTS

2.01 MATERIALS

- A. Duct: Schedule 40 PVC conduit and fittings in accordance with Section 16110—Conduit.
- B. Warning Ribbon: Provide Brady "Identoline," Services and Materials "Buried Underground Tape," or Somerset (Thomas & Betts) "Protect-A-Line." Provide tape with nominal dimension of 6 inches wide, 4 mil thickness, permanently imprinted with "CAUTION BURIED ELECTRIC LINE BELOW" for installation above, and centered on direct-buried cables, electrical duct banks, and conduits without duct bank encasement.
- C. Backfill: Refer to Section 16010—General Electric Requirements.

- D. Reinforcement: In accordance with Section 03200–Concrete Reinforcement.
- E. Concrete: In accordance with Section 03300–Cast-In-Place Concrete.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Provide excavation and backfilling required for duct bank installation.
- B. Make duct bank installations and penetrations through foundation walls watertight.
- C. Top of duct banks shall be a minimum of 24 inches below grade.
- D. Assemble duct banks using nonmagnetic saddles, spacers and separators. Position separators to provide 3-inch minimum concrete separation between the outer surfaces of the ducts. Provide side forms for each duct bank.
- E. Provide a 3-inch minimum concrete covering on both sides, top and bottom of concrete envelopes around conduits. Concrete covering size shall be as shown on the drawings. Add red dye on top of concrete for easy identification during subsequent excavation. Red dye shall be applied to the top of the concrete after being poured.
- F. Firmly fix ducts in place during placing of concrete. Carefully place and vibrate the concrete to ensure filling of all spaces between ducts.
- G. Make bends with sweeps of not less than 48-inch radius or 5 degree angle couplings.
- H. Make a transition from nonmetallic to PVC-coated rigid steel conduit where duct banks terminate and conduits continue to run exposed. Transition shall be within concrete encasement and be a minimum of 5 feet from encasement termination.
- I. Reinforce all duct banks. Unless otherwise shown on the drawings, reinforce with No. 4 longitudinal steel bars placed at each corner and along each face at a maximum parallel spacing of 18 inches on centers, and No. 3 closed ties transversely placed at 18-inch maximum longitudinal intervals. Maintain a minimum clearance of 2 inches from bars to the edge of the concrete encasement.
- J. Where ducts enter structures such as manholes, handholes, pullboxes, transformer and switchgear compartments or buildings, terminate the ducts in suitable end bells, insulated bushings or couplings on PVC-coated rigid steel conduits.
- K. Duct banks abutting new or existing concrete structures shall be tied into structure. All No. 4 longitudinal bars shall be adhesive anchored into concrete structure a minimum of 6-inch embedment.
- L. Do not backfill with material containing large rock, paving materials, cinders, large or sharply angular substances, corrosive material, or other materials which can damage or contribute to corrosion of ducts or cables, or prevent adequate compaction of backfill.

- M. Slope duct runs for drainage toward manholes and away from buildings with a slope of approximately 3 inches per 100 feet.
- N. After completion of the duct bank and prior to pulling cable, pull a mandrel not less than 12 inches long and with a cross section approximately 1/4 inch less than the inside cross section of the duct through each duct. Then, pull a rag, swab or sponge through to make certain that no particles of earth, sand, or gravel have been left in the duct.
- O. Install a warning ribbon as specified herein, approximately 12 inches below finished grade over all underground duct banks carrying cables of 120 volts and higher.
- P. Plug and seal empty spare ducts entering buildings and structures. Seal watertight all ducts in use entering buildings and structures with O-Z/Gedney Type DUX duct sealing compound, or equal.
- Q. Provide survey points including northing, easting and elevation every 50 feet, including changes in elevation or direction. Update record drawings to reflect survey information. Submit both redlines and electronic data to ENGINEER weekly.
- R. Wherever duct banks cross roadways, driveways, parking areas, and any paved areas, provide brass medallion over location of duct bank crossing. Medallion shall indicate "Electrical duct bank crossing."

END OF SECTION

SECTION 16120

WIRE

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Wire.
 - 2. Terminal blocks and accessories.
 - 3. Wiring connections and terminations.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 QUALITY ASSURANCE

- A. Manufacturers of Wire: Firms regularly engaged in the manufacture of electrical wire products of the types and ratings needed whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 5 years of successful installation experience on projects with electrical wiring installation work similar to that in this project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) and any and all local codes as applicable to construction and installation of electrical wiring devices, material, and equipment herein specified.
- D. UL Labels: Provide electrical raceways, wire, connectors, outlets, switches, etc., which have been listed and labeled by Underwriters Laboratories.
- E. NECA Standard: Comply with applicable portions of National Electrical Contractor's Association's "Standard of Installation."

1.03 SUBMITTALS

- A. Submit shop drawings and product data under the provisions of Section 01300—Submittals.
- B. Submit shop drawings for wiring system including layout of distribution devices, branch circuit conduit and cables, circuiting arrangement, and outlet devices.
- C. Submit manufacturer's instructions.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Provide factory-wrapped, waterproof, flexible-barrier material for covering wire on wood reels, where applicable, and weather-resistant fiberboard containers for factory-packaging of wire, connectors, outlets, boxes, lamps, fuses, etc., to protect against physical damage in transit. Do not install damaged wire or other material; remove from project site.

- B. Store wire and other material in factory-installed coverings in a clean, dry, indoor space which provides protection against the weather.

PART 2-PRODUCTS

2.01 WIRE

- A. All wire for permanent installation shall be new stranded copper delivered to project in unopened cartons or reels, except where specifically noted and be UL listed for the use intended. No wire smaller than 12 AWG shall be used unless specifically noted. The use of multiconductor cable is NOT ALLOWED, except where specified below for VFDs.
- B. Motor circuit branch wiring and associated control wiring:
 - 1. Insulation type shall be THHN (indoors, nonVFD application).
 - 2. Minimum size for motor control wiring shall be 14 AWG.
 - 3. Control wiring for supervisory equipment shall be shielded, sized per equipment manufacturer's recommendations, or as shown on drawings.
- C. All power wiring to motors utilizing Variable Frequency Drives (VFDs) shall be multiconductor, shielded consisting of stranded, tinned copper conductors, full size ground, copper shield, XLPE insulation, and 1000 V rating. Conductor sizes 12 AWG through 2 AWG shall have full-size insulated ground conductor and 85% tinned copper braid shield. Conductor sizes 1 AWG through 4/0 AWG shall have three stranded tinned copper ground conductors and 100% shield coverage using two copper tape shields. Cable shall be Belden, or equal, 29502 through 29507 for sizes 12 AWG through 2 AWG, and Belden, or equal, 29528 through 29532 for sizes 1 AWG through 4/0 AWG.
- D. All wiring within control panels, supervisory control centers, and motor control centers that does not extend outside of the enclosure or the motor control center bucket shall be insulation-type MTW, minimum size 16 AWG.
- E. Wiring in dry locations shall be THHN. Wiring in damp and wet locations shall be XHHW-2. Damp and wet locations shall include, but not be limited to, washdown areas, unconditioned spaces, exterior buried conduits, wet wells, and exterior locations.
- F. All available colors shall be used; however, green shall be used only for equipment grounds. Where color-coded wire in larger sizes is not available, one wrap of 1-inch-wide colored self-adhesive tape at each terminal end shall be used for identification. Initial phase color shall be used throughout the run, even for switch legs. Colors must meet code requirements for each class voltage. Do not duplicate colors, including neutral, on different voltages.
- G. All wiring for intrinsically safe circuits shall be light blue. Refer to Section 16940—Controls and Instrumentation for additional wire color requirements.
- H. Refer to Section 16195—Electrical Identification for conductor labeling and insulation color requirements.
- I. Branch circuit wiring for exit lights, emergency lights, and exterior lights in excess of 75 feet shall be minimum 10 AWG. Circuits 150 feet or over shall be sized for a maximum 2% voltage drop.

2.02 LOW-VOLTAGE WIRING (LESS THAN 100 VOLTS)

- A. Low-voltage wiring specified in this section shall be applicable to all systems installed that utilize low-voltage wiring where such wiring is not specified in other technical sections.
- B. All wiring shall have copper conductors with 300-volt insulation rating and meet the requirements of NEC Article 725.
- C. All conductors must be suitable for the application intended. Conductors 16 AWG and larger shall be stranded. Conductors 18 AWG and smaller may be solid or stranded.
- D. Control Cable for Class 1 Remote Control and Signal Circuits: Individual conductors twisted together, shielded, and covered with an overall PVC jacket. Cable shall be UL listed, temperature rated, and plenum or nonplenum rated for the application as required in the National Electrical Code.
- E. Control Cable for Class 2 or Class 3 Remote Control and Signal Circuits shall be constructed, UL listed, temperature rated, and plenum or nonplenum rated for the application as required in the NEC Article 725.

2.03 WIRING CONNECTIONS AND TERMINATIONS

- A. Provide crimp type UL or ETL listed terminations for 6 AWG and smaller stranded conductor connections to electrical devices and equipment such as receptacles, switches, and terminal strips. Crimp devices shall be Sta-kon, or equal.
- B. Provide insulated, **silicone-filled** spring wire connectors with plastic caps for 8 AWG conductors and smaller. Connectors shall be King Silicone-Filled Safety Connectors, or equal. Spring wire connectors shall only be allowed in junction, outlet, or switch boxes. Spring wire connectors are not allowed for terminating motor conductors.
- C. All feeder cable connections to motor leads up to 600 volts shall be insulated and sealed with factory-engineered kits. Motor connection kits shall consist of one-hole copper compression lugs for 6 AWG and larger, split-bolt connector for 8 AWG and smaller, and motor-lead pigtail splice kit. Individual components shall be as follows:
 - 1. Split-bolt connectors shall be for use with copper conductors only.
 - 2. One-hole copper compression lugs shall be as manufactured by 3M, or equal, 30000 series. Lug size shall be selected based on motor and feeder wire sizes installed.
 - 3. Pigtail splice kit shall consist of one-hole lug cover, silicone grease and mastic sealing strip. Pigtail splice kit shall have locking pins for conductors 2 AWG and larger. Kit shall be as manufactured by 3M, or equal, 5300 series, and be selected based on motor, feeder, and lug sizes installed.
- D. No splices will be allowed unless reviewed by ENGINEER. Where allowed, provide in-line splices for all conductor connections, 6 AWG and larger. Splice crimp component shall be Burndy copper compression splice long barrel, beveled entry, type YS, or equal. Splice shall be made with crimp tool by manufacturer that allows expanded conductor ranges. Splice insulation component shall be Raychem heavy-wall, low-voltage tubing, type WCSM, or equal.

2.04 TERMINAL BLOCKS AND ACCESSORIES

- A. Terminal Blocks: ANSI/NEMA ICS 4: UL listed or UL recognized under UL 467, UL 486E, UL1059, and UL 1953 (power terminals only).
- B. Power Terminal Blocks: Unit construction type, closed-back type, tin-plated copper, with tubular pressure screw connectors, rated 600 volts as manufactured by Allen-Bradley 1492-PDL, or equal.
- C. Signal and Control Terminal Blocks:
 - 1. General-Purpose Terminal Blocks:
 - a. Terminal blocks shall be rated up to 600 volts AC/DC.
 - b. Terminal blocks shall accept center-mounted jumper bars without increasing the installed space.
 - c. Terminal blocks shall be Allen-Bradley Bulletin 1492-J3, 1492-J4, 1492-J6, or equal, depending on the application.
 - d. Terminal block color shall be gray.
 - 2. Grounding Terminal Blocks:
 - a. Terminal blocks shall accept 22- to 14-AWG conductors.
 - b. Terminal blocks shall be Allen-Bradley Bulletin 1492-JG3, or equal.
 - c. Terminal block color shall be green/yellow.
 - 3. Disconnect-type Terminal Blocks:
 - a. Terminal blocks shall be rated up to 300 volts AC/DC.
 - b. Terminal blocks shall be feed-through type with a knife-blade disconnect.
 - c. Terminal blocks shall be Allen-Bradley Bulletin 1492-JKD3, 1492-JKD4, or equal, depending on the application.
 - d. Terminal block color shall be gray.
 - 4. Fuse-type Terminal Blocks with Indicator (300-Volt Class):
 - a. Terminal blocks shall be rated up to 15 amps.
 - b. Terminal blocks for applications from 100 to 300 volts AC shall be Allen-Bradley Bulletin 1492-H4, or equal, with neon blown-fuse indicator.
 - c. Terminal blocks for applications from 10 to 50 volts AC/DC shall be Allen-Bradley Bulletin 1492-H5, or equal, with LED blown-fuse indicator.
 - d. Terminal blocks shall accept 1/4-inch by 1 1/4-inch fuses.
 - e. Terminal block color shall be black.
 - 5. Fuse-type Terminal Blocks with Indicator (600-Volt Class):
 - a. Terminal blocks shall be rated up to 20 amps.
 - b. Terminal blocks shall be Allen-Bradley Bulletin 1492J3P, or equal, with associated indicating-type fuse plug.
 - c. Terminal blocks shall accept 5-mm bu 20-mm fuses.
 - d. Terminal block color shall be gray.
 - 6. Current Transformer Shorting Terminal Blocks:
 - a. Provide a pair of terminal blocks for each current transformer including one feed-through terminal block, one sliding disconnect terminal block, and a cross-connection short-circuit slider. The pair of terminal blocks shall include the following:
 - (1) Feed-through terminal block shall be Weidmüller Model WTD 6/1 EN, or equal.
 - (2) Sliding disconnect terminal block shall be Weidmüller Model WTL 6/1 EN, or equal.
 - (3) Short-circuit slider shall be Weidmüller Model WKS 2/2, or equal.

- b. The short-circuit slider shall cover the terminal block conductor screws on the meter-side of the terminal blocks when in the non-shorting position, and expose the terminal block conductor screws when slid into the shorting position.
 - c. Terminal block color shall be gray.
 - 7. Terminal blocks shall have self-locking screw compression clamps rated for the size of conductors being terminated and upstream overcurrent protection for each application.
 - 8. Terminal blocks with different current ratings shall be used based on the selected application; however, the same manufacturer and style of terminal block shall be used throughout the entire project for all applications.
 - 9. Terminal blocks shall have tin-plated copper current bars and tin-plated steel screws. Terminal housings shall be completely finger safe from all live circuits and be constructed of self-extinguishing material with minimum UL 94-V0 flammability rating.
 - 10. Terminal blocks shall accept pre-printed, snap-in labeling cards on both sides without increasing the installed space. Provide terminal block manufacturer's end barriers and screw-type retainers for all terminal block groupings.
 - 11. Terminals shall be a maximum of 2.2 inches tall. Maximum terminal block width shall be as follows:
 - a. Terminal blocks rated up to 25 amps and grounding terminal blocks: maximum .20 inches wide.
 - b. Terminal blocks rated from 25 to 50 amps: maximum .32 inches wide.
 - 12. Terminal blocks shall mount on standard DIN rail and shall be able to be removed without removing adjacent terminal blocks.
 - 13. Multi-level terminal blocks and stacked, single-level terminal block installations are not acceptable.
- D. Refer to Section 16195—Electrical Identification for terminal block labeling requirements.

PART 3—EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which the work is to be installed and notify CONTRACTOR of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 GENERAL WIRING METHODS

- A. Install electrical wire and connectors in accordance with the manufacturer's written instructions, applicable requirements of the NEC, the National Electrical Contractors Association's "Standard of Installation," and in accordance with recognized industry practices to ensure that products serve the intended functions. Use appropriate wiring methods and materials for the equipment or environment.
- B. Stranded conductors shall be terminated using crimp-type devices specified herein. Conductors may not be wrapped around a terminal screw.
- C. Place an equal number of conductors for each phase of a circuit in same raceway.
- D. Torque conductor connections and terminations with calibrated torque wrench to manufacturer's recommended values. Provide permanent marking on lug, bolt, nut, or connection for conductors larger than 4 AWG.

- E. Splice only in junction or outlet boxes. Splicing is not allowed in disconnects, manholes, motor control centers, panelboards, control panels, equipment, etc. Avoid splices between terminals of interconnecting power and control wiring.
- F. Spring wire connectors shall only be used in junction, outlet, or switch boxes. Equipment wireways (e.g., motor control centers, panelboards, disconnects, switchgear, etc.), and control panels shall not have any spring-wire connectors installed; all terminations shall be on terminal strips.
- G. Neatly train, lace, and tie wrap all wiring inside boxes, equipment, control panels, MCCs, and panelboards.
- H. Make conductor lengths for parallel circuits equal.
- I. The same color shall be used for each numbered wire throughout its entire length.
- J. Terminate all wiring on terminal blocks in control panels, VFD enclosures, starter cubicles, and similar equipment. This shall include all spare or unused wires.
- K. Provide a dedicated neutral for each branch circuit or feeder requiring a neutral. Ampacity of neutral conductor shall match that of the branch circuit or feeder.
- L. Do not use a pulling means that can damage the raceway.
- M. Signal wiring (below 100 volts) and intrinsically safe wiring must be in a conduit separate from power and/or control wiring (over 100 volts). Signal wire shall include, but not be limited to, loop-powered devices, voice and data communications, and communication wiring (i.e., DeviceNet, RS-232, etc.). Analog wiring shall be in a conduit separate from all other wiring. Intrinsically safe wiring shall be separated and identified in accordance with Article 504 of the NEC.
- N. Control wiring (e.g., internal thermal overloads, lockout stops, etc.) to motors utilizing VFDs shall be in a conduit separate from motor power wiring.
- O. Provide junction or pull boxes to facilitate the “pulling in” of wires or to make necessary connections. All raceways and apparatus shall be thoroughly blown out and cleaned of foreign matter prior to pulling in wires.
- P. Thoroughly clean wires before installing lugs and connectors.
- Q. Make splices, taps, and terminations to carry full capacity of conductors without perceptible temperature rise.
- R. Terminate spare conductors within equipment, MCCs, control panels, etc., on terminal strips and label as “SPARE.” Spare wiring in pull or junction boxes may be terminated with electrical tape and labeled as “SPARE.” All spare conductor labels shall indicate where the conductors terminate. Refer to Section 16195–Electrical Identification, for additional requirements.

- S. Feeder connections to motors shall be installed within the motor junction box utilizing factory engineered kits as specified herein. Spring wire connectors are not allowed for connections to motors.

3.03 GENERAL LOW-VOLTAGE WIRING METHODS (LESS THAN 100 VOLTS)

- A. Low-voltage wiring installation requirements specified herein shall be applicable to all systems installed that utilize low-voltage wiring where such wiring installation is not specified in other technical sections.
- B. Low-voltage wiring shall be installed in conduit. Unless noted in other specification sections, low-voltage wiring located in office buildings above suspended ceilings shall be allowed to be installed free air, as specified herein if the cable meets NEC requirements for the application.
- C. Control wiring for HVAC and lighting equipment connected to standby power shall be installed in conduit.
- D. Do not use wire smaller than 14 AWG for control wiring greater than 60 volts, or 18 AWG for voltages less than 60 volts. All sizes subject to NEC 725 requirements.
- E. Low-voltage cable splices shall only be allowed in junction boxes.

3.04 LOW-VOLTAGE CABLE FREE-AIR CABLE INSTALLATION

- A. Free-air cabling may be installed above suspended ceilings and cabling shall be installed parallel and perpendicular to the structure. Raceways shall be provided in wall cavities and chases with nylon bushings at each conduit end.
- B. Cabling shall be supported at a maximum of 5-foot intervals utilizing J-hook-type supports anchored to ceiling concrete, piping supports, or structural steel beams. Maximum fill for supports shall be 50%. Cable sag at midspan shall not exceed 12 inches. Mounting hooks shall be installed to maintain NEC-required minimum cable bending radii.
- C. Cabling shall not be attached to, or supported by, existing cabling, plumbing or steam piping, ductwork, suspended ceiling supports or electrical conduit. Cabling shall not be laid directly on the ceiling grid or woven through building structural members.
- D. To reduce or eliminate Electro-Magnetic Interference (EMI), the following minimum separation distances for 'Free-Air' cabling installations shall be adhered to:
 - 1. Twelve inches from power lines of less than 5 kV.
 - 2. Forty-eight inches from power lines of 5 kV or greater.
 - 3. Eighteen inches from lighting fixtures.
 - 4. Forty-eight inches from transformers and motors.
- E. A coil of 2 feet in each cable shall be placed in the ceiling at each 'free-air' wired device. These coils shall be secured (wire tied) at the last cable support before the cable reaches the device and shall be coiled from 100% to 200% of the cable recommended minimum bend radius.

- F. Splices for low-voltage devices, including devices installed through suspended ceiling tiles, or free-air cabling installed in suspended ceilings shall be made in junction boxes. Junction boxes shall be supported as specified in Section 16130–Boxes.
- G. All cable shall be free of tension at both ends. Nylon strain relief connectors shall be provided at each device and junction box where cables enter.
- H. Care shall be taken when using cable ties to ensure they are not overtightened compressing the cable jacket.
- I. All exposed vertical cable extensions to devices located below the finished ceiling shall be in conduit.

3.05 WIRING INSTALLATION IN RACEWAYS

- A. Pull all conductors into a raceway at the same time. Use UL-listed wire-pulling lubricant for pulling 4 AWG and larger wires. Wax-based pulling lubricant is not allowed unless it includes a Teflon additive.
- B. Install wire in raceway after interior of building is enclosed, watertight, and dry, and all mechanical work likely to injure conductors has been completed.
- C. Completely and thoroughly swab raceway system before installing conductors.
- D. Conductors No. 6 AWG and larger shall be pulled into conduits utilizing a tugger with built-in tension meter. CONTRACTOR shall provide a report to ENGINEER for each pull indicating maximum tension reached during the pull along with manufacturer's maximum pulling tension. Motorized machines of any type are NOT ALLOWED for any wire pulling.
- E. Conductors shall be installed in conduit system in such a manner that insulation is not damaged, conductors are not overstressed in pulling, and walls are not damaged. No splices are permitted except in junction boxes or outlet boxes.
- F. CONTRACTOR shall observe code limitation on the number and size of wires in an outlet box. CONTRACTOR shall either lay out work so that the wires do not exceed the particular box limitation or provide larger boxes approved for additional capacity.
- G. Panel riser feeder conductors shall be identified with colored tape at panel lugs. The same phase relation shall be maintained throughout.
- H. Circuiting is indicated diagrammatically on the drawings.

3.06 TERMINAL BLOCK INSTALLATION

- A. A maximum of one conductor shall be installed on the field-wired side of each terminal block. If rated to accept more than one conductor, a maximum of two conductors shall be installed on the enclosure-wired side of each terminal block. Provide additional terminal blocks and shorting jumpers as required.
- B. Provide a separate ground-type terminal block for each shielded-cable drain conductor.

- C. Provide ten percent spare terminal blocks for each type of connected terminal block, minimum five spare terminal blocks total. For each grouping of terminal blocks, provide 25% spare DIN rail space. Refer to Section 16951–Spare Parts for additional spare terminal block requirements.
- D. Maintain a minimum of 1 1/2 inches between terminal blocks and adjacent devices and enclosure wireways.
- E. For current transformer shorting terminal blocks, the short-circuit slider shall cover the terminal block conductor screws on the meter-side of the terminal blocks when in the non-shorting position, and expose the terminal block conductor screws when slid into the shorting position.

3.07 FIELD QUALITY CONTROL

- A. Inspect wire for physical damage and proper connection.
- B. Prior to energizing, check conduit, raceways, outlet boxes, and wire for continuity of circuitry and for short circuits. Correct malfunction when detected.
- C. Subsequent to wire hookups, energize circuitry and demonstrate functionality in accordance with these specifications.
- D. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.
- E. Perform field inspection and testing according to provisions of this section.

3.08 ACCEPTANCE TESTS

- A. CONTRACTOR shall furnish all materials, labor, and equipment necessary for the acceptance tests specified herein. Acceptance tests shall be performed in the presence of OWNER or OWNER's representative and must be passed before final acceptance of the work.
- B. CONTRACTOR shall be responsible for powered tests of each field-installed device unless specifically noted otherwise. CONTRACTOR shall be responsible for device operation as powered from its power source and signals as received at the I/O modules.
- C. Operation Test: By operational testing, OWNER will give final acceptance of the wiring system when all of the wiring is considered a complete system. All equipment shall function and operate in the proper manner as indicated in the details of the specifications and on the drawings. All motors shall be properly connected to protective devices, and motor rotation shall be in the correct direction.
- D. At the request of OWNER's representative, demonstrate by test the compliance of the installation with these specifications and drawings, the National Electrical Code, and the accepted standards of good workmanship. These tests shall include operation of equipment, continuity of the conduit system, grounding resistance and insulation resistance.

- E. A written record of performance tests on electrical and control and instrumentation systems and equipment shall be supplied to OWNER. Such tests shall show compliance with governing codes.
- F. The transformer, feeder, and subfeeds to the lighting panels shall be completely phased out as to sequence and rotation. Phase sequence shall be A-B-C as follows:
 - 1. Front-to-rear, top-to-bottom, or left-to-right when facing equipment.
 - 2. Phasing shall be accomplished by using distinctive colors for the various phases. The same color or variation of it shall be used for a particular phase throughout the building and project.

3.09 WIRE INSTALLATION SCHEDULE

- A. Install all wiring in raceways except as otherwise noted. This includes all low-voltage wiring such as temperature control, instruments, phone, network, etc.

END OF SECTION

SECTION 16130

BOXES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Switch, outlet, and small junction boxes.
 - 2. Pull and junction boxes.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern Work in this section.

1.02 REFERENCES

- A. ANSI/NEMA OS 1—Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- B. ANSI/NEMA OS 2—Nonmetallic Outlet Boxes, Device Boxes, Covers, and Box Supports.
- C. NEMA 250—Enclosures for Electrical Equipment (1000 Volts Maximum).

1.03 QUALITY ASSURANCE

- A. Manufacturers of switches, outlets, boxes, lamps, fuses, lugs, etc.: Firms regularly engaged in the manufacture of these products, of the types and ratings required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 5 years of successful installation experience on projects with electrical wiring installation Work similar to that in this project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) and any and all local codes as applicable to construction and installation of electrical wiring devices, material, and equipment herein specified.
- D. UL Labels: Provide electrical cable, boxes, raceways, wire, connectors, outlets, switches, etc., which have been listed and labeled by Underwriters Laboratories.
- E. NECA Standard: Comply with applicable portions of National Electrical Contractor's Association's "Standard of Installation."

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.

PART 2–PRODUCTS

2.01 SWITCH, OUTLET, AND SMALL JUNCTION BOXES

- A. Sheet Metal Boxes: ANSI/NEMA OS 1; galvanized steel, 4-inch square or octagon, minimum 2 1/8 inches deep. Raco, Appleton, or equal. Boxes with knockouts for multiple size conduits not allowed. Suspended ceiling grid support bridges shall be as manufactured by Caddy, Model 512 HD, or equal.
- B. Masonry and Partition Boxes: Galvanized steel, nongangable. Thomas & Betts, GW Series, or equal. Provide number of gangs for devices shown on the drawings.
- C. Cast Boxes: Aluminum or cast feraloy, deep-type, gasketed cover, threaded hubs, Crouse-Hinds FD Series, or equal.
- D. PVC-Coated Cast Boxes: Boxes shall be by the same manufacturer as the conduit.
- E. NEMA 4X Boxes: PVC or FRP, Carlon NS Series, or equal, with proper cover and gasket.
- F. Covers for switch and outlet boxes used as junction boxes shall have covers that match box type.

2.02 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: ANSI/NEMA OS 1: Code gauge steel with galvanized or sheradised finish, secured by galvanized machine screws. Hoffman ASG Series without knockouts, or equal.
- B. Cast Boxes: NEMA 250; Type 4, flat-flanged, surface-mounted junction box, UL-listed as watertight. Cast aluminum or feraloy box and cover with ground flange, neoprene gasket, and stainless steel cover screws, Crouse-Hinds WCB Series, or equal.
- C. PVC-Coated Cast Boxes: Provide PVC-coated cast boxes in areas where PVC-coated conduit is used. Boxes shall be by the same manufacturer as the conduit.
- D. NEMA 4X Boxes: PVC or FRP, Carlon HS Series, or equal with proper cover and gasket.
- E. Boxes Larger Than 12 inches in Any Dimension: Hinged enclosure in accordance with Section 16160–Cabinets and Enclosures.
- F. Boxes specified in this section are not allowed to have knockouts and are not allowed to be used as enclosures for control panels.

PART 3–EXECUTION

3.01 COORDINATION OF BOX LOCATIONS

- A. Provide electrical boxes as shown on the drawings and as necessary for splices, taps, wire pulling, cable bending radii, equipment connections, and code compliance.

- B. Electrical box locations shown on the drawings are approximate. Verify location and size of floor boxes and outlet boxes in all work areas prior to rough-in.
- C. Where dedicated raceways are provided for different voltage systems or wiring, (e.g., motor power wiring and motor space heaters), separate boxes shall also be provided unless acceptable to ENGINEER. Where acceptable to ENGINEER, combined boxes shall be physically divided to separate the wiring.
- D. Locate and install boxes to allow access. Where installation is inaccessible, coordinate locations and sizes of access doors.
- E. Locate and install to maintain headroom and to present a neat appearance.
- F. All boxes attached to building surfaces that may be damp shall be spaced to avoid rust and/or corrosion. All boxes in damp locations shall be on 1/2-inch standoffs. Damp locations shall include, but not be limited to, all basement areas, tunnel areas, exterior locations, garage areas, all wet wells and dry wells, all areas below grade, and any washdown areas.

3.02 SWITCH, OUTLET, AND SMALL JUNCTION BOX INSTALLATION

- A. Locate boxes in masonry walls for cutting of masonry unit corners only. Coordinate masonry cutting to achieve neat openings for boxes.
- B. Provide knockout closures for unused openings.
- C. Support boxes independently of conduit.
- D. Use multiple gang boxes where more than one device is mounted together; do not use sectional boxes. Provide barriers to separate wiring of different voltage systems.
- E. Install boxes in walls without damaging wall insulation.
- F. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.
- G. Switch and outlet boxes provided for branch circuits and feeders shall not contain control wiring. Control wiring and intrinsically safe wiring shall each have dedicated pull and junction boxes provided. Wiring for different voltage systems (e.g., 24 V, 120 V, 480 V) shall have dedicated pull and junction boxes for each voltage.
- H. In inaccessible ceiling areas, position outlet boxes within 6 inches of recessed luminaire to be accessible through luminaire ceiling opening.
- I. Provide sheet metal recessed outlet boxes in finished areas; secure boxes to interior wall and partition studs accurately positioning to allow for surface finish thickness. Use stamped steel stud bridges for flush outlets in hollow stud wall and adjustable steel channel fasteners for flush ceiling outlet boxes.
- J. Align wall-mounted outlet boxes for switches, thermostats, and similar devices.
- K. All concealed lighting outlet boxes shall be sheet metal octagon boxes.

- L. In plaster or concrete walls, single receptacle, single- or double-switch outlets, use 4-inch-square masonry boxes fitted with raised plaster covers. In poured concrete walls belowgrade, use cast boxes.
- M. In unplastered brick or block walls, use masonry boxes.
- N. In metal door frames, use partition boxes.
- O. For weatherproof switches, devices, and exterior fixtures, use cast boxes with proper cover and gasket.
- P. All exterior outlet boxes shall be NEMA 4X.
- Q. All interior exposed wall and ceiling outlet boxes shall be cast boxes, unless otherwise noted.
- R. Knockout punches or saws shall be used for holes; boxes with prepunched holes are not acceptable, except when used in conjunction with EMT conduit in areas where allowed.
- S. Boxes shall be of a depth to accommodate wires and splices and shall be equipped with both fixture hanging studs and tapped fixture ears. Boxes shall be installed so that they will support the weight of the fixture. Conduit will not be considered as adequate supports.
- T. Cast boxes with 3/4-inch hubs and aluminum fittings and enclosures may be used with all conduit types.
- U. Sheet metal boxes installed in suspended ceilings for free-air splices or devices installed through the suspended ceiling shall be supported by the suspended ceiling grid system using grid support bridges. Provide mounting hardware, accessories, extensions, etc., based on ceiling grid installed for this project.
- V. Provide PVC-coated cast boxes in all areas where PVC-coated conduit is used. Boxes in Classified locations shall be rated for Class I, Division 1, Groups C and D locations. Boxes shall be by the same manufacturer as the PVC-coated conduit.

3.03 PULL AND JUNCTION BOX INSTALLATION

- A. Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.
- B. Support pull and junction boxes independent of conduit.
- C. Knockout punches or saws shall be used for holes; boxes with prepunched holes are not acceptable, except when used in conjunction with EMT conduit in areas where allowed.
- D. Refer to Section 16195—Electrical Identification for junction box labeling requirements.
- E. All interior exposed junction and pull boxes shall be cast type with cover, unless noted otherwise.
- F. All exterior junction and pull boxes shall be NEMA 4X. Boxes in areas subject to damage shall be stainless steel.

- G. In inaccessible ceiling areas, position boxes within 6 inches of recessed luminaire to be accessible through luminaire ceiling opening.
- H. Boxes in Classified locations shall be rated for Class I, Division 1, Groups C and D locations. Boxes shall be by the same manufacturer as the PVC-coated conduit.

END OF SECTION

SECTION 16141

WIRING DEVICES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Wall switches.
 - 2. Receptacles.
 - 3. Cover plates.
 - 4. Control stations.
 - 5. Outdoor photo cells.
 - 6. Thermostats.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. NEMA WD 1—General-Color Requirements for Wiring Devices.
- B. NEMA WD 5—Specific-Purpose Wiring Devices.
- C. Drawings—Bill of Materials.

1.03 QUALITY ASSURANCE

- A. Manufacturers of switches, outlets, boxes, lamps, fuses, lugs, etc.: Firms regularly engaged in the manufacture of these products, of the types and ratings required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 5 years of successful installation experience on projects with electrical wiring installation work similar to that in this project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) and any and all local codes as applicable to construction and installation of electrical wiring devices, material, and equipment herein specified.
- D. UL Labels: Provide electrical cable, raceways, wire, connectors, outlets, switches, etc., which have been listed and labeled by Underwriters Laboratories.
- E. NECA Standard: Comply with applicable portions of National Electrical Contractor's Association's "Standard of Installation."

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.

- B. Provide product data showing configurations, finishes, dimensions, and manufacturer's instructions.

PART 2-PRODUCTS

2.01 WALL SWITCHES

- A. A-C general use Industrial specification grade, snap switch, 20 amperes, 277 volts, one of the following: Cooper 222*, Leviton 122*, or Pass and Seymour PS20AC*.
- B. Class I Switches: AC general use snap switches, 20 amperes, Crouse-Hinds EDS, or equal.
- C. Provide ivory-colored handles.
- D. Manual motor switches or manual motor controllers for 120 V or 240 V motors on circuits 20 amps or less shall be specification grade snap switch as specified above. Manual motor switches or manual motor controllers for 120 V or 240 V motors on circuits 30 amps or less shall be Cooper 303*, Leviton 303*, or Pass and Seymour PS30AC*. Manual motor switches for three-phase motors 30 amps or less shall be as specified in Section 16440-Disconnect Switches.

*Complete catalog number for pole arrangement necessary.

2.02 RECEPTACLES

- A. Twenty ampere, 125-volt, NEMA 5-20R, Industrial specification grade, straight blade, 3-wire duplex grounded outlets, one of the following: Cooper 5362, Leviton 5362, Pass and Seymour 5362. 208-volt receptacles shall be grounded type, rated same as circuit indicated on the drawings. Provide ivory color.
- B. Locking-Blade Receptacles: NEMA WD 5.
- C. GFCI Receptacle: GFCI receptacles shall be UL 943 listed, Pass and Seymour 2095, Cooper TRVGF20 receptacle with integral ground fault current interrupter. Provide ivory color.
- D. Specific-Use Receptacle Configuration: NEMA WD 1 or WD 5; type as indicated on drawings.
- E. Class I Receptacles: Crouse Hinds CPS-152 or Appleton CPS. Provide two plugs (total) to match receptacle.
- F. Provide spare receptacles as described in Section 16951-Spare Parts.

2.03 COVER PLATES

- A. Each and every flush box shall be provided with standard 302 series stainless steel plates, blank, receptacle, switch, or cord as designated by outlet symbol. Surface boxes shall have plates to match Crouse-Hinds, Appleton, or equal, cast boxes.

- B. NEMA 4X and weatherproof switch covers shall be Thomas and Betts, Industrial Gray, toggle switch cover, Model E98TSCN-CAR, or equal.
- C. While in use receptacle covers for exterior use shall be Leviton M5979, or equal. Receptacle covers for NEMA 4X locations shall be Leviton 5980, or equal.
- D. Cover plates for manual motor switches or manual motor controllers shall have provisions for locking the switch in the On or Off position.

2.04 CONTROL STATIONS

- A. Heavy-duty, oil-tight, 30 mm operators in NEMA 4X enclosures, unless otherwise noted. Control stations shall be Square D, Class 9001, Type SKY, Allen-Bradley Bulletin 800T, or equal, with operators as shown on the drawings. Lockouts where called for on the drawings shall be Square D, Type K5, or equal. Lights shall be LED type.

2.05 OUTDOOR PHOTOCELLS

- A. Photocell controller shall be rated 1800 watts tungsten at 120 volts. The photocell shall be cadmium sulfide, 1-inch diameter, gasketed for maximum weatherproofing.
- B. Photocell mounting shall include a weatherproof wall plate with neoprene gasket suitable for attachment to an approved outdoor junction box.
- C. Photocell controller shall include a delay to prevent false switching. On-activation shall occur at 1-5 foot-candles; off-deactivation shall occur at 3-15 foot-candles.
- D. Operational temperature range shall be -40°F to 158°F. All photocells shall be CSA listed and include a 5-year warranty.
- E. Photocell shall be Intermatic, or equal, K4000 Series with weatherproof wall plate, light shield, and neoprene gasket. Install where shown on the drawings.

2.06 THERMOSTATS

- A. Line voltage thermostats for single-stage heating, single-stage cooling, or high- and low-temperature alarms in NEMA 4X areas shall be PECO Model TF115-001, or equal. Thermostats shall be rated NEMA 4X with a 40°F to 110°F temperature range and fixed 3°F deadband.
- B. Line voltage thermostats for single-stage heating or single-stage cooling in Class I locations shall be Honeywell T6051B.
- C. Line voltage thermostats for two-stage cooling shall be Honeywell T6052B1013. Thermostats shall be rated NEMA 4X with a 40°F to 100°F temperature range and fixed 3°F deadband between the first and second stage.
- D. Thermostats shown on the drawings shall be single-stage unless otherwise noted.

PART 3–EXECUTION

3.01 INSTALLATION

- A. All receptacles shall be mounted vertically.
- B. GFCI receptacles shall not be series wired.
- C. Install wall switches 48 inches above floor (top of box), “Off” position down, except as otherwise noted.
- D. Install convenience receptacles 15 inches above floor (bottom of box), grounding pole on bottom except as otherwise noted.
- E. Install specific-use receptacles above furniture, countertops, or at heights shown on the Contract Drawings.
- F. Install thermostats 48 inches above floor (top of box).
- G. Convenience Receptacles: Specification grade self-grounding.
- H. Install devices and cover plates flush and level.
- I. Back wiring is not allowed for switches and receptacles. Wires shall be terminated with the device screw terminal.
- J. Individual labels shall be placed on the back of all switch faceplates and receptacle faceplates indicating the lighting panel and circuit from which the switch or receptacle is fed. Labels shall be White background with Black lettering no smaller than 12-point font. Provide Pan Net permanently attached self-adhesive type, machine fed, and self-laminating labels, or equal. All labels must be by the same manufacturer, same size, and same font. Handwritten labels are not acceptable.
- K. Individually adjust each occupancy sensor’s sensitivity such that the sensor does not energize lighting due to ambient noise in the space when unoccupied (e.g., noise from pumps, refrigerators, HVAC equipment, servers, etc.).

END OF SECTION

SECTION 16160

CABINETS AND ENCLOSURES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Hinged cover enclosures.
 - 2. Cabinets.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern Work in this section.

1.02 REFERENCES

- A. NEMA 250—Enclosures for Electrical Equipment (1000 Volts Maximum).
- B. ANSI/NEMA ICS 1—Industrial Control and Systems.
- C. ANSI/NEMA ICS 6—Enclosures for Industrial Control Equipment and Systems.

1.03 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.
- B. Show Drawings for Equipment Panels: Include wiring schematic diagram, connection diagram, outline drawing, and construction diagram as described in ANSI/NEMA ICS 1.

PART 2—PRODUCTS

2.01 HINGED COVER ENCLOSURES

- A. Construction: NEMA 250, larger than 12 inches in any dimension. Acceptable manufacturers: Hoffman, B-Line, or equal.
- B. Covers: Continuous hinge, applicable NEMA rating with hasp and staple for padlock.
- C. Back Panel for Mounting Terminal Blocks or Electrical Components: 14 gauge steel, white enamel finish.
- D. All cabinets with double doors or that are free-standing shall have a 3-point latch.

2.02 CABINETS

- A. Construction: NEMA 250. Acceptable manufacturers: Hoffman, Saginaw, or equal.

- B. Cabinet Fronts: Steel, surface-type with screw cover front, concealed hinge, and flush lock. Finish in white baked-enamel.

2.03 FABRICATION

- A. Shop-assembled enclosures and cabinets housing terminal blocks or electrical components in accordance with ANSI/NEMA ICS 6.
- B. Provide conduit hubs on all enclosures.
- C. Provide protective pockets inside front cover with schematic diagram, connection diagram, and layout drawing of control wiring and components within enclosure.
- D. Provide gasketed surfaces for all enclosure and cabinet doors and covers.

2.04 ENCLOSURE RATING

- A. Cabinets and enclosures shall be rated as listed below, unless noted otherwise on the Drawings:
 - 1. Indoor dry locations: NEMA 12, steel.
 - 2. Outdoor, corrosive, or wet locations: NEMA 4X, stainless steel.
 - 3. Hazardous locations: NEMA 7, cast aluminum, rated for Class I, Division 1, Groups C and D locations.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Install cabinets and enclosures plumb. Anchor securely to wall and structural supports at each corner minimum.
- B. Refer to Section 16195—Electrical Identification for cabinet and enclosure labeling requirements.
- C. Provide accessory feet for free-standing equipment enclosures.
- D. All cabinets and enclosures attached to building surfaces which may be damp shall be spaced out to avoid rust and/or corrosion. All boxes in damp locations shall be on 1-inch standoffs. Damp locations shall include, but not be limited to, all basement areas, tunnel areas, washdown areas, garage areas, all wet wells and drywells, all areas below grade, and exterior locations.

END OF SECTION

SECTION 16190

SUPPORTING DEVICES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Conduit and equipment support members.
 - 2. Fastening hardware.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 QUALITY ASSURANCE

- A. Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.

1.03 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.

PART 2–PRODUCTS

2.01 MATERIAL

- A. Support Members:
 - 1. 316 stainless steel, fiberglass, or PVC in exterior locations and FRP in NEMA 4X areas. PVC-coated steel in Class I locations and where used with PVC-coated conduit.
 - 2. Galvanized steel in all other areas.
- B. Hardware:
 - 1. Stainless steel in exterior locations and Class I locations. FRP in NEMA 4X areas.
 - 2. Galvanized steel in all other areas.
- C. Manufacturers: Unistrut P-1000, B-line, Superstrut, or equal.

PART 3–EXECUTION

3.01 INSTALLATION

- A. All supporting devices and support structures shall be constructed such that the structure adequately supports the load of the equipment installed on it including any wind and/or snow loads. Provide additional support members to those shown on the Drawings to adequately support load.

- B. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using expansion anchors or support members. Do not use spring steel clips and clamps. Provide standoffs or suspended ceiling grid bridge supports as specified in other technical sections.
- C. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchors on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.
- D. Where support members are used for conduit, cutoff ends shall be ground smooth. Cutoff PVC-coated support members shall be ground smooth and touched up with PVC coating material from the manufacturer.
- E. Do not fasten supports to piping, ductwork, mechanical equipment, or conduit.
- F. Do not use powder-actuated anchors.
- G. Do not drill structural steel members.
- H. Fabricate supports with welded end caps and all welds and surfaces ground smooth for neat appearance. Use hexagon head bolts with steel spring-lock washers under all nuts.
- I. In wet locations, install free-standing electrical equipment on concrete pads. Anchor all equipment to adjacent walls with standoffs and caulk.
- J. Install surface-mounted cabinets and panelboards with a minimum of four anchors.
- K. Bridge studs top and bottom with channels to support flush-mounted cabinets and panelboards in stud walls.
- L. Do not use chain, wire rope, or perforated strap hangers.
- M. All welds shall be continuous and ground smooth.

END OF SECTION

SECTION 16195

ELECTRICAL IDENTIFICATION

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Nameplates.
 - 2. Labeling tags.
 - 3. Wire markers.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.
- B. Provide schedule for nameplates and labeling tags with shop drawings. Reference drawings for type used.

PART 2–PRODUCTS

2.01 NAMEPLATES

- A. Type “A”:
 - 1. Use:
 - a. Motor starters.
 - b. Each separately mounted circuit breaker or disconnect switch.
 - c. Each device in main distribution panels.
 - d. Each device in switchboards and switchgear.
 - e. Each device in motor control centers.
 - f. SPD.
 - g. SCADA System computers.
 - h. Each device on Supervisory Control Center exterior.
 - i. Cabinets, enclosures, pull, and junction boxes.
 - j. Field devices (flowmeter transmitters, level transmitters, chemical scales, chemical leak detectors, etc.).
 - k. Communication and Network Cable Tray.
 - 2. Size: 2 inch by 3 inch.
 - 3. Material: 3-layer laminated Micarta.
 - 4. Background Color: Black.
 - 5. Character Color: White.
 - 6. Character Size: 1/4 inch.
 - 7. Engraving: See MCC schedule, one-line, and I/O list for labels, or as requested by ENGINEER. Label shall include equipment number and description (i.e., SCAL-60-01, Fluoride Scale).
 - 8. Mounting Location: Front exterior.

- B. Type "B":
1. Use: Standby power systems as in "A" above.
 2. Size: 2 inch by 3 5/8 inch.
 3. Material: 3-layer laminated Micarta.
 4. Background Color: Red.
 5. Character Color: White.
 6. Character Size: 1/4 inch.
 7. Engraving: See MCC schedule and one-line for labels, or as requested by ENGINEER.
 8. Mounting Location: As requested by ENGINEER.
- C. Type "C":
1. Use:
 - a. Motor Control Centers.
 - b. Supervisory Control Centers.
 - c. Panelboards.
 - d. Transformers.
 2. Size: 4 inch by 4 inch.
 3. Material: 3-layer laminated Micarta.
 4. Background Color: Black.
 5. Character Color: White.
 6. Character Size: 2 1/4 inch.
 7. Engraving: Equipment label, Emergency shall be red with white letters. Label shall include equipment number and description (i.e., LP-10-01, First Floor Power).
 8. Mounting Location: Equipment: Top wire way.
- D. Type "D":
1. Use: Control stations, thermostats, etc.
 2. Size: 3/8 inch by 2 inch.
 3. Material: 3-layer laminated Micarta.
 4. Background Color: Black.
 5. Character Color: White.
 6. Character Size: 1/8 inch.
 7. Engraving: Control station number and equipment description (e.g., T-15-01, Chlorine Room).
 8. Mounting Location: Device front at top.
- E. Type "E":
1. Use:
 - a. Telephone and Paging System Equipment.
 - b. Electrical Distribution System Equipment not previously specified.
 - c. Fire Alarm System.
 - d. Intrusion Alarm System.
 2. Size: As necessary.
 3. Material: 3-layer laminated Micarta.
 4. Background Color: Yellow.
 5. Character Color: Black.
 6. Character Size: 3/16 inch.
 7. Engraving and Mounting Location: As requested by ENGINEER.
- F. Type "F":
1. Use: Operator instructions.
 2. Size: As necessary.

3. Material: 3-layer laminated Micarta.
4. Background Color: Yellow.
5. Character Color: Black.
6. Character Size: 3/16 inch.
7. Engraving and Mounting Location: As requested by ENGINEER.

G. Type "G":

1. Use: Hazard alarm horn and strobe.
2. Size: Minimum 7 inches wide by 12 inches high, 1/8-inch thick.
3. Material: Laminated phenolic.
4. Background Color: Yellow.
5. Character Color: Black.
6. Character Size: Minimum 3 inches high.
7. Engraving: Hazard Alarm Horn and strobe:
 - a. First Line: "COMBUSTIBLE GAS".
 - b. Second Line: "DETECTED ALARM".
8. Mounting Location: Below Devices.

2.02 LABELING TAGS

- A. Use: Field-Mounted Devices (Valves, Limit Switches, Level Transmitters, Flow Transmitters, etc.).
1. Size: 2-inch diameter round.
 2. Material: 3-layer laminated Micarta.
 3. Character Size: 1/8 inch.
 4. Engraving: As requested by ENGINEER.

2.03 WIRE AND CABLE MARKERS

- A. Wire and cable markers shall be permanently-attached, heat-shrink type labels.
1. Sleeve: Permanent, PVC, white, with legible machine-printed black markings.
 2. Acceptable Manufacturers: Raychem Model D-SCE or ZH-SCE, Brady Model 3PS, or equal.
 3. Grounding Conductor: Provide green wire marker; minimum 2 inches wide.
- B. Wire or cable numbering preprinted on the conductor or cable insulation, flag-type labels, and individual wraparound numbers (such as Brady preprinted markers) are not acceptable. All wire markers shall be the same throughout the project.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Degrease and clean surfaces to receive nameplates.
- B. Install nameplates parallel to equipment lines.
- C. Affix nameplates with weatherproof, UV-resistant adhesive in outdoor locations and sticky back adhesive in indoor locations.
- D. Affix labeling tags with stainless steel leaders; vinyl locking wire ties are not acceptable. Provide 3/8-inch hole to accommodate wire tie.

- E. Prepare and install neatly-typed directions in all panels, including existing panels where Work is done under this Contract.

3.02 WIRE IDENTIFICATION

- A. Provide wire markers on each conductor, including neutral and spare conductors, in panelboard gutters, pull boxes, outlet and junction boxes, and at load connection. Neutral conductor labels shall include the associated branch circuit number. Identify with branch circuit or feeder number for power and lighting circuits, and with control wire number as indicated on schematic and interconnection diagrams for control wiring. Spare conductors shall have control wire number or shall indicate termination point of wire.
- B. Conductors in pull boxes, motor control centers, supervisory control panels, control panels, cabinets, and panelboards shall be grouped as to circuits and arranged in a neat manner. All conductors of a feeder or branch circuit shall be grouped, bound together with nylon ties, and identified. Phase identification shall be consistent throughout the system. All wiring labels shall be able to be read without removing wire management (i.e., wiring trough covers, spiral windings, etc.) or twisting the wire/cable.
- C. Power Conductor Insulation Color Code:
1. 6 AWG and Larger: Provide general-purpose, flame-retardant, permanent tape at each termination and at accessible locations such as manholes, handholes, junction and pull boxes, panelboards, motor control centers, switchboards, switchgear, etc. Apply tape with at least six full, overlapping wraps; minimum 2 inches wide.
 2. 8 AWG and Smaller: Provide conductors with color-coded insulation.
 3. Colors:

System	Conductor	Color
All Systems	Equipment Grounding	Green
120/240 Volts Single-Phase, Three Wire	Grounded Neutral	White*
	One Hot Leg	Black
	Other Hot Leg	Red
120/208 Volts Three-Phase, Four Wire	Grounded Neutral	White*
	Phase A	Black
	Phase B	Red
	Phase C	Blue
277/480 Volts Three-Phase, Four Wire	Grounded Neutral	White*
	Phase A	Brown
	Phase B	Orange
	Phase C	Yellow
Note: Phase A, B, C implies direction of positive phase rotation.		
* When installed as part of a 120-volt or 277-volt branch circuit, provide a color-coded stripe on the white neutral conductor insulation matching the branch circuit insulation.		

- D. Control Panel and Field-Installed Control Conductor Insulation Color Code:
1. All conductors shall have color-coded insulation.
 2. Colors:

System	Conductor	Color
Supply Voltage	Ungrounded Circuit Conductors Neutral	Black White
Discrete 120-volt AC Input/Output	Control Circuit Conductor Neutral	Red White
Discrete 12/24-volt DC Input/Output	Control Circuit Conductor Common	Blue White with Blue Stripe
Conductors energized when the main disconnect is in the "off" position (e.g. foreign supply voltages)	Control Circuit Conductor AC Neutral DC Common Ground	Orange White White with Blue Stripe Green
Intrinsically Safe	Control Circuit Conductor DC Common	Light Blue White with Two Light Blue Stripes

E. Circuit Identification

1. Identify power, instrumentation, and control conductors at each termination and at accessible locations such as manholes, handholes, junction and pull boxes, panelboards, motor control centers, switchboards, switchgear, etc.
2. Conductors for panelboard circuits shall identify circuit matching the circuit directory designations, including the neutral conductor.
3. Control conductor identification shall match the associated terminal block label.
4. Circuits Not Listed in Circuit Directories:
 - a. Assign circuit name based on unique device or equipment at load end of circuit.
 - b. Where unique device or equipment names are not available or apparent, add a unique number or letter modifier to each otherwise identical circuit name.

3.03 DATA/VOICE CABLE AND COMMUNICATION EQUIPMENT IDENTIFICATION

- A. Individual labels shall be placed on all information outlets, patch panels, 110-style punch down blocks, racks and communications cabinet, and both ends of all cables.
- B. Each component shall be clearly labeled using a code identifying each devices location throughout the facility along with a unique identifier. The record drawings shall identify the numbering at each rack, communication cabinet, and jack location. Each media type shall be uniquely labeled as follows:
 1. Floor-standing Racks and Wall-Mounted Communications Cabinets:
 - a. Mounting structure type (R=floor-standing rack, CC=communications cabinet), structure number, rack/cabinet number.
 - b. For example: "R-80-01" represents rack No. 1 in Structure 80. "CC-10-01" represents communications cabinet No. 1 in Structure 10.
 - c. Racks shall be labeled on the top and bottom, both front and back of rack.
 - d. Nameplates are not required in structures with a total of one rack or cabinet installed.
 2. Patch Panels:
 - a. Rack/cabinet number, patch panel type (C=copper, F=fiber) and top position of patch panel in rack units from bottom of rack/cabinet.
 - b. For example: "R-80-01:C07" represents a copper patch panel mounted in top RU space 7 of rack No. 1, which is located in Structure 80.
 - c. For structures with a total of one rack or cabinet installed, the patch panel labels shall not include a preceding rack number.

3. Cables:
 - a. Patch panel number, cable type (D=data, V=voice)-jack number.
 - b. For example: "R-80-01:C07.D-001" represents the first data jack served from a copper patch panel mounted in top RU space 7 of rack No. 1, which is located in Structure 80.
 - c. For structures with a total of one rack or cabinet installed, the cable labels shall not include a preceding rack number.
4. Jacks:
 - a. Provide a label on the top or bottom of the faceplate identifying the patch panel serving the associated jacks, as specified herein.
 - b. Label each jack with the cable type (D=data, V=voice): jack number.
 - c. For example: "D-001" represents the first data jack served from the associated patch panel.

C. Refer to Section 16931–Structure Cabling for cable insulation and jack color requirements.

3.03 JUNCTION BOX IDENTIFICATION

- A. All junction boxes shall be labeled with permanent labels. Labels shall indicate circuit or load served, as well as the power source and highest voltage present on any conductor.

3.04 TERMINAL BLOCK IDENTIFICATION

- A. Terminal blocks shall be labeled on both sides of each terminal block. Terminal block numbering shall match the numbers shown on the project-specific wiring diagrams.
- B. Fused terminal blocks labels shall be located on top of the terminal blocks and include the fuse voltage and amperage rating.

3.05 LABELING FONT REQUIREMENTS

- A. The font for all conductor, cable, and device labels shall be Arial with black characters on white background, and minimum font size 12.
- B. The text for all conductor, cable, and device labels shall be machine printed. Handwritten labels are not acceptable.

END OF SECTION

SECTION 16440

DISCONNECT SWITCHES

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Disconnect switches.
 - 2. Fractional hp motor switches.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. NEMA KS 1–Enclosed Switches.

1.03 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.
- B. Include outline drawings with dimensions and equipment ratings for voltage, capacity, horsepower, and short-circuit.

PART 2–PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Disconnect Switches: Square D Class 3110, or Cutler Hammer Type DH.
- B. Manual Motor Switches: Square D Class 2510 Type K, or Cutler Hammer B330.
- C. Substitutions: Under provisions of the General Conditions.

2.02 DISCONNECT SWITCHES

- A. Fusible Disconnect Switches: NEMA KS 1; heavy-duty; quick-make, quick-break, load interrupter enclosed knife switch with externally-operable handle interlocked to prevent opening front cover with switch in “On” position. A defeater shall be provided to bypass this interlock. Handle shall be lockable in “Off” position. Provide fuse clips designed to accommodate Class R fuses, and auxiliary contacts to remove control power associated with field devices or instruments interlocked with equipment served. Auxiliary contacts shall be by the disconnect manufacturer.
- B. Nonfusible Disconnect Switches: NEMA KS 1; heavy-duty, quick-make, quick-break, load interrupter enclosed knife switch with externally-operable handle interlocked to prevent opening front cover with switch in “On” position. A defeater shall be provided to bypass this

interlock. Handle lockable in "Off" position. Provide auxiliary contacts to remove control power associated with field devices or instruments interlocked with equipment served. Auxiliary contacts shall be by the disconnect manufacturer.

- C. Manual Motor Switches: Where noted on the drawings, manual motor switches shall be provided for three-phase motors with circuit rating of 30 amps, or less. Manual motor switches shall have toggle operator without overload protection or indicator light. Provide cover plate for all switches to meet the finish or classification of the space. Cover plate shall have provisions for locking the switch in the "On" or "Off" position.

2.03 SINGLE-PHASE MOTOR SWITCHES (2 HP OR LESS)

- A. Where noted on the drawings, motors rated 2 hp or less, for operation on 120 V or 240 V, single-phase, shall be provided with a specification-grade wall switch as disconnecting means. See Section 16141–Wiring Devices for additional information.

2.04 ENCLOSURES

- A. Provide disconnect switch enclosures as listed below, unless noted otherwise on the drawings:
 - 1. Indoor dry locations: NEMA 12, steel.
 - 2. Outdoor, corrosive, or wet locations: NEMA 4X, stainless steel.
 - 3. Hazardous locations: NEMA 7, cast aluminum.
- B. Provide manual motor switch enclosures as listed below, unless noted otherwise on the Drawings.
 - 1. Indoor dry, outdoor, or wet locations: NEMA 4, die cast zinc.
 - 2. Hazardous locations: NEMA 7, cast aluminum.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Provide disconnect switches where indicated on the drawings. Maximum mounting height shall be 42 inches above finished floor unless noted otherwise, or acceptable to ENGINEER based on field conditions.
- B. Provide fuses in fusible disconnect switches where necessary and in accordance with Section 16475–Overcurrent Protective Devices.
- C. Provide wall switch for each single-phase fractional horsepower motor where indicated on the drawings.
- D. Disconnect enclosures that house wiring powered from a source separate from the motor power wiring (e.g., MAS units, space heaters) shall have a nameplate installed on the front of the disconnect indicating that power may be present at the motor when the disconnect is in the "Off" position.
- E. Wiring within disconnects shall only be for loads or equipment served by that disconnect. Foreign wiring within disconnect enclosures is not allowed. All wiring within disconnect enclosures shall be landed on lugs or terminals provided by the disconnect manufacturer,

or on dedicated terminal strips for instrumentation equipment or field devices. Splices and spring wire connectors are not allowed within disconnect enclosures.

- F. Manual motor starters shall not be installed in corrosive and NEMA 4X locations. Provide disconnect switches.

END OF SECTION

SECTION 16460

DRY-TYPE TRANSFORMERS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Distribution transformers for nonlinear loads.
 - 2. Dry-type transformers.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. ANSI/NEMA ST 1—Specialty Transformers.
- B. ANSI/NEMA ST 20—Dry-Type Transformers for General Applications.

1.03 QUALITY ASSURANCE

- A. Manufacturers: Firms regularly engaged in the manufacture of electrical equipment, cable, and wire products of the types and ratings necessary, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 5 years of successful installation experience on projects with electrical wiring installation work similar to that in this project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) as applicable to construction and installation of electrical equipment, cable, wire, and connectors.
- D. UL Labels: All electrical equipment and material shall be listed and labeled by Underwriters Laboratories, except where UL does not include the equipment in their listing procedures.
- E. NEMA/ANSI Compliance: Comply with National Electrical Manufacturers Association, American National Standards Institute and other standards pertaining to material, construction, and testing, where applicable.

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.
- B. Include outline and support point dimensions of enclosures and accessories, unit weight, voltage, kVA, and impedance ratings and characteristics, loss data, efficiency at 25%, 50%, 75%, and 100% rated load, sound level, tap configurations, insulation system type, and rated temperature rise.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store and protect products under provisions of Section 01600—Materials and Equipment.
- B. Store in a warm, dry location with uniform temperature. Cover ventilating openings to keep out dust.
- C. Handle transformers using only lifting eyes and brackets provided for that purpose. Protect units against entrance of rain, sleet or snow, if handled in inclement weather.

PART 2—PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Square D.
- B. Cutler Hammer.
- C. Substitutions: Under provisions of the General Conditions.

2.02 DISTRIBUTION TRANSFORMERS FOR NONLINEAR LOADS

- A. Provide, as shown on the Drawings, dry-type transformer(s) Type NLP as manufactured by Square D, or equal. Transformers shall be TP-1 rated.
- B. Transformer coils shall be copper and be of the continuous-wound construction and shall be impregnated with nonhygroscopic thermosetting varnish.
- C. Transformer shall have a minimum of six 2.5% full capacity primary taps for 480-volt primary. Exact voltages to be as designated on the drawings.
- D. Transformer insulation shall be a UL-recognized 220°C system. Neither the primary nor the secondary temperature shall exceed 115°C rise at any point in the coils while carrying their full rating of nonsinusoidal load. The maximum hot spot temperatures shall not exceed the following values for the indicated K factors defined as the sum of fundamental and harmonic $I_h(\text{pu})^2 h^2$ per ANSI/IEEE C57.110-1986.

Hot Spot Temperature	K-Factor Rating NLP
220°C	13.0
185°C	9.6
150°C	6.9

- E. Manufacturers rating K factors by average temperature rise alone shall not be acceptable.
- F. All cores to be constructed with low hysteresis and eddy current losses. The core flux density shall be well below the saturation point to prevent core overheating caused by harmonic voltage distortion. Manufacturers shall submit verification of induction levels well below the usual level for standard transformers.

- G. Transformer shall be common core construction. Transformers utilizing more than one core or Scott-T connections shall not be acceptable.
- H. The transformer secondary neutral terminal shall be sized for 200% of the secondary phase current.
- I. The transformer enclosure shall be ventilated and be fabricated of heavy gauge sheet steel construction. The entire enclosure shall be finished utilizing a continuous process consisting of degreasing, cleaning and phosphatizing, followed by electrostatic deposition of a polymer polyester powder coating and baking cycle to ensure uniform coating of all edges and surfaces. The coating shall be UL recognized for outdoor use. The coating color shall be as chosen by OWNER.
- J. The maximum temperature of the top of the enclosure shall not exceed 50°C rise above a 40°C ambient.
- K. Transformer shall be supplied with a quality, full-width electrostatic shield resulting in a maximum effective coupling capacitance between primary and secondary of 33 picofarads. With transformer connected under normal loaded operating conditions, the attenuation of line noise and transients shall equal or exceed the following limits:
 - 1. Common Mode: 0 to 1.5 kHz-120 db; 1.5 kHz to 10 kHz-90 db; 10 kHz to 100 kHz-65 db; 100 kHz to 1 MHz-40 db.
 - 2. Transverse Mode: 1.5 kHz to 10 kHz-52 db; 10 kHz to 100 kHz-30 db; 100 kHz to 1 MHz-30 db.
- L. Sound levels shall be guaranteed by the manufacturer not to exceed the following: 15 to 50 kVA-45 db; 51 to 150 kVA-50 db; 151 to 300 kVA-55 db; 301 to 500 kVA-60 db.
- M. Provide weather shield for transformers installed outdoors.
- N. All insulation materials are to be in accordance with NEMA ST20 standards for 220°C UL component recognized insulation system. Transformers are to be manufactured and tested in accordance with ANSI Standard C57.12.91 and NEMA ST20.
- O. Transformer shall be listed by Underwriters Laboratory.
- P. Suppliers asking consideration as an equal shall submit complete, guaranteed performance data and physical dimensions for similar transformers.

2.03 DRY-TYPE TRANSFORMERS

- A. Dry-Type Transformers: ANSI/NEMA ST 20; factory-assembled, air-cooled, dry-type, two-winding, ventilated transformers; ratings as shown on the drawings. Transformers shall be TP-1 rated.
- B. Insulation system and average winding temperature rise for rated kVA as follows:

kVA Rating	Class	Temperature Rise (°C)
1-500	220	115

- C. Case temperature shall not exceed 35°C rise above ambient at its warmest point.
- D. Winding Taps, Transformers Less than 15 kVA: Two 5% below rated voltage, full-capacity taps on primary winding.
- E. Winding Taps, Transformers 15 kVA and Larger: Two at +2 1/2% FCAN and four at -2 1/2% FCBN.
- F. Sound Levels: ANSI/NEMA ST 20.
- G. Basic Impulse Level: 10 kV for transformers less than 300 kVA, 30 kV for transformers 300 kVA and larger.
- H. Ground core and coil assembly to enclosure by means of a visible flexible copper grounding strap.
- I. Mounting: Transformers 75 kVA and less shall be suitable for wall, floor, or trapeze mounting; transformers larger than 75 kVA shall be suitable for floor or trapeze mounting.
- J. Coil Conductors: Continuous copper windings with terminations brazed or welded.
- K. Enclosure: ANSI/NEMA ST 20; NEMA Type 3R with weather shield. Provide lifting eyes or brackets.
- L. Isolate core and coil from enclosure using vibration-absorbing mounts.
- M. Include engraved metal nameplate from manufacturer with transformer connection data. Also provide engraved phenolic nameplate as specified in Section 16195—Electrical Identification.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Install equipment per manufacturer's recommendations and as indicated on the drawings. Coordinate final locations of equipment with CONTRACTOR, and review final locations with ENGINEER prior to setting equipment.
- B. Protect equipment during installation to prevent twisting or deformations, exposure to potentially damaging environments, and work of other trades. Maintain protection until completion of construction.
- C. Set transformer plumb and level.
- D. Use liquidtight flexible metal conduit, 3 feet maximum length, for connections to transformer case. Make conduit connections to side panel or bottom of enclosure only. Provide grounding as required by code.
- E. Mount transformers on vibration isolating pads suitable for isolating the transformer noise from the building structure.

- F. All transformers with a 4-wire secondary shall be grounded as a separately derived system per the NEC.

3.02 ADJUSTMENTS AND CLEANING

- A. Immediately prior to final inspection, make final adjustments and thoroughly clean all equipment. Refinish all damaged enclosures to original quality.

3.03 FIELD QUALITY CONTROL

- A. Check for damage and tight connections prior to energizing transformer.
- B. Measure primary and secondary voltages and make appropriate adjustments.
- C. Visually inspect all equipment and components at time of delivery. Submit report to ENGINEER with list of items to be corrected.
- D. Electrically test and inspect all equipment. Submit final report to ENGINEER. Adjust or replace equipment to comply with manufacturer's specifications and resubmit corrected test report. Testing shall be done in accordance with NETA testing specifications for equipment supplied.

END OF SECTION

SECTION 16470

PANELBOARDS

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Lighting and appliance panelboards.
 - 2. Power distribution panelboards.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 QUALITY ASSURANCE

- A. Manufacturers: Firms regularly engaged in the manufacture of electrical equipment, cable, and wire products of the types and ratings necessary, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 5 years of successful installation experience on projects with electrical equipment installation work similar to that in this project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) as applicable to construction and installation of electrical equipment, cable, wire, and connectors.
- D. UL Labels: All electrical equipment and material shall be listed and labeled by Underwriters Laboratories, except where UL does not include the equipment in their listing procedures.
- E. NEMA/ANSI Compliance: Comply with National Electrical Manufacturers Association, American National Standards Institute, and other standards pertaining to material, construction, and testing, where applicable.

1.03 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All electrical equipment and material shall be received and stored with the factory tamperproof wrapping intact. Provide factory-wrapped waterproof flexible barrier material for factory packaging of equipment and material to protect against physical damage in transit. Do not install damaged equipment or material; remove from project site. Store equipment in factory coverings in a clean, dry, indoor space that provides protection against weather.

PART 2-PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Square D.
- B. Cutler-Hammer.
- C. Substitutions: Under provisions of the General Conditions.
- D. The drawings and specifications were prepared based on Cutler-Hammer. CONTRACTOR shall include in the Bid and shall be responsible for the cost of any changes to accommodate other equipment including but not limited to structural, mechanical, and electrical work. CONTRACTOR shall also pay additional costs necessary for revisions of drawings and/or specifications by ENGINEER.

2.02 PANELBOARDS

- A. Lighting and appliance and power distribution panelboards shall be provided as indicated on the drawings and as scheduled. Panelboards shall be factory-assembled and constructed in accordance with latest NEMA, UL, and NEC requirements and shall bear the UL label. Panelboard cabinets, including boxes and fronts, shall be code gauge galvanized steel. Front covers shall be hinged to allow access to wiring gutters without removal of panel trim (door-in-door type). All fronts shall be complete with cylinder-type lock and catch, and all cylinders shall be keyed alike. Provide two keys per panelboard to OWNER.
- B. Gutter and wiring space shall be provided according to NEMA and UL standards, except provide additional 6-inch-wide or -high wiring space for all double-lugged two or more section panels, feed-through panels; or panels that subfeed other panels at 100 amperes or more. CONTRACTOR shall instruct manufacturer as to where additional wiring space is needed, i.e., top, bottom, right, left, or combination. Where oversized cabinets are necessary for one section of a panelboard, all sections of the panelboard shall be the same size.
- C. Panelboards shall have full ampacity bussing throughout (full length of panel) and shall be full-size in regard to number of possible pole spaces. All lighting and appliance panels shall have poles as shown on the drawings. Power distribution panels shall have number of poles as scheduled or shown on the drawings. Panelboards shall be identified with phases reading left to right and circuits alternately numbered left to right, odd numbers on the left, even numbers on the right.
- D. Panelboards shall have copper bussing. Provide copper ground bus in all panelboards. Ground bus shall be isolated from the panelboard with insulated standoffs.
- E. Lugs for incoming feeders shall be UL listed for use with copper conductors. Lugs shall be sized by CONTRACTOR in accordance with feeder sizes shown. Main lugs or main breakers shall be top- or bottom-mounted to coordinate with incoming feeder entrance location. Location shall be selected by CONTRACTOR.
- F. Branch circuit breakers shall be quick-make, quick-break, with thermal magnetic trip bolt-on type. Multipole breakers shall have common internal trip, UL listed as multipole

units; handle ties are not permitted. All breakers shall be of the same manufacturer as the panelboard and provided at ampere capacity as scheduled.

- G. Lighting and Appliance Panelboards shall be provided as follows (types listed are Cutler-Hammer):

Type	Maximum Voltage	Maximum Bus Amps	Maximum Brk. Amps	Minimum I.C.
Pow R-Line 1a	240	400	100	10,000
Pow R-Line 2a	277/480	400	100	14,000
Pow R-Line 3a	600	800	225	14,000
Pow R-Line 4B	600	1,200	1,200	14,000

- H. All panelboards scheduled with main circuit breakers shall be individually mounted main circuit breaker panels. Main circuit breakers installed in the location of branch circuit devices (branch-mounted mains) are not acceptable.

PART 3—EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which work is to be installed and notify CONTRACTOR of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Panelboards shall be provided as indicated. Final locations, sizes, and mounting of panelboards shall be reviewed with ENGINEER prior to installation.
- B. Each panelboard shall have a typewritten circuit schedule provided on the inside cover. This schedule shall be covered with clear plastic in a metal frame and shall include room numbers, room name, and area or item served by each branch circuit. Room numbers used shall be those used by OWNER, except as otherwise requested by ENGINEER.
- C. Flush panels in finished areas shall have factory-applied primer coat painted trim for finish painting by CONTRACTOR to match the walls.
- D. Prior to final inspection, clean all panelboard interiors, adjust trims, covers, hinges and locks, and refinish covers to original condition.
- E. Panel trim shall have enamel finish as selected by OWNER.
- F. Balance load on all panelboards so phases are balanced to 15% of each other. Reconnect or redistribute circuits and/or circuit breakers to achieve balanced condition. Submit ammeter readings for all panelboard feeders indicating normal operating load and phase balance.

END OF SECTION

SECTION 16475

OVERCURRENT PROTECTIVE DEVICES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Provide overcurrent protective devices as shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 SUBMITTALS

- A. Submit shop Drawings and product data in accordance with provisions of Section 01300—Submittals, including electrical ratings, physical size, interrupt ratings, trip curves, I²t curves, and manufacturer's detailed specifications.

1.03 QUALITY ASSURANCE

- A. Comply with the following requirements:
 - 1. NFPA 70 National Electrical Code (NEC).
 - 2. Local codes and ordinances.
 - 3. Provide overcurrent protective devices by same manufacturer for each type of device.

1.04 SPARE PARTS

- A. Provide the following spare parts to OWNER that match items specified:
 - 1. In three-phase circuits: Three fuses of each type and rating.
 - 2. In single-phase circuits: Two fuses of each type and rating.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01600—Materials and Equipment.
- B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

PART 2—PRODUCTS

2.01 FUSES

- A. General purpose fuses for protection of motors, transformers, feeders, and main service:
 - 1. Use UL Class RK-1 fuses:
 - a. Single end rejection or to fit mountings specified.
 - b. 0-600 ampere rating.
 - c. 200,000 ampere interrupting capacity.

- d. Dual element, time delay.
 - e. Use Bussman Low Peak LPN-RK, or equal: 250 volt rating.
 - f. Use Bussman Low Peak LPS-RK, or equal: 600 volt rating.
 - 2. Use UL Class L fuses:
 - a. Bolt-in type.
 - b. 601-6,000 ampere rating.
 - c. 200,000 ampere interrupting capacity.
 - d. Time delay.
 - e. Use Bussman HI-CAP, KRP-C, or equal: 600 volt rating.
 - f. All fuses shall be provided with indicating-type fuse blocks.
- B. General purpose fuses for protection of motor control circuits, lighting ballasts, control transformers, and street lighting fixtures:
 - 1. Use UL Class CC, fast-acting, single-element fuses.
 - 2. Rated for 0-30 amperes.
 - 3. Provide 200,000 ampere interrupting capacity.
 - 4. Use Bussman Limitron KTK-R, or equal: 600 volt rating.
- C. All lugs shall be rated to accept copper conductors.

2.02 CIRCUIT BREAKERS

- A. General:
 - 1. Comply with UL 489 and NEMA AB1 requirements.
 - 2. Provide thermal and magnetic protection unless noted otherwise.
- B. Feeder Breakers:
 - 1. Circuit breakers shall have a short-circuit interrupting rating as indicated on the Drawings.
 - 2. Solid-state Circuit Breakers: Circuit breakers with frame sizes 225 amperes and larger shall be provided with an integral LED ammeter, electronic sensing, timing, and tripping circuits for adjustable current settings. Provide adjustable long-time pickup, long-time delay, short-time pickup, short-time delay, and instantaneous pickup settings.
 - 3. Field-Adjustable Thermal-Magnetic Trip Circuit Breaker: NEMA AB1. Provide circuit breakers with frame sizes less than 225 amperes with mechanism for adjusting instantaneous pickup setting for automatic operation. Range of adjustment shall be three to ten times the trip rating.
 - 4. Field-Changeable Magnetic-Only Ampere Rating Circuit Breakers/Motor Circuit Protectors: NEMA AB1. Provide circuit breakers with frame sizes 200 amperes and larger with changeable trip units.
 - 5. Ground Fault Protection: Ground fault pickup and delay shall be provided for circuit breakers with frame sizes 1,000 amperes and larger and for all feeders serving equipment outdoors or in wet locations.
- C. All lugs shall be rated to accept copper conductors.

2.03 ENCLOSURES

- A. Circuit breakers shall be installed within switchgear, switchboard, MCC, panelboard, etc. as shown on the Drawings.

- B. Provide fused switch or circuit breaker with enclosures where required as listed below, unless noted otherwise on the Drawings:
 - 1. Indoor: NEMA 12, steel.
 - 2. Outdoor, corrosive, or wet location: NEMA 4X, stainless steel.
 - 3. Hazardous locations: NEMA 7, cast iron.

2.04 ACCESSORIES

- A. Provide accessories as listed below:
 - 1. Handle lock: Include provisions for padlocking.
 - 2. Provide mechanical trip device.

PART 3-EXECUTION

3.01 INSTALLATION

- A. Install overcurrent protective devices in accordance with manufacturer's recommendations.

3.02 ADJUSTMENT

- A. Set and record adjustable settings on circuit breakers to provide selective coordination and proper operation.

END OF SECTION

SECTION 16480

MOTOR CONTROL

PART 1–GENERAL

1.01 SUMMARY

- A. Work Included:
 - 1. Motor control devices, accessories, and general requirements.
 - 2. Manual motor starters.
 - 3. Magnetic motor starters.
 - 4. Solid-state starters.
 - 5. Variable frequency drives.
 - 6. Motor control centers.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

PART 1–GENERAL	1
1.01 SUMMARY.....	1
1.02 REFERENCES	1
1.03 SUBMITTALS.....	2
1.04 OPERATION AND MAINTENANCE DATA	2
1.05 DELIVERY, STORAGE, AND HOLDING	2
1.06 SPARE PARTS	2
1.07 COORDINATION	2
1.08 WARRANTY	3
PART 2–PRODUCTS.....	3
2.01 ACCEPTABLE MANUFACTURERS	3
2.02 MOTOR CONTROL DEVICES, ACCESSORIES, AND GENERAL REQUIREMENTS.....	3
2.03 MANUAL MOTOR CONTROLLERS	5
2.04 MAGNETIC MOTOR STARTERS.....	5
2.05 VARIABLE FREQUENCY DRIVES.....	5
2.06 COMBINATION MOTOR STARTERS.....	9
2.07 MOTOR CONTROL CENTERS	9
PART 3–EXECUTION.....	11
3.01 INSTALLATION	11

1.02 REFERENCES

- A. ANSI/NEMA ICS 6–Enclosures for Industrial Controls and Systems.
- B. NEMA AB 1–Molded Case Circuit Breakers.
- C. NEMA ICS 2–Industrial Control Devices, Controllers, and Assemblies.
- D. NEMA ICS-18–Motor Control Centers.
- E. NEMA KS 1–Enclosed Switches.

F. NEMA PB 1–Panelboards.

G. NEMA PB 1.1–Instruction for Safe Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less.

1.03 SUBMITTALS

A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.

B. Provide product data on motor starters and combination motor starters, VFDs, relays, pilot devices, and switching and overcurrent protective devices.

1.04 OPERATION AND MAINTENANCE DATA

A. Submit operation and maintenance data under provisions of Section 01300–Submittals.

B. Include spare parts data listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.

1.05 DELIVERY, STORAGE, AND HOLDING

A. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

B. Handle in accordance with manufacturer’s written instructions. Lift only with lugs provided for the purpose. Handle carefully to avoid damage to motor control center components, enclosure, and finish.

1.06 SPARE PARTS

A. Furnish spare parts for equipment specified herein as listed in Section 16951–Spare Parts.

1.07 COORDINATION

A. To ensure proper coordination between Section 16940–Controls and Instrumentation, and equipment specified herein, all equipment specified in this section shall be supplied as part of the Controls and Instrumentation package described in Section 16940. This shall include, but not be limited to, equipment such as MCCs, stand-alone VFDs, stand-alone motor controllers, combination starters, and control stations. Drawings for MCCs, combination starters, motor controllers, and motor control equipment shall be provided by the Section 16940 system supplier. Drawings from equipment manufacturers will not be accepted as shop drawings or O&M documents.

B. To ensure proper coordination between CONTRACTOR, equipment manufacturer, and equipment specified herein, all equipment specified in this section shall have shop drawing submittals provided by equipment manufacturer. This shall include, but not limited to, equipment such as stand-alone VFDs, stand-alone combination starters, and control stations. Drawings for combination starters, VFDs, and motor control equipment shall be specific to the project and factory engineered by equipment manufacturer. Generic

drawings from equipment manufacturer will not be accepted as shop drawings or O&M documents.

1.08 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2-PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Motor control devices, motor starters, variable frequency drives, and motor control centers shall be as manufactured by Allen-Bradley, or equal, as approved by ENGINEER and in accordance with substitutions under provisions of the General Conditions. All equipment specified in this section and provided by CONTRACTOR shall be by the same manufacturer.
- B. The drawings and specifications were prepared based on Allen-Bradley. CONTRACTOR shall include in the Bid and shall be responsible for the cost of any changes to accommodate other equipment including, but not limited to, structural, mechanical, and electrical work. CONTRACTOR shall also pay additional costs necessary for revisions of drawings and/or specifications by ENGINEER.

2.02 MOTOR CONTROL DEVICES, ACCESSORIES, AND GENERAL REQUIREMENTS

- A. Auxiliary Contacts: NEMA ICS 2; two field convertible contacts minimum, in addition to seal-in contact, or as necessary.
- B. Push buttons: NEMA ICS 2; heavy-duty, oiltight (30 mm) as shown on the drawings.
- C. Indicating Lights: NEMA ICS 2; heavy-duty, oiltight (30 mm), LED, push-to-test type as shown on the drawings.
- D. Selector Switches: NEMA ICS 2; heavy-duty, oiltight, (30 mm) as shown on the drawings.
- E. Timing Relays: UL listed with On and Timing-Out LEDs.
- F. Contactors: NEMA ICS 2. All contactors for starters specified herein, including VFD and bypass starters, shall be NEMA rated. IEC contactors are not allowed. Contactors shall be Allen-Bradley, Bulletin 509, or equal.
- G. Control Power Transformers: 240/120-volt secondary. Each motor starter shall have a dedicated control power transformer.
- H. Elapsed Time Meters: Redington/Engler 722 series, or equal, 3 inches round, flush door mounted, capable of reading up to 99,999.9 hours, nonreset type.

- I. Relays for motor control circuits, hard-wired control logic, and for loads less than 10 amps shall be general purpose, industrial, square base relays. Relays for lighting circuits and small motor loads shall be industrial, electrically-held power relays. Relays shall meet the following requirements:
 - 1. General purpose relays:
 - a. Configuration: DPDT or 3 PDT as required by system supplier.
 - b. Mounting: DIN rail with screw terminal base socket.
 - c. Voltage: 120 Vac.
 - d. Contact rating: 15 A, minimum; 3/4 hp.
 - e. Operating life: 10 million cycles.
 - f. Status: On-Off flag type or LED indicator.
 - g. UL listed.
 - h. Manufacturer: Allen-Bradley, 700-HB, or equal.
 - 2. Power relays.
 - a. Configuration: Electrically-held, 2-12 poles.
 - b. Mounting: DIN rail, square base.
 - c. Voltage: 120 Vac.
 - d. Contact rating: 20 A continuous; 1 hp.
 - e. Operating life: 10 million cycles.
 - f. UL listed.
 - g. NEMA rated.
 - h. Manufacturer: Allen-Bradley, 700-PK, or equal.
- J. All starters shall be equipped with the auxiliary devices to meet the requirements of the Drawings and Specifications. Each starter operating at other than 120-volt, single-phase shall be equipped with a control transformer providing 120-volt secondary for control power. Transformer shall have fused primary and secondary connections and shall be sized per manufacturer's recommendations. Coils and pilot lights in all starters shall be 120 volts.
- K. Enclosures for Stand-Alone Controllers, Starters, and Control Devices:
 - 1. Enclosures in indoor dry locations shall be NEMA 1 gasketed.
 - 2. Enclosures in indoor damp or wet locations, outdoor locations, or locations below grade shall be NEMA 4X, stainless steel.
 - 3. Enclosures in hazardous locations shall be NEMA 7, cast iron.
 - 4. Starters and disconnect devices for motors shall be installed in common enclosures, combination type, with all accessories such as terminal blocks, push-to-test pilot lights, and H-O-A switches.
 - 5. All wiring within starter enclosures shall be landed on terminal blocks. This shall include internal control wiring, field wiring, and any spare or unused wiring.
 - 6. Control stations shall include devices as shown on the Drawings and specified in Section 16940–Controls and Instrumentation.
- L. Hardwired Motor Controls:
 - 1. Equipment and wiring specified to be hardwired shall be physically wired independent of controllers, programmable relays, and communication systems to allow manual operation in the event of an emergency.
 - 2. Motor control wiring and logic shall be set up such that in the event of a power failure, equipment shall automatically restart if previously running, or remain off if previously off. A manual reset shall not be required to restart equipment following a power failure.

2.03 MANUAL MOTOR CONTROLLERS

- A. Where noted on the drawings, controllers for motors rated 2 hp or less, for operation at 120 V or 240 V single-phase, shall be specification grade wall switches as specified in Section 16141–Wiring Devices.

2.04 MAGNETIC MOTOR STARTERS

- A. Magnetic Motor Starters: NEMA ICS 2; AC general-purpose Class A magnetic controller for induction motors rated in horsepower. Each magnetic starter shall be equipped with a solid-state overload relay, Allen-Bradley E1 Plus, Bulletin 592-EE, or equal. Starters for submersible pumps, mixers, and motors installed outdoors shall include ground fault protection.
- B. Full-Voltage Starting: Reversing or nonreversing type as shown on the drawings.
- C. Coil Operating Voltage: 120 volts, 60 Hz.
- D. Size: NEMA ICS 2; size as shown on the drawings. Contactors shall be Allen-Bradley, Bulletin 505 (Reversing), or Bulletin 509 (Nonreversing), or equal.
- E. Overload relays shall have the following features:
 - 1. Self-powered, solid-state.
 - 2. Up to 5:1 adjustment range.
 - 3. DIP switch settings for trip class and reset mode.
 - 4. Current transformers (no heaters).
 - 5. Thermal memory.
 - 6. Ambient temperature compensation.
 - 7. Visible trip indicators.
 - 8. Phase loss protection.
 - 9. Low energy consumption.
 - 10. Ground fault protection as specified herein.
- F. Magnetic motor starters in motor control centers shall be combined with magnetic only molded case circuit breakers. Magnetic motor starters in combination motor starters or control panels shall be combined with thermal-magnetic molded case circuit breakers.
- G. Through-the-door overload reset pushbuttons shall be provided for all magnetic starters installed in motor control centers and combination motor starters.

2.05 VARIABLE FREQUENCY DRIVES

- A. A variable frequency drive (VFD) system consists of enclosed inverter, motor starter, bypass system when specified, motor, and any additional system control as specified. VFDs shall be provided to match the load type (constant or variable torque) of the specification application, as well as the full load amps of the motor furnished for the project.
- B. System Operating Conditions:
 - 1. 480 Vac \pm 10%.
 - 2. three-phase, 3-wire, any phase sequence.
 - 3. 60 Hz \pm 2%.

4. Storage temperature -25°C to +55°C.
5. Operating temperature 0 to 40°C.
6. Altitude: 3,300 feet above sea level maximum.
7. Humidity: 95% noncondensing maximum.

C. Variable Frequency Unit:

1. Conform to NEMA and NEC standards.
2. CSA and ETL approved and/or UL approved.
3. Overall VFD efficiency shall be a minimum of 96.5%, $\pm 1\%$, at 100% speed and motor load at nominal line voltage. Efficiency rating shall include control power supplies, control circuits, and all cooling fans.
4. Input:
 - a. Withstand without component failure line voltage transients up to 3,000 volts per ANSI C37.
 - b. Design shall include DC bus chokes (two) used in conjunction with one or more capacitors. The DC bus chokes shall be incorporated in the design to minimize line-side harmonics. Magnetic-only designs shall include line filters to limit harmonics to a value no greater than in a system using dual DC bus chokes.
 - c. Include MOV line-side protection.
 - d. Inverter input for six pulse VFDs shall have a true power factor of 0.95 or better at rated load and nominal line voltage throughout the entire speed range.
 - e. Units shall be capable of operating attached to the same power bus without affecting each other's operations. If operational problems occur, an isolation transformer shall be added to each drive at no additional Contract cost.
 - f. Three percent line reactors (drives smaller than 100 hp).
 - g. Drives larger than 40 hp shall include fuses on the drive input. Fuses shall be provided with indicating-type fuse blocks.
5. Inverter Output:
 - a. Inverter shall utilize latest generation IGBTs, be microprocessor based, and isolated from power circuits.
 - b. Match motor specified.
 - c. Three-phase, 3-wire.
 - d. Pulse width modulated wave form with selectable Sensorless Vector, Flux Vector, Volts/Hertz, and adjustable voltage control modes.
 - e. Maximum output 460 volts.
 - f. Frequency 2 to 650 Hz.
 - g. Frequency accuracy $\pm 1\%$ of setting at any point in the specified speed range in a 24-hour period.
 - h. Full load output current shall be rated in excess of the AC motor selected.
 - i. Motor performance:
 - (1) 3% regulation in the manual speed control mode.
 - (2) Normal duty overload rating: 110% continuous current for 1 minute; 150% for 3 seconds.
 - (3) Heavy-duty overload rating: 150% continuous current for 1 minute; 180% for 3 seconds.
 - (4) 110% starting torque minimum.
6. AC drive features:
 - a. Embedded I/O for discrete and analog signals. Analog signals shall include 4-20 mA circuitry mounted on separate printed circuit board to include offset, slope, minimum clamp, and separate acceleration and deceleration adjustments from 0 to 3600 seconds. An internal manual speed potentiometer is to be provided

- for simulating the 4-20 mA input for start-up and maintenance. The circuit is to be designed to accept either a positive or negative signal, grounded or ungrounded.
- b. Slot-based architecture for expansion control and communication cards including Ethernet/IP, ControlNet, DeviceNet, discrete I/O, and analog I/O.
 - c. Real-time clock with battery for date/time stamping of events.
 - d. Integral thermostat control of door-mounted cooling fans.
 - e. Current limit circuitry: 20% to 160% of drive-rated amps.
 - f. Additional features for constant torque units shall include:
 - (1) IR compensation to provide automatic voltage boost or reduction to optimize both starting torque and system input kW.
 - (2) Slip compensation to provide 0.5% regulation with a 100% load change.
 - (3) Inner current loop regulator.
7. Enclosures:
- a. The VFD system shall be furnished with NEMA-rated (as previously specified) floor-mounting MCC structure or structures. MCC structures shall be 91 1/2 inches high by 20 inches deep with a width to accept the unit specified. MCC structure shall incorporate bus where field wiring can be reduced.
 - b. Items to be mounted in the VFD structure or structures:
 - (1) Inverter.
 - (2) Incoming door interlocked, magnetic, molded-case circuit breaker.
 - c. NEMA 4/13 items to be door-mounted on the MCC structure.
 - (1) Control devices, pilot lights, selector switches, etc., as shown on the drawings and specified herein.
 - (2) Interface to the drive shall be via a removable wireless Human Interface Module (HIM) with integral display. This unit shall be a 7-line by 21-character backlit LCD display with graphics capability. HIM shall be used to display drive-operating conditions, fault/alarm indications, and programming information with full text support in multiple languages. The LCD HIM shall be rated IP20/Type 1 and may also be used as a handheld terminal by connecting via a separate cable. The HIM keypads shall include programming keys, drive operating keys (Start, Stop, Direction, Jog, and Speed Control), numeric keys for direct entry and an ALT (alternate function) key to allow drive programming or operating functions to be accessed directly without knowledge of programming structure. The HIM unit shall be mounted on the front of the enclosure door so the operator does not have to open the enclosure to access the HIM.
8. Interlocks:
- a. Fault contact to terminals.
 - b. VFD run contact to terminals.
9. VFD protection:
- a. Adjustable current limit of 20 to 160% minimum.
 - b. Instantaneous overcurrent trip.
 - c. Electronic ground fault and short-circuit protection to shut down the drive without fuse or component failure. Electronic ground- and short-circuit protection to be functional with an input line of 480 Vac $\pm 10\%$. The drive manufacturer is to be prepared to demonstrate ground fault and short-circuit protection without the use of an isolation transformer at drive start-up.
 - d. Input thermal-magnetic ambient compensated circuit breaker with a through-the-door interlocked operator.
 - e. Shut down on loss of any input phase for longer than 3 cycles.
 - f. Output phase sequence to be independent of input phase sequence.
 - g. High- or low-sustained voltage.

- h. 120 Vac grounded control circuits.
- i. Electrically and/or optically isolated low voltage logic.
- j. Corrosion protection:
 - (1) Gold-plated plugs (male and female section) on all printed circuit boards.
 - (2) Protective board coating (conformal coating).
- k. MOV converter protection.
- l. DC bus chokes to minimize line side current harmonics.
- m. Additional features for constant torque units:
 - (1) I²T protection to provide 150% current for one minute.
 - (2) Regenerative override protection.
- 10. VFD adjustments:
 - a. Maximum speed: 50 to 100%.
 - b. Minimum speed: 0 to 70%.
 - c. Current limit: 20 to 110%, 160% on constant torque units.
 - d. Linear acceleration 0 to 3,600 seconds.
 - e. Linear deceleration 0 to 3,600 seconds.
 - f. Output volts/Hz trim.
 - g. Voltage boosts.
 - h. Additional features for constant torque units:
 - (1) Slip compensation.
 - (2) IR compensation.
 - i. All drives shall attempt to restart three times prior to indicating failure.
- 11. Inverter digital or LED diagnostic features:
 - a. Current limit signal.
 - b. Regenerative override signal.
 - c. External fault (ex. motor overload).
 - d. Low line voltage.
 - e. High line voltage.
 - f. Current overload.
 - g. High DC bus voltage.
 - h. Current trip.
 - i. Short-circuit.
- 12. Inverter construction:
 - a. Modular construction ease of maintenance.
- 13. Mount modules on enclosure subpanel:
 - a. Easily accessible from front.
 - b. Interconnect with plugs.
 - c. Construct boards of fire-retardant materials in accordance with NEMA grade FR4 specifications.
- D. Inverter Quality Control:
 - 1. Test all power devices at rated temperature and current for dv/dt, tq, TRR, and leakage.
 - 2. Test integrated circuits for programmed parameters at rated temperature.
 - 3. Treat printed circuit boards for corrosion resistance (conformal coating).
 - 4. Provide gold-plated connections at all points where plugs are used.
 - 5. Thermal cycle all printed circuit boards for 10 cycles between 0° to 65°C prior to installation in inverter.
 - 6. All units to be tested at a rated load and temperature after assembly.
- E. The variable speed drives shall be Allen-Bradley, or equal, Powerflex 753. All drives shall be by the same manufacturer.

- F. Minimum, maximum, and harmonic skip speed setpoints shall be programmed into each VFD. CONTRACTOR shall coordinate these setpoints with the manufacturer of the equipment served. CONTRACTOR shall provide a table listing the minimum, maximum, and skip setpoints programmed into each VFD on the project to ENGINEER and OWNER.
- G. Provide Ethernet communications module (20-750-ENETR) for each drive so that signals noted in the I/O List–Section 16990 are transmitted/received via the plant SCADA system Ethernet network.
- H. Provide manufacturer certified start-up and warranty service for each VFD. Service shall be for 2 years and include all travel and expenses. Warranty service shall commence at the date of substantial completion.

2.06 COMBINATION MOTOR STARTERS

- A. Magnetic motor starters not installed in MCCs shall be individually mounted as specified herein or noted on the drawings. Overloads specified herein shall be combined with molded case circuit breakers, and enclosure type shall be as specified herein or noted on the drawings. Control devices and starter components shall be provided as specified herein or noted on the drawings.
- B. All combination starters shall be factory assembled, wired, and tested. All internal wiring shall be color-coded and numbered, and each wire shall be terminated on terminal strips. Schematic and wiring layout drawings, following JIC Standards, which show all connections to external devices, a complete bill of materials, and a detailed description of operation shall be submitted for each piece of equipment.
- C. Motor Circuit Protector: NEMA AB 1; circuit breakers with integral instantaneous magnetic trip in each pole.
- D. Nonfusible Switch Assemblies: NEMA KS 1; quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle. Provide interlock to prevent opening front cover with switch in “On” position. A defeater shall be provided to bypass this interlock. Handle lockable in “Off” position.
- E. Fusible Switch Assemblies: NEMA KS 1; quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle. Provide interlock to prevent opening front cover with switch in “On” position. A defeater shall be provided to bypass this interlock. Handle lockable in “Off” position. Fuse Clips: Designed to accommodate Class R fuses.
- F. Combination starters shall be Allen-Bradley, Bulletin 513, Cutler Hammer, or Square D.

2.07 MOTOR CONTROL CENTERS

- A. Starters and disconnect devices for motors shall be installed in MCCs except where shown to be remote-mounted at the motor location. Starters and disconnect devices shall be NEMA rated, sized according to application as specified. The MCC and NEMA Class IIB drawings shall be supplied as part of the Controls and Instrumentation package described in Section 16940–Controls and Instrumentation. MCC drawings provided by the MCC manufacturer or through any contractor will not be accepted as shop drawing submittals or

O&M documents. System supplier described in Section 16940—Controls and Instrumentation shall wire and test all MCCs for the functions described herein in its shop prior to shipment to the site. Provide one copy of the test report to ENGINEER.

- B. It shall be assumed that colors will be selected by OWNER and shall be nonstandard. Color shall match that specified for control enclosures specified in Section 16940—Controls and Instrumentation.
- C. Auxiliary contacts shall be of quantity necessary for equipment functions.
- D. MCC design shall be in accordance with latest applicable NEMA standards, shall have been tested to prove adequate mechanical and electrical capabilities, and all major components shall have been individually tested.
- E. Structures shall be totally enclosed, dead front, free-standing vertical sections, 90 inches high and not less than 20 inches deep for front-mounted units and not more than 40 inches deep for units mounted back-to-back. Each vertical section shall have side panels extending the full height of the section to minimize fault-propagation to adjacent sections.
- F. Each structure shall contain a main horizontal bus continuously braced within each section, with rating as specified, and vertical bus feeding unit compartments with a minimum rating of 300 amperes, or as necessary for load and feeder breakers. All horizontal and vertical bus of all MCC sections shall be powered regardless of location of transfer switch, unless otherwise noted. All motor control centers shall include a 1/4-inch by 2-inch ground bus. All bus shall be tin-plated copper and braced to withstand short-circuit currents as indicated.
- G. Structures shall contain a horizontal wireway at the top, isolated from the horizontal bus, and shall be readily accessible by removal of its cover plate. Adequate space for conduit and wiring to enter the top or bottom shall be provided without structural interference and safely accessible without disrupting service.
- H. A vertical wireway with a minimum of 28 square inches of cross-sectional area shall be adjacent to each vertical unit compartment and shall be covered by its own door. These vertical wireways shall be free of all live parts and shall contain vertical wireway tie bars. Exceptions to this are as shown on the drawings.
- I. All units shall be provided with a mechanical interlock with the unit door to prevent access unless the disconnect is in the off position. A defeater shall be provided to bypass this interlock. With the door open, an interlock shall be provided to prevent inadvertent closing of the disconnect.
- J. Padlocking facilities shall be provided to positively lock the disconnect in either the on or off position with from one to three padlocks whether the door is open or closed.
- K. All disconnect operating handles located higher than 6 feet 7 inches above finished floor in the on position (including the MCC pad height) shall be provided with handle extensions. All disconnect operating handles above this height must operate in the vertical direction.
- L. All unit heights shall be of modular dimensions to allow for unit layout, in any combination, without structural interference. Drawout units shall have a tin-plated stab assembly for connection to the vertical bus; no wiring to these stabs shall extend into the bus

compartments. All bus access openings shall be provided with automatic shutters that close when the unit (e.g., starter, breaker) is withdrawn.

- M. Terminal blocks for NEMA Type B assemblies shall be mounted within the unit and shall be factory-wired. Provide a minimum of 25% spare terminals for all terminal blocks furnished.
- N. Control centers shall be NEMA Class II.
- O. Wiring in control centers shall be Type B. All conductors supplying power from the MCC bus to frame-mounted equipment shall have the phases identified as specified in Section 16195—Electrical Identification.
- P. Control centers shall include NEMA 1 gasketed enclosures, unless otherwise noted.
- Q. Remote-mounted controls shall be heavy-duty, oiltight (30 mm) of same quality and type furnished in starters and as shown on the drawings. Equipment controls that require a manual reset shall be accomplished through a reset push button on the enclosure or MCC bucket for the associated piece of equipment. All reset buttons shall be appropriately labeled, including mechanical type.
- R. MCC enclosures must be in accordance with area designations shown on the drawings. All outdoor enclosures shall be NEMA 4T cast construction.
- S. All motor control centers shall be factory-assembled, wired, and tested. All internal wiring shall be numbered, and each wire shall be terminated on terminal strips, including internal spares, field wiring, and spare field wires. Schematic and wiring layout drawings following JIC Standards which show all connections to external devices, a complete bill of materials, and a detailed description of operation, shall be submitted for each piece of equipment.
- T. Arrangement and physical locations of all equipment within each motor control center shall be subject to shop drawing approval.
- U. All components shall be properly identified with laminated engraved nameplates with 3/8-inch-high letters (white or black). Nameplates located outdoors shall be stainless steel screw on type. Nameplates located indoors shall be adhesive type.
- V. Unless otherwise indicated, all conduit entrances shall be through the bottom only.
- W. MCC interrupting rating shall be as shown on the drawings, minimum 42,000 A.
- X. Feeder circuit breakers shall be provided in accordance with the requirements specified in Section 16475—Overcurrent Protective Devices.

PART 3—EXECUTION

3.01 INSTALLATION

- A. Provide motor control equipment in accordance with manufacturer's instructions and drawings.
- B. Motor Starter Panelboard Installation: In conformance with NEMA PB 1.1.

- C. Provide fuses in fusible switches.
- D. Overloads shall be selected on the basis of nameplate horsepower and service factor. Selection of overloads based on horsepower shown on the drawings is not acceptable. Where power factor correction capacitors are provided, overload protection shall be compensated for the lower motor running current because of improved power factor.
- E. All motor control wiring shall be installed in accordance with control wiring diagrams furnished.
- F. Wireways in MCCs shall be used only for routing of conductors. Splices are not allowed within wireways.
- G. All wiring within MCCs shall be landed on terminals inside buckets or equipment compartments and not left unterminated within wireways. This shall include all internal MCC wiring and external field wiring, including spare wires.
- H. Motor Data: Provide neatly typed label inside each motor starter enclosure identifying motor served, nameplate horsepower, full-load amperes, code letter, service factor, and voltage/phase rating.
- I. Control wiring and field wiring (120 V and below) within MCCs shall be separated from power wiring (277 V and above). Where possible, route control and field wiring in separate raceways or wireways. Provide a minimum of 2 inches separation between control wiring, field wiring, and power wiring.
- J. All motors will be provided by other divisions, ready for connections. CONTRACTOR shall be responsible for electrical connections for power and control circuit wiring, proper phase relationships, and correct motor rotation.
- K. Provide motor circuit wiring for each motor from the source of supply to the terminal box on the motor including all intermediate connections at devices such as motor starters, disconnect switches, etc.
- L. All feeder cable connections to motor leads up to 600 volts shall be insulated and sealed with factory-engineered kits, as specified in Section 16120–Wire.
- M. Provide motor starters as specified for all motors, unless shown or specified that starters or control equipment will be furnished by others.
- N. Provide motor circuit disconnect devices for all motors, unless shown or specified that disconnect devices or starters are furnished with other equipment.

END OF SECTION

SECTION 16500

LIGHTING

PART 1—GENERAL

1.01 SUMMARY

- A. Work includes a complete functional lighting system.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. Underwriters Laboratories: Lighting fixtures shall be manufactured in accordance with the standards of the Underwriters Testing Laboratories and shall bear the UL label where practicable. In all cases the lighting fixtures shall be constructed with UL listed components.
- B. Applicable Codes: Fixtures shall be made and installed in accordance with the current version of the National Electrical Code, the Uniform Building Code, the Federal Occupational Safety & Health Act, and other applicable regulations.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) as applicable to construction and installation of electrical equipment, cable, wire, and connectors.
- D. NEMA/ANSI Compliance: Comply with National Electrical Manufacturers Association, American National Standards Institute, and other standards pertaining to material and construction and testing where applicable.

1.03 SYSTEM DESCRIPTION

- A. Intent: It is the intent of these specifications to obtain a completed lighting fixture installation by CONTRACTOR. Completed means lamped, cleaned, adjusted, tested, and ready for occupancy and operation in accordance with the above-indexed paragraphs and in accordance with the other sections of these Contract Documents. It is the responsibility of CONTRACTOR to point out discrepancies, errors, and other problems.
- B. All lighting fixtures are to be provided complete with all necessary accessories for a proper installation. Catalog numbers shown are basic fixture types, and additional features, accessories, and options specified, scheduled or required, are to be included for all fixtures provided.
- C. Provide lamps for all fixtures of size and type as recommended by the fixture manufacturer and as scheduled.

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals. Shop drawings shall include, but not be limited to, the following:

1. Manufacturer's dimensioned scale drawings showing in complete detail the fabrication of all lighting fixtures including overall and detail dimensions, finishes, prefinishes, metal thickness, fabrication methods, support method, ballasts, sockets, type of shielding, reflectors, wiring sizes and insulation types, lenses, provisions for relamping, and all other information to show compliance with the Contract Documents. Manufacturers' catalog cut sheets will not be acceptable.
 2. Installation instructions.
 3. Certified test data and reports.
 4. Shop drawings shall not only clearly indicate the assigned fixture type, but also the equipment location.
 5. Provide a submittal on all lamp types used. Submittal should include, but not be limited to, lumen output, lamp color temperature, and CRI value.
- B. Submit for review samples requested by ENGINEER. The fixtures or components are to be tagged with the project name and the fixture type. Samples will be held by CONTRACTOR available for reference throughout the construction period. Fixtures or components under the Contract shall be identical with the accepted samples. No sample (fixture or component) is to be installed on the Project.
1. In the event the submissions are not approved, the materials will be returned to CONTRACTOR to immediately make a new submission responding to the notations (corrections/revisions) of ENGINEER regarding compliance with the Contract Documents.
 2. All charges for these shipments shall be paid by CONTRACTOR.
 3. The fixture schedule shows the style of the fixture only. CONTRACTOR shall verify the types of ceiling and mounting construction prior to releasing fixtures for fabrication and delivery, and provide fixtures adapted to the ceiling construction used.

1.05 QUALITY ASSURANCE

- A. Standards: Materials, equipment, and parts, as well as workmanship provided under this section, shall conform to the highest commercial standard as specified and as indicated on drawings. Fixture parts and components not specifically identified or indicated shall use materials most appropriate to their intended use or function and as such be resistant to corrosion and thermal mechanical stresses encountered in the normal application and function of the fixtures.
- B. Measuring and Testing Equipment: CONTRACTOR shall have available at all times, instruments for the measurement of voltage, luminaire temperature, lighting level, and fixture brightness level.
- C. Photometric Testing: Samples may be necessary to be subjected to photometric testing at the request of ENGINEER. Luminaire efficiency shall be determined in an integrating sphere not less than 100 inches in diameter. Testing will be at CONTRACTOR's expense.
- D. Manufacturers: Firms regularly engaged in the manufacture of lighting fixtures of the types and ratings for the project, whose products have been in satisfactory use in similar service for not less than 5 years.
- E. Installer: A firm with at least 5 years of successful installation experience on projects with electrical wiring installation work similar to that in this project.

1.06 SPECIAL FIXTURES

- A. Special Fixtures: Designs and/or unique applications of standard units may need samples and mock-ups and other developmental work which is to be specifically provided for in CONTRACTOR's Bid.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Luminaires and lighting equipment shall be delivered to the project complete, including mounting devices, lamps, and components necessary for the proper operation of the equipment.
- B. Marking: All equipment must be clearly and boldly identified as to the fixture type and, where practicable, the fixture location.
- C. Timely Purchasing: Luminaires and associated lamps and other allied equipment shall be ordered in a timely fashion and securely stored to be available to meet the project schedule.

1.08 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2-PRODUCTS

2.01 FABRICATION

- A. Materials: Provide dimensional thickness of metal, plastic, and composite materials so that all fixtures are rigid, stable, and will resist deflection, twisting, and warping under normal installation and relamping procedures.
 - 1. All luminaire housings shall be minimum 22 gauge, cold-rolled steel, unless a heavier gauge is specified.
 - 2. All aluminum extrusion housings shall be minimum 3/16 inches thick.
 - 3. All spun, hydroformed, or sheet aluminum reflectors shall be fabricated from No. 12 aluminum sheets minimum, 15 gauge (0.57 inches), or heavier.
 - 4. All acrylic and polycarbonate lenses and/or diffusers shall be minimum 1/8-inch nominal thickness.
- B. Joints: Provide positive, durable, means of connection at all joints. NO HOLLOW RIVETS shall be used.
- C. Gaskets: Provide neoprene, silicone, rubber, or other appropriate gasketing, stops, and barriers where required, to prevent light leak, control sound and vibration, prevent water leaks, and if pertinent, water vapor penetration.
- D. Edges: Provide finished product with the following minimum qualities:
 - 1. Ground and/or burr-free metal edges.

2. Tight-fitting connections, hinges, and closures.
 3. Clean, neat corners, edges, trims, and frames.
- E. Castings: All cast parts, including die-cast members, shall be of uniform quality; free from blow holes, pores, hard spots, shrinkage defects, cracks, or other imperfections that affect strength and appearance or are indicative of inferior metals or alloys.

2.02 FINISHES

- A. Application: Fixture finishes shall be applied in a manner that will assure a durable wear-resistant surface:
1. Prior to finishing, all surfaces must be free from foreign materials such as dirt, rust, oil, polishing compounds, and mold-release agents.
 2. All castings and extrusions shall be machined, sanded, or similarly treated and given minimum one coat of baked-on clear methacrylate lacquer, unless a painted finish is specified.
 3. Aluminum surfaces exposed to weather (other than anodized reflectors covered elsewhere) shall receive a duronodic or polyester powder paint finish as specified for corrosion resistance.
 4. Sheet steel fixture housings, iron and steel parts, which have not received phosphating treatment ("Bonderizing," or similar process) or are to be utilized in exterior applications, are to be made corrosion-resistant by zinc or cadmium plating or hot-dip galvanizing.
 5. Unless specified to the contrary, all fluorescent fixture housings shall have a complete coverage of white alkyd reflecting enamel, 85% minimum reflectivity, applied by either a spray or dip process, then baked in a temperature-controlled oven until paint is thoroughly cured. Prior to applying the enamel, each metallic surface shall be prepared for painting by using a five-stage hot zinc phosphatizing process.
 6. Plastic refractors diffusers material shall be light stable 100% virgin acrylic, translucent (98% minimum transmission), unless specified otherwise, conforming to minimum standards of IES-NEMA-SPI. Material shall perform as applied in a normal interior environment for a period of 20 years without noticeable deformation, and with a transmission loss not exceeding 5%. Nominal thickness of material shall be 0.125 inches for either extrusions or injections.

2.03 LAMPS

- A. Lamps: Provide new lamps as specified for all lighting fixtures (luminaires) as shown on the drawings.
- B. Lamps shall be manufactured by Phillips, Sylvania Osram, or equal, wattage as indicated on the drawings.
- C. LED Downlight Inserts:
1. All downlight LED lamps shall be of the same manufacturer.
 2. All downlight LED lamps shall be 3500 K color temperature.
 3. All downlight LED sources shall have a minimum CRI rating of 92.
 4. All downlight LED lamps shall be of the wattage specified on the drawings.
 5. Initial downlight LED source lumen output shall be minimum 650.
- D. Site Lighting LED Sources:
1. All site lighting LED sources shall be of the same manufacturer.

2. All site lighting LED sources shall be 6500 K color temperature.
3. All site lighting LED sources shall have a minimum CRI rating of 70.
4. All site lighting LED sources shall be of the wattage specified on the drawings.
5. Initial site lighting LED source lumens shall be minimum 14175.

2.04 WIRING

- A. Minimum Standards: All wiring shall comply with the following standards:
1. All wiring within lighting fixtures or from the splice with the building wiring shall be as specified in Section 16120–Wire.
 2. Wiring between fluorescent lamp holders and associated operating and starting equipment shall be of similar or heavier gauge than the leads furnished with the ballasts.
 3. Wire leads to the receptacle or connector of any “cool-beam” lamp, or any lamp 200 watts or over shall be SF-2 (silicone rubber insulated) stranded wire.
 4. Wiring within fixture construction is to be concealed, except where the fixture design or mounting dictates otherwise.
 5. Wiring channels and wireways shall be free from projections and rough or sharp edges throughout and all points or edges over which conductors must pass and may be subject to injury or wear.
 6. Insulated bushings shall be installed at points of entrance and exit of flexible wiring.

2.05 MARKING OF FIXTURES

- A. Voltage Identification: Fixtures designed for voltages other than 110- to 125-volt circuits shall be clearly marked.
- B. Lamp Types: Markings must be clear and shall be located to be readily visible to service personnel but invisible from normal viewing angles when lamps are in place.

2.06 FIXTURE TRIMS

- A. Trim Details: Provide trim details as shown on the drawings or as specified. The trim finish and dimensions are subject to the shop drawing approval of ENGINEER.
1. Mitered corners shall be smoothed before shop finish is applied. No lapping of trim metal for all flush-mounted ceiling trims for rectangular or square recessed fixtures.
 2. All exposed ceiling trim and inside reveals on all fixtures shall be painted in a color to match ENGINEER's sample.

PART 3–EXECUTION

3.01 INSTALLATION

- A. Install fixtures, lamps, lenses, etc., after building is enclosed, weathertight, and environmental conditions are nominally the same as expected for the complete spaces. All lamps, glassware, reflectors, and refractors shall be clean and free of chips, cracks, and scratches.
- B. Lamps installed for use as temporary lighting shall be replaced with new lamps.

- C. All wall-mounted fixtures and all ceiling-mounted surface fixtures including exit lights, shall be fed through a fixture Stud/Hickey/Nipple assembly and with provisions to prevent fixture turning.
- D. All fixtures shall be securely and adequately supported and installed. Recessed lighting fixtures in suspended ceilings or in plaster ceilings shall have channel and supports provided by CONTRACTOR as described in the finish section of these specifications. CONTRACTOR shall provide plaster frames.
- E. Surface- or pendant-mounted fixtures shall be attached to and supported from structural part of the building in a manner acceptable to ENGINEER. Fixtures shall be supported by not less than two supports for each fixture. Where fixtures are to be suspended, they shall be mounted on steel channel with the channel supported directly to the structure by a minimum of 3/8-inch rod inside rigid conduit stems. Any fixture which has an individual fixture weight of greater than 25 pounds shall have safety cable installed, in addition to other support means. Cable shall be 3/16-inch airplane cable. All fittings and connectors shall be compression type. Cables must be secured to the building structure and to a point or points on the fixture to ensure against falling parts.
- F. Industrial-type fixtures in unfinished areas which are near obstructions such as ducts and pipes shall be suspended so that the bottom of the fixture is no higher than the bottom of the obstruction. All fixtures in each room should be located at the height of the lowest fixture, but not lower than 8 feet 0 inches A.F.F. Fixtures shall not be located until the locations of these obstructions are determined, and fixtures shall be accessible after installation of other equipment.
- G. Recessed fixtures in suspended ceilings shall have final connections made up of a length of flexible conduit not in excess of 6 feet, with THHN conductors and green ground conductor.
- H. Provide inscription for exit and area of rescue assistance signs to conform to codes.
- I. Metal decking shall not be pierced for fixture support.
- J. All wiring for dimming circuits shall have an individual neutral provided for each circuit.
- K. All fixture whips shall be constructed of minimum No. 12 AWG conductors.

3.02 SUPPORTS

- A. Mounting Frames: Provide mounting frames (plaster frames for example), as necessary, for installation and as called for under other sections. Frames are to be finished matte white baked enamel unless otherwise noted.
- B. Mounting Accessories: Provide bars, angles, or other attachment devices for all recessed fixtures. Fixtures shall be securely attached so there is minimum possible movement up, down, or sideways. Fixtures shall be mounted to permit access to wiring. Fastening devices shall be of a positive, locking type, and shall not require the use of special tools to apply or remove. Tie wires shall not be used in place of fastening devices.
- C. Fire Codes: Where necessary to meet Code requirements, enclosure housings shall be constructed to provide a 1-hour fire rating.

- D. **CONTRACTOR Responsibility:** CONTRACTOR shall verify all ceiling conditions from the drawings and furnish appropriate mounting details for each lighting fixture.
- E. **Pendant Mounting:** Provide pendant- or surface-mounted fixtures with required mounting devices and accessories, including hickey, stud extensions, ball aligners, canopies, and stems. Coordinate locations of fixtures in mechanical areas. Provide mounting stems on pendant fixtures of the correct length to uniformly maintain the fixture heights shown on the drawings, or established in the field.
- F. **Adequate rigid, sturdy support** shall be provided to prevent possibility of fixture falling. Surface and pendant fixtures must be supported with two supports per 4-foot section, except that continuous 8-foot chassis shall have three supports. All pendants must have swivel aligners located at the top ends; pendants shall be minimum 3/8-inch threaded rod inside 3/4-inch rigid steel conduit, unless specifically indicated otherwise on the drawings, painted on jobsite. Support surface-mounted fixtures from structural members other than ceiling tees by providing Unistrut members laid across main ceiling tees or by attachment directly to structure.

3.03 ADJUSTMENT

- A. **Focusing/Adjustment:** After the installation of lighting fixtures is completed, fixtures so requiring (both interior and exterior units), shall be adjusted after dark under the observation of OWNER.

3.04 CLEANING

- A. **Installation Sequence:** Lighting fixture mounting frames, plaster rings, etc., are required to be installed prior to the finishing assembly which shall not be installed until the Project is "broom clean." When the fixture location or construction cannot permit sequential installation, CONTRACTOR shall carefully protect all reflectors, lenses, flanges, and other visible surfaces.
- B. **Cleaning:** Before final acceptance by OWNER, all protective (strippable) coatings, dust, finger marks, paint spots, and any other materials deleterious to the appearance or functioning of the lighting fixtures must be removed. Abrasive cleaners are not permitted.

3.05 FINAL INSPECTION

- A. Upon completion of the installation, lighting equipment must be in first-class operating order and free from defects in condition and finish:
 - 1. At time of final inspection, all fixtures and equipment must be installed and lamped with new lamps, and be complete with all lenses, diffusers, reflectors, side panels, louvers, or other necessary components.
 - 2. Fixtures shall be completely clean and free from finger marks, dust, plaster, or paint spots.
 - 3. Any reflectors, lenses, diffusers, side panels, or other parts damaged prior to the final inspection, shall be replaced at no expense to OWNER.
 - 4. Housing shall be rigidly installed and adjusted to a neat flush fit with the ceiling.

END OF SECTION

SECTION 16930

INSTRUMENT AND COMMUNICATION WIRE AND CABLE

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: This specification contains the requirements for instrument wire and cable as opposed to electrical power wire and cable.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 QUALITY ASSURANCE

- A. Standards: Comply with standards specified in this section as listed in Division 1.
- B. Qualifications of Installers: Use skilled workers who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work.

1.03 PRODUCT HANDLING

- A. Instrument cable shall be furnished in lengths as necessary.
- B. Reels, coils, or package rolls of instrument cable shall be identified with the project name and other tagging identification as called for.

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300—Submittals.

PART 2—PRODUCTS

2.01 GENERAL

- A. All materials of construction for cable and wire shall be compatible and noncontaminating.
- B. Unless otherwise noted in these specifications, the requirements herein listed shall be strictly adhered to.

2.02 SHIELDED PAIR CABLING FOR ELECTRONIC INSTRUMENTS

- A. Shielded pair cabling shall have stranded, tinned-copper conductors, No. 16 AWG, twisted with 2-inch lay.
- B. Insulation of conductors shall be 15 mil, 90°C minimum PVC, rated for 300 volts. Materials shall equal or exceed UL 13 requirements for physical properties.

- C. Color coding shall be manufacturer's standard or as stated.
- D. The outer jacket shall be flame-retardant and weather- and ultraviolet-resistant PVC, 35 mils thick, and 80°C minimum rating. The outer jacket shall contain a ripcord and shall equal or exceed the requirements of UL 1277. Cable shall be UL labeled as power-limited circuit cable.
- E. If the cabling is not installed in steel conduits, a 100% coverage shield shall be applied over the insulated conductors. The shield shall consist of a 0.85 mil minimum thickness aluminum mylar tape. A No. 18 AWG, seven-strand, tinned-copper drain wire shall be furnished in continuous electrical contact with the shield.
- F. Single-pair shielded cables shall be Belden 9316, or equal.

2.03 INDUSTRIAL ETHERNET CABLE

- A. For communication with plant SCADA systems and equipment in supervisory control centers, motor control centers, switchgear, switchboards, control panels, etc., and areas with 480-volt power, provide 600 V-rated, 4-pair **shielded** twisted-pair cabling meeting EIA/TIA Category 5e requirements. Transmission characteristics of the cables shall meet full Category 5e performance criteria as defined by the referenced TIA/EIA documents and this specification. Jacket color shall be teal.
- B. Industrial Ethernet cable shall be minimum 24 AWG with PVC jacket and foil and braided shield. The cable outer jacket shall be industrial-grade PVC with a nominal overall cable diameter of 0.32 inches. Cable shall be nonplenum rated, UL listed, 600 V UL AWM rated, and be as manufactured by Rockwell Automation Bulletin 1585-C8HB, Belden 7958A, or equal.
- C. Patch cables shall be provided premanufactured by the cable manufacturer or connector manufacturer in sufficient length to connect associated equipment to any port on the patch panel or switch. Field-attached plugs shall be insulation displacement type and be by the same manufacturer as the cable or connector.
- D. Faceplates shall be Leviton 42080 series Ivory, or equal, in "finished areas." Stainless steel shall be used in all other areas and be Leviton 43080 series, or equal.
- E. Cat 5e shielded connectors shall be Leviton 5S180-SH5, or equal.
- F. Patch panels shall be shielded and include star washers and grounding lug, with stainless steel plate to provide grounding continuity between connectors and panel. Shielded patch panels shall be Leviton 4S255 series, or equal.

PART 3—EXECUTION

3.01 INSTALLATION REQUIREMENTS AND SPECIAL CONSIDERATIONS

- A. Shielded pair and industrial Ethernet cabling specified in this section shall be installed in conduit, and may not be run free-air or in nonmetallic tubing such as innerduct.

- B. Since magnetic interference is produced by currents flowing through conductors and electrical equipment, any instrument wire run near electric motors, generators, transformers, induction heaters, circuit breakers, motor starters, power lines, or AC power and control cables may need additional magnetic shielding.
- C. Armor may be necessary on instrument cables installed in ladder-type trays or in nonmagnetic electrical ducts:
 - 1. Electronic instrument wiring, pairs and triplets, and thermocouple lead extension wire, single pair. There shall be a steel wire armor of 24 gauge AISI 1006 soft annealed steel wire covering the inner jacket.
 - 2. Electronic instrument wiring, multiconductor cables, and thermocouple lead extension wire, multipair. There shall be a flexible interlocked galvanized steel armor covering the inner jacket.
 - 3. The armor shall be covered by a flame-retardant and weather- and ultraviolet-resistant PVC, outer jacket 35 mil minimum thickness and 80°C minimum rating. The outer jacket shall contain a ripcord and shall equal or exceed the physical characteristics of UL 1277. Cable shall be UL labeled as power limited cables.

3.02 GROUNDING

- A. Shielded cabling shall be installed in accordance with manufacturer's instructions and to minimize electrical noise and interference to associated instruments. Refer to instrument manufacturer's instructions for additional requirements.
- B. Ends of signal wires shall be sealed to prevent the migration of moisture into the cable and to prevent unintentional grounding of the shield at the open end. Seal signal wires using a minimum 1-inch piece of heat-shrink tubing installed over PVC jacket and individual wires, and heat-shrink to a watertight fit.
- C. All shields must be grounded.
- D. Shields shall be grounded at one point only. Shielded cabling shall be isolated and left open at the instrument. The single-pair electronic instrument cable shields shall be connected to the multipair electronic instrument cable overall shield in the field junction box.
- E. Cable shield grounds shall be isolated from control system signal grounds, except at instrument system grounding electrodes.
- F. See grounding riser diagram in the drawings for additional requirements.

END OF SECTION

SECTION 16931

STRUCTURED CABLING

PART 1—GENERAL

1.01 SUMMARY

- A. This section describes the requirements for providing telecommunications and data cabling, termination components, and related subsystems as part of a structured cabling system.
- B. Related Sections and Divisions: Applicable provisions of Division 1 shall govern Work in this section.

1.02 SYSTEM DESCRIPTION

- A. CONTRACTOR shall provide and test all cabling and components necessary for a complete and functional structured cabling system as specified herein and shown on the Drawings. Conduit, raceway, and outlet boxes for the "Information Outlets" shall be provided by CONTRACTOR.
- B. CONTRACTOR shall ensure cable runs from the telecommunications room or equipment room to the information outlets do not exceed 90 meters.
- C. Provide all faceplates, patch panels, equipment racks, equipment trays, and all other items necessary for telephone and computer connections at all specified data outlets and patch panel(s).

1.03 REGULATORY REFERENCES

- A. All Work and materials shall conform in every detail to the rules and requirements of the National Fire Protection Association, the National Electrical Code and present manufacturing standards.
- B. All materials shall be listed by UL and shall bear the UL label. If UL has no published standards for a particular item, then other national independent testing standards shall apply and such items shall bear those labels. Where UL has an applicable system listing and label, the entire system shall be so labeled.
- C. The cabling system shall comply with the following standards:
 - 1. ANSI/IEEE C2—National Electrical Safety Code.
 - 2. NFPA 70—National Electrical Code (currently-adopted edition).
 - 3. TIA/EIA Standards 526-14A (OFSPT-14A), 526-7 (OFSPT-7), TIA-568-C.0, TIA-568-C.1, TIA-568-C.2, TIA-568-C.3, TIA-569-B-1, TIA-606-A-1, and TIA J-STD-607-A.
 - 4. IEEE/ANSI 142—Recommended Practice for Grounding of Industrial and Commercial Power Systems.

1.04 SUBMITTALS

- A. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.
- B. Initial Project Documentation: CONTRACTOR shall submit the following project documentation for approval prior to ordering materials or equipment. See Section 01300–Submittals for requirements. Provide documentation in a binder tabbed for easy identification. Catalog sheets with complete technical data for all materials being furnished. Exact part/model numbers being provided shall be highlighted.
- C. Provide load calculations showing battery runtimes and UPS sizing, including all equipment specified herein.
- D. Provide scaled equipment rack and communication cabinet elevations showing all installed equipment.
- E. Record Drawings:
 - 1. Three complete sets of drawings shall be provided by CONTRACTOR prior to final acceptance.
 - 2. These drawings shall contain the following:
 - a. Any changes made to the system during installation.
 - b. Location of all information outlets including jack number identification.
 - c. Scaled equipment rack and communication cabinet elevations showing all installed equipment.
- F. Technical Manual: CONTRACTOR shall furnish three complete technical service manuals containing the following:
 - 1. Description of maintenance/programming procedures for all equipment and systems.
 - 2. All warranty information required by manufacturers for submission of warranty claims for all equipment installed.
 - 3. All testing reports according to Paragraph 3.03.

1.05 QUALIFICATIONS

- A. CONTRACTOR shall have at least four years of experience in the installation of similar systems. CONTRACTOR shall provide documentation upon request to certify that all assigned staff have attended training courses corresponding to the type of cabling and equipment specified herein.
- B. CONTRACTOR shall currently be licensed to install low voltage electronic cabling systems in the state of the project.
- C. CONTRACTOR shall currently meet all manufacturer's requirements for the provision and installation of all equipment specified herein.
- D. CONTRACTOR shall utilize and have technicians trained in the utilization of the following test equipment: fiber optic cable and copper cable certification equipment.

1.06 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.

PART 2—PRODUCTS

2.01 GENERAL

- A. All products Bid shall be the most current and up-to-date versions available, unless otherwise specified.
- B. CONTRACTOR shall provide written notification to ENGINEER, prior to Bidding, of any discrepancies in model or part numbers specified herein.
- C. CONTRACTOR shall provide written notification to ENGINEER, prior to Bidding, of the announced discontinuation or replacement of any items specified herein.
- D. CONTRACTOR shall provide all necessary power supplies, mounting hardware, and accessories required to install the materials specified herein.

2.02 MOUNTING EQUIPMENT

- A. Wall-Mounting Backboard: Provide a 48-inch by 96-inch, 3/4-inch plywood backboard permanently attached to the wall with flush mounting hardware where shown on the Drawings. Treat the plywood with a nonconductive, fire-resistant coating. Mount the backboard 24 inches above the finished floor.
- B. Equipment Racks and Frames: Provide one 7-foot, open-frame, free-standing equipment racks. Racks and wall frames shall meet EIA/ECA-310-E. Equipment racks shall be as manufactured by Systimax Solutions Model RK3-45A, or equal.
- C. Cable Management:
 - 1. Horizontal cable management troughs shall be as manufactured by Systimax Solutions Model HTK-19-SS-2U, or equal. Horizontal cable management troughs shall be mounted above and below each grouping of two rows of data patch panels.
 - 2. Vertical cable management troughs shall be as manufactured by Systimax Solutions Model VCM-DS, with door size as required, or equal. Provide two vertical management troughs for each rack. Maximum fill for vertical cable management troughs shall be 60 percent. Cable management troughs shall be double-sided with black doors.
 - 3. Cable management hardware shall be by the same manufacturer as the rack.

2.03 DATA AND VOICE STATION CABLES

- A. Provide 4-pair, unshielded twisted-pair (UTP) cabling with solid copper-only conductors meeting EIA/TIA Category 6 requirements for horizontal station cabling. Cable shall be listed as suitable for use in locations indicated on the Drawings. Provide Systimax

Solutions 2071E Low Smoke PVC, or equal, for Plenum environments, or Systimax Solutions 1071E PVC, or equal, for nonplenum environments.

- B. Refer to the Execution Section which details the required performance criteria for the permanent link of which the cable is a part. The jacket color for data cables shall be blue. The jacket color for voice cables shall be white.
- C. Provide nylon cable ties or reusable hook-and-loop bands, where specified herein, for bundling cables.
 - 1. Nylon cable ties for bundling cables above suspended ceilings shall be Panduit Model CBR, or equal. Provide plenum-rated, natural-color cable ties in plenum environments. Provide black cable ties in all other environments.
 - 2. Reusable hook-and-loop banks for all other areas shall be Panduit Tak-Ty Model HLT, or equal, black.

2.04 INDUSTRIAL ETHERNET CABLE

- A. For communication with plant SCADA Systems and equipment in supervisory control centers, motor control centers, switchgear, switchboards, control panels, etc., and areas with 480-volt power, provide 600 V-rated, 4-pair **shielded** twisted-pair cabling meeting EIA/TIA Category 6 requirements. Transmission characteristics of the cables shall meet full Category 6 performance criteria as defined by the referenced TIA/EIA documents and this specification. Jacket color shall be teal.
- B. Industrial Ethernet cable shall have minimum 23 AWG solid, copper only, with PVC jacket and foil and braided shield. The cable outer jacket shall be industrial-grade PVC with a nominal overall cable diameter of 0.32 inches. Cable shall be nonplenum rated, UL listed, 600 V UL AWM rated, and be as manufactured by Belden 7953A, or equal. Provide a shielded connector on one end of each cable.
- C. Patch cables shall be provided premanufactured by the cable manufacturer or connector manufacturer in sufficient length to connect associated equipment to any port on the patch panel or switch. Field-attached plugs shall be insulation displacement type and be by the same manufacturer as the cable or connector. Shielded cables shall have a shielded connector on one end.

2.05 CONNECTORS

- A. Data and Voice Station Cables:
 - 1. Faceplates: Systimax Solutions: L-Type flush-mounted, ivory, or equal, in finished areas and stainless steel, SP-L-Type, flush-mounted, or equal in all other areas.
 - 2. Jacks: Systimax Solutions M1BH-H-246 (Ivory) for voice and MGS400-318 (Blue) for data, or equal.
- B. Industrial Ethernet Cable:
 - 1. Faceplates: Systimax Solutions L-Type, flush-mounted, ivory color, or equal, in finished areas and stainless steel SP-L-Type, flush-mounted, or equal, in all other areas.
 - 2. Jacks: Leviton 5S180-SH5 shielded connector, or equal.
- C. Copper (RJ-45) Patch Panels: Patch panels shall be used as a termination point for data as shown on the Drawings and specified herein. Patch panels shall be as manufactured by

Systimax Solutions, Model 1100GS3, or equal. Each patch panel shall include the following:

1. Jack ports to meet Category 6 Standards.
2. UL listing.
3. Universal T568A and T568B wiring cards for 110-style IDC terminations.
4. Cable retainer at back of panel.
5. Front window labeling for port identification.
6. 19-inch wall mounting as required for each location/installation.
7. Port quantities shall be as necessary to connect all data jacks shown on the Drawings.
8. Minimum of 25% spare ports available for future terminations.

D. Voice (Horizontal) Termination Field:

1. In the Electrical Room, each horizontal voice cable shall be terminated on high-density 110 blocks utilizing 4-pair termination clips.
2. Each horizontal row shall be capable of terminating six 4-pair groups (Station Cable).
3. The blocks shall identify pair position by color designation.
4. The blocks shall maintain the cable's pair twists as closely as possible to the point of mechanical termination.
5. The blocks shall maintain Category 6 performance according to the referenced EIA/TIA documents. All pair combinations shall be considered, with the worst-case measurement being the basis for compliance.
6. Each row of blocks shall be provided with a label holder used to identify the cable pairs.

PART 3-EXECUTION

3.01 GENERAL

- A. Install all equipment and components in accordance with manufacturer's written instructions, in compliance with NEC, ANSI/TIA/EIA-569-B-1 and with recognized industry practices, to ensure that all items comply with these Specifications and serve intended purposes.
- B. Refer to Section 16195-Electrical Identification for cable and equipment label requirements.
- C. All cabling shall be installed in accordance with good engineering practices as established by the TIA/EIA and the NEC. Cabling shall meet all applicable local, state, and federal building codes. Voice and Data Cables shall be terminated according to the TIA-568B standard:
 1. Pair 1: Pins 5 and 4.
 2. Pair 2: Pins 1 and 2.
 3. Pair 3: Pins 3 and 6.
 4. Pair 4: Pins 7 and 8.
- D. Record serial numbers of all items provided that are serialized prior to final acceptance.
- E. All items must be complete as specified prior to final acceptance. CONTRACTOR shall ensure cabling meets all specifications and standards defined herein.

3.02 INSTALLATION

A. Cabling—General:

1. Provide cabling runs from the patch panel or voice termination blocks each jack shown on the Drawings. A dedicated cabling run shall be utilized for each jack.
2. Provide faceplates and connections in outlet boxes for all jacks shown on the Drawings.
3. Excess cable behind faceplate connections shall be pulled back into junction boxes in ceiling space and secured in such a manner as to prevent damage to cabling or connections. Provide minimum 10 feet of slack in all cables. Manage slack for future use.
4. A minimum 10-foot loop of extra cable shall be secured in accessible ceiling space for jacks installed in movable partition walls or power poles.
5. Provide grommets and/or bushings in conduit ends to prevent damage to insulation and conductors.
6. Use cable tie tool to install cable ties with appropriate pressure to the cable bundles so as not to damage cable and provide a smooth cut of excess cable tie. Cable ties shall be able to be turned freely around the bundle of cable. Cable bundles shall be limited to 3-inch diameter.
7. Use hook-and-loop bands to secure cable bundles.
8. Tighten connectors and terminals including screws and bolts in accordance with the equipment manufacturer's published torque-tightening values for equipment connectors.
9. Allow sufficient slack in cable to prevent premature deterioration of cable system components, and to assist in the maintenance and servicing of cable and/or other building systems and components. Avoid excessive and sharp bends. Ensure manufacturer's recommended pulling tensions are not exceeded.
10. Fittings or connections are allowed only at the input and output of devices. Splicing shall not be accepted in any cable run. The entire cable run shall be replaced in all such instances.
11. All wiring shall be installed in conduit.
12. Conduit, raceways, and outlet boxes shall be provided as required.
13. All station cables installed through and within process areas shall be installed in conduit.
14. Station cables may be routed free-air only above suspended ceilings. All cables shall be installed parallel to building structure and shall be supported by J-hooks at a minimum of every 5 feet.
15. J-hooks and all other cable supports shall be fastened to structural members (beams, concrete deck, etc.). Cables shall not be supported by, or tied to, piping, conduit, the suspended ceiling, or other mechanical systems.
16. All horizontal station cables shall be routed and installed to avoid light fixtures and other sources of EMI.
17. All horizontal station cables shall be concealed within conduit, raceways, or above ceilings. No cables shall be installed where they will be exposed.

- #### B. Grounding:
- Ground all equipment according to manufacturer's instructions, NEC requirements, EIA/TIA 568B, and EIA/TIA 607.

END OF SECTION

SECTION 16940

CONTROLS AND INSTRUMENTATION

PART 1–GENERAL

1.01 SUMMARY

- A. Related Sections and Divisions:
1. Applicable provisions of Division 1 shall govern work in this section.
 2. Section 16941–Controls and Instrumentation Drawings.

PART 1–GENERAL	1
1.01 SUMMARY	1
1.02 SYSTEM DESCRIPTION	1
1.03 QUALITY ASSURANCE	2
1.04 SUBMITTALS	2
1.05 OPERATION AND MAINTENANCE DATA	3
1.06 DELIVERY, STORAGE, AND HOLDING	3
1.07 DESCRIPTION OF THE TWIN LAKES WASTEWATER TREATMENT PLANT	3
1.08 CONTRACTOR AND SYSTEM SUPPLIER GENERAL REQUIREMENTS	4
1.09 SYSTEM STARTUP AND SUPPORT SERVICES	5
1.10 MCC CUBICLE MODIFICATIONS	6
1.11 COMMON REQUIREMENTS ALL EQUIPMENT	7
1.12 GENERAL CONTROL ALGORITHMS	7
1.13 WARRANTY	8
PART 2–PRODUCTS	8
2.01 INDUSTRIAL CONTROL AND POWER RELAYS	8
2.02 FLOAT SWITCHES	9
2.03 LIMIT SWITCHES	10
2.04 CURRENT SWITCHES	10
2.05 OPEN CHANNEL FLOW TRANSMITTERS	10
2.06 ULTRASONIC LEVEL TRANSMITTERS	11
2.07 THERMOSTATS	12
2.08 TVSS DEVICES FOR CONTROL PANELS AND INSTRUMENTATION EQUIPMENT	12
2.09 INTRINSIC SAFETY BARRIERS	12
2.10 GAS DETECTORS AND MONITORING SYSTEMS	12
PART 3–EXECUTION	16
3.01 MAIN MCC MOTOR CONTROL CENTER NOTES	16
3.02 MCC-1 MOTOR CONTROL CENTER NOTES	20

1.02 SYSTEM DESCRIPTION

- A. The work includes furnishing, delivering, installing all items furnished, and placing in operation for Controls, instruments, and alarm/monitoring devices specified herein.
- B. System Supplier shall be defined as the fabricator, assembler, and supplier of all system components. This shall include, but not be limited to, all control instrumentation, and monitoring equipment as specified, required interface hardware and wiring, system

drawings, MCC modifications at the wastewater treatment plant, and MCC modification drawings as necessary. See paragraph 1.09 for other System Supplier requirements.

- C. CONTRACTOR shall inspect all work. The Bid shall include everything necessary to obtain a complete installation operating in accordance with these specifications and the Bidder's proposal, whether necessary items and equipment are contained in, or are remote from the enclosures furnished under this Contract. All responsibility for this system ultimately lies with CONTRACTOR.
- D. CONTRACTOR shall be responsible for the placing of circuits and making of electrical connections in accordance with System Supplier-furnished drawings, instructions, and field supervision to ensure proper connection. CONTRACTOR shall include the services of a System Supplier factory engineer to supervise making of connections to power supplies, motor leads, communication circuits, existing control equipment, and any other connections external to the new control equipment; adjust the equipment; initiate and check operation; instruct OWNER's electrician on operation and maintenance of the equipment; and place the equipment in operation in a manner fully satisfactory to ENGINEER. This shall include on-site review of software/hardware controls from the central control point.
- E. Any auxiliary interface relays and controls needed for completion of this project, if not specifically called for, shall be by System Supplier. All switches and control and indicating lights associated with the control panels shall be new and installed in the starter panels. All new telemetry equipment and controls shall be installed in new or existing supervisory control panels as necessary by System Supplier at locations where space allows for the new equipment in the remote stations and at the wastewater treatment plant.

1.03 QUALITY ASSURANCE

- A. System Suppliers: Firms regularly engaged in the design and manufacture of SCADA systems of the size and complexity specified herein, and whose systems have been in satisfactory use in similar service for not less than 10 years.
- B. Installer: A firm with at least 10 years of successful installation experience on projects with SCADA system design and installation work similar to that required for the project.
- C. Code Compliance: Comply with National Electrical Code (NFPA 70) and any and all local codes as applicable to construction and installation of electrical wiring devices, material, and equipment herein specified.
- D. UL Labels: Provide control panels, power supplies, controllers, relays, wire, and connectors that have been listed and labeled by Underwriters Laboratories.
- E. NECA Standards: Comply with applicable portions of National Electrical Contractor's Association's Standard of Installation.

1.04 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's data, specifications, and installation recommendations for each item specified herein.

- B. Submit shop drawings and product data in accordance with provisions of Section 01300–Submittals.
- C. Provide product data on all equipment and devices specified herein as well as wiring schematics for all systems.
- D. The following shop drawing information shall be provided in booklet form:
 - 1. Detailed catalog information, descriptive literature, and specifications of hardware. All items being provided must be specifically noted on this literature.
 - 2. All field devices and instruments.
 - 3. Project implementation plan, including information on project organization, project management, engineering, programming, configuration, training, startup, and maintenance services. Plan shall include key personnel on project, point of contact, and communication protocol.
 - 4. Overall remote alarm and monitoring schematic showing all controllers, radio, antennae, and hardware applicable to the system.
 - 5. Wiring diagrams for all MCCs, including modification drawings for existing equipment.
 - 6. Control narratives.

1.05 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provision of Section 01300–Submittals.
- B. Include spare parts data listing, source and current prices of replacement parts and supplies, and recommended maintenance procedures and intervals.
- C. Submit Operation and Maintenance Manuals in accordance with Division 1. The following additional information shall apply:
 - 1. Manuals shall contain, but not be limited to, all system hardware.
 - 2. Hardware section shall include:
 - a. Safety precautions, physical description, functional description, operating procedures, theory of operation, maintenance instructions, checkout procedures, troubleshooting procedures, servicing, and removal and replacement procedures.
 - b. Wiring schematic and logic diagrams, parts list, and point-to-point wiring.
 - c. Listing of all hardware timers installed in MCCs, as well as the ranges set on each timer. Listing shall also include actual timer setting after completion of startup.

1.06 DELIVERY, STORAGE, AND HOLDING

- A. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- B. Handle in accordance with manufacturer's written instructions. Lift only with lugs provided for the purpose. Handle carefully to avoid damage to components, enclosure, and finish.

1.07 DESCRIPTION OF THE TWIN LAKES WASTEWATER TREATMENT PLANT

- A. The Twin Lakes Wastewater Treatment Plant is a secondary treatment plant. The project generally includes improvements to the influent screening and grit removal systems.

- B. System Supplier shall be responsible for the development of all required process control functions based on the algorithms described in this specification. Many systems encompass several algorithms for system components. A listing of major process areas that will need control development for operation is as follows.
 - 1. Influent Screening System.
 - 2. Headworks Building monitoring systems..
- C. All process equipment shall be monitored and alarmed using the existing Mission M800 and M110-800 Remote Monitoring System as described herein and listed in the I/O tables shown in Section 16990–SCADA System I/O Listing. The I/O listed shall be wired to spare inputs at the existing Remote Monitoring System.

1.08 CONTRACTOR AND SYSTEM SUPPLIER GENERAL REQUIREMENTS

- A. Components, peripherals, interconnections, cabling, power supplies, and services necessary to form a complete, integrated system shall be identified and provided by CONTRACTOR. CONTRACTOR shall be responsible for reviewing the wiring diagrams and control sequences for equipment provided under other divisions of these specifications and coordinating all interface requirements. CONTRACTOR shall submit to ENGINEER, in writing, any deficiencies noted during this review. Any changes required by CONTRACTOR because of failure to complete this review shall be the responsibility of CONTRACTOR, at no increase in cost to OWNER.
- B. CONTRACTOR shall be responsible for complete coordination in providing all equipment, sensors, and meters supplied with input and output signals, and contacts that are compatible with the systems as specified herein. CONTRACTOR shall also be responsible for complete coordination with manufacturers of other systems specified in other divisions of these specifications with which an interface is required. The Contract drawings and I/O Listing are symbolic representatives of the required work. It is not intended that the drawings show all appurtenances. CONTRACTOR shall provide a complete and working system according to the true intent and meaning of the drawings, specifications, and standard industry practices.
- C. To ensure a complete and totally integrated system, a single manufacturer who has experience in furnishing similar monitoring and control systems of the same complexity and size for municipal wastewater treatment facilities shall provide specified equipment and services. The system proposed to meet this specification shall be of field-proven design, incorporating manufacturer's standard equipment and software. Service of all peripheral devices shall be provided by the manufacturer of the process monitoring and control system.
- D. Design and specification of devices and completed system shall conform to applicable portions of the latest edition of the National Electrical Code (NEC).
- E. Control panels shall bear a serialized UL label indicating that it is UL approved as an assembled unit. Panels that have individual components that are UL labeled, but do not have UL approval as an assembled unit are not acceptable.
- F. Training Program:
 - 1. Submit training plan including course syllabus, personnel who will be conducting the training, and schedule.
 - 2. Provide materials, instructors, and workbooks to complete the training.

3. Training courses shall include:
 - a. Operator and Maintenance training at WWTP. Course length minimum 4 hours. Training shall utilize equipment specified herein following installation and field testing. Training session schedule shall be acceptable to OWNER.
 4. Manufacturer's training shall be directed to system and equipment operation, maintenance, troubleshooting, and equipment and system-related areas other than the process itself.
- G. System Supplier shall meet the following minimum requirements:
1. System Supplier shall have a full-time staff of qualified programmers who are knowledgeable in the configuration of equipment being provided.
 2. System Supplier shall have training capabilities and shall have conducted training courses in programming and maintenance.
 3. System Supplier shall have an adequate inventory of spare parts.
 4. System Supplier shall have a full-time staff of qualified service technicians.
 5. System Supplier shall be responsible for the programming and documentation of the equipment.
 6. System Supplier shall be responsible for all details that may be necessary to properly install, wire, adjust, and place in operation a complete and working system.
 7. System Supplier shall be responsible for all coordination between the system and the field devices, instrumentation equipment, motor control centers, and equipment furnished with other divisions of this specification. This shall include interface with existing equipment.
 8. System Supplier shall have a UL panel shop located inside the System Supplier's own facilities.
- H. All components shall be standard make acceptable to OWNER, with one manufacturer to provide all similar components. The Base Bid System Supplier shall be Wunderlich-Malec Environmental, (630) 827-0200, Frakes Engineering, (317) 577-3000, or Instrument Control Systems, (763) 559-0568. See General Conditions and Supplementary Conditions regarding substitutions to the Base Bid system suppliers. System Supplier is required to attend a preconstruction conference at ENGINEER's office for coordination with Headworks Control Panels 1 and 2 System Suppliers.

1.09 SYSTEM STARTUP AND SUPPORT SERVICES

- A. After being notified by CONTRACTOR that the equipment has been installed and is in full operating condition and ready for test, ENGINEER will make a 1-day trip to check operation. If the equipment does not operate according to the specifications, there will be deducted from payments due CONTRACTOR the amount of \$1,500 a day for ENGINEER's time plus travel and expenses, for all additional field and office time spent by ENGINEER checking equipment. OWNER will deduct the amount of these charges from payments made to CONTRACTOR and will make payment to ENGINEER.
- B. Final acceptance and payment will not be made until the system has operated satisfactorily for a minimum of 30 consecutive days. CONTRACTOR shall include in Bid field follow-up to ensure proper adjustments and operation during the first year following project final completion. Prior to beginning the 30-day test, the following criteria shall be met:
1. Satisfactory operation of equipment control.
 2. Satisfactory operation of peripheral equipment.
 3. Checking and calibrating of systems have been completed.

- C. CONTRACTOR, through System Supplier, shall provide the following support services:
1. Field Service Engineer: Field service engineer shall be responsible for programming of equipment in the factory and at the site. Field service engineer shall be present at the factory acceptance test and be present for startup of all systems and available throughout the entire construction process until final completion. Service technicians sent for system startup will not be acceptable. Support shall include on-site time. Services shall include, but not be limited to:
 - a. Commissioning, installation, startup, and testing of equipment.
 - b. Revising or rewriting manuals to incorporate an installed and accepted system.
 - c. On-site training.
 - d. Modifications to equipment programming.
 2. In-factory support shall include consultation following the acceptance testing and shipment. Services shall include, but not be limited to:
 - a. Researching and answering questions related to the system operation, documentation, and system use and functions.
 - b. Revising or rewriting manuals.
 3. Post-startup support shall include follow-up services during the 1-year period following final acceptance. Service shall include follow-up recalibration and replacement of defective equipment, as well as additional training, software modifications, and control configurations as requested by OWNER. This shall include two separate 1-day visits for work on-site other than warranty repair or replacement of defective equipment.

1.10 MCC CUBICLE MODIFICATIONS

- A. New enclosures shall be front access only, minimum No. 12 gauge steel, and hinged doors, rotating lockable handle, 3-point latch on each supervisory equipment compartment door (not screws or bolts), with top and bottom bolts actuated by one rotating handle on large doors. Provide door stop kit for all panel doors, data pockets for wiring diagrams, and minimum 18-inch, bolt-on, LED light and door switch. Panels over 48 inches wide shall have two lights. Painting shall include phosphate treatment, zinc chromate iron oxide primer, baked rust-inhibiting enamel, gray interior, and OWNER-selected exterior color. All doors and panels shall be gasketed. All louvers shall be filtered with forced-air cooling as necessary by the supplier for conditions where installed. New enclosures shall be a minimum of 24 inches wide, 20 inches deep, and 90 inches high and shall be as manufactured by Hoffman or Saginaw. MCC structures are not acceptable. Where installed next to motor control centers, enclosure painting shall match that of the MCC.
- B. Indicating devices shall be at eye level, minimum 48 inches, maximum 60 inches, from floor to bottom of device.
- C. Plastic wiring troughs shall have removable covers. Maximum fill for wiring troughs shall be 60%. All wiring in supervisory enclosures and control panels not in wiring troughs shall be bound with continuous-type spiral windings. Terminal strips located adjacent to wiring troughs shall have a minimum of 1 1/2 inches between terminal strip and wiring trough. All wiring labels shall be able to be read without removing wiring trough covers.
- D. Tubing and instruments containing water shall be in separate compartments located and constructed so that leakage or spray at 100 psi pressure cannot touch electrical conductors or devices. Leakage shall be conducted to the floor in duct or pipe.
- E. All exterior wiring shall be terminated at master terminal strips. Terminal strips shall be located either at the bottom or on the side of the cubicle and shall not hinder access to

other equipment in the cubicle. Splices are not allowed within enclosures or wireways. All wiring shall be labeled at each end with corresponding numbers. This numbering shall be shown on the shop and record drawings.

- F. All door-mounted devices shall be furnished flush-mounted, and an exterior-engraved phenolic nameplate worded by OWNER (upon receipt of shop drawings) shall be provided for each compartment, device, and light. All components within the enclosures shall be identified with interior-mounted engraved labels. Labels shall be installed on the enclosure back panel and not on the device or wireway. Devices shall be grouped for each device or unit being controlled.

1.11 COMMON REQUIREMENTS ALL EQUIPMENT

- A. All indicating and recording devices shall be electric or electronic.
- B. All indicating and control devices mounted on MCC enclosure doors (e.g., meters, gauges, electronic indicators, pilot lights, selector switches, VFD HIMs, OIPs, etc.) shall be located at eye level, minimum 48 inches, maximum 60 inches, from floor to bottom of device. Indicating devices on MCC enclosure doors located in the bottom half of an MCC section shall be mounted as high as possible.
- C. All motor control power shall be 120 volts with suitable circuit protection (fuses or breakers). Fuse holders shall be provided with integral LEDs to indicate when the fuse is blown.
- D. If enclosure and panel space is needed for future installation of devices and lights, the enclosure and panel shall be constructed for such installation. Supports shall be provided for future equipment, and panel openings shall be made and covered with neat cover plates matching the panel.
- E. Where equipment is necessary to perform a function as called for in one part of this specification, it shall be provided, even though the detailed enumeration at various control points may omit listing that equipment.
- F. Where a certain accuracy of sensing and transmitting levels or flows and controlling operations are called for, means must be provided to read or determine that the levels or flows are within the limits or accuracy specified of the sensing, transmitting, and controlling devices. Where no accuracy is specified, but a knowledge of levels is necessary to set operating points, an indicating device of accuracy consistent with the operation of the system is required.
- G. All control and auxiliary relays shall have indicating LEDs. All timing relays shall have On and timing Out LEDs.

1.12 GENERAL CONTROL ALGORITHMS

- A. In general, the following is a definition of I/O at each MCC:
 - 1. Run from MCC or auxiliary starter contact (dry contact).
 - 2. Fail from MCC or starter auxiliary O.L. contact (dry contact).
 - 3. Command Run Maintained start or as required (dry contact).
 - 4. Hand-Auto from MCC or Controller Selector Switch (dry contact), feedback to SCADA.

5. Any command to operate shall be acted upon within 5 seconds, and any status feedback signals shall be received within 5 seconds.
- B. All alarm contacts or system changes following a command must exist or not change for 0 to 5 seconds to activate the SCADA to the alarm state.
- C. Float switches shall include time delays to prevent intermittent starting and stopping and/or alarming because of bouncing floats.
- D. Solenoid valves and small motorized ball valves that are not provided with position indication (e.g., opened, closed) shall include hardcoded time delays on the open and close signals to allow operation of the solenoid or valve.

1.13 WARRANTY

- A. Standard One-Year Warranty: Unless otherwise stated below, manufacturer shall warrant the equipment to be free from defects in material and workmanship for a period of one year from the earlier of either the date established for partial utilization in accordance with GC14.04 and 14.05, as modified in the Supplementary Conditions, or Substantial Completion of the project.
- B. In addition, see the gas detectors and monitoring system section (if applicable) for additional warranty information.

PART 2-PRODUCTS

2.01 INDUSTRIAL CONTROL AND POWER RELAYS

- A. Industrial control and power relays shall be installed in supervisory control centers, motor control centers, industrial control panels, and where required by System Supplier. Relays used to interface with PLC I/O shall be terminal style, interposing/isolation relays. Relays for motor control circuits, hardwired control logic, and for loads less than 10 amps shall be general purpose, industrial, square base relays. Relays for lighting circuits and small motor loads shall be industrial, electrically held power relays.
- B. Relays shall meet the following requirements:
 1. Interposing/isolation relays:
 - a. Configuration: SPDT or DPDT as required by System Supplier.
 - b. Mounting: DIN rail with screw terminal base socket.
 - c. Voltage: 120 Vac, or as required by System Supplier.
 - d. Contact rating: 8 A (DPDT), 16 A (SPDT).
 - e. Operating life: 10 million cycles.
 - f. Status: On-Off flag-type or LED indicator.
 - g. UL listed.
 - h. Manufacturer: Allen-Bradley, 700-HK, or equal.
 2. General purpose relays:
 - a. Configuration: DPDT or 3PDT as required by System Supplier.
 - b. Mounting: DIN rail with screw terminal base socket.
 - c. Voltage: 120 Vac.
 - d. Contact rating: 15 A, minimum; 3/4 hp.
 - e. Operating life: 10 million cycles.

- f. Status: On-Off flag-type or LED indicator.
 - g. UL listed.
 - h. Manufacturer: Allen-Bradley, 700-HB, or equal.
- 3. Power relays:
 - a. Configuration: Electrically held, 2-12 poles.
 - b. Mounting: DIN rail, square base.
 - c. Voltage: 120 Vac.
 - d. Contact rating: 20 A continuous; 1 hp.
 - e. Operating life: 10 million cycles.
 - f. UL listed.
 - g. NEMA rated.
 - h. Manufacturer: Allen-Bradley, 700-PK, or equal.
- 4. Duplex Alternation Relay.
 - a. Configuration: DPDT or DPDT cross wired.
 - b. Mounting: DIN rail with screw terminal base socket.
 - c. Voltage: 120 Vac.
 - d. Contact Rating: 10 A, minimum; 1/8 hp.
 - e. Operating Life: 10 million mechanical operations and 100,000 electrical operations.
 - f. Status: Output position indicating LEDs.
 - g. Control: Three-position toggle switch permitting selection of normal duplexing action, locking in the A-B sequence, or locking in the B-A sequence. Alternation shall be able to be toggled every time a 120 Vac control signal is removed.
 - h. Manufacturer: Diversified Electronics, ARA, or equal.

2.02 FLOAT SWITCHES

- A. Float switches when specified herein, shown on the drawings, or necessary to complete an operating system shall be as follows:
 - 1. The float switches shall be mercury free and consist of a 304 stainless steel housing 5 1/2-inch diameter, stainless steel mounting clamp, a flexible two-conductor cable with a CPE jacket, and a potted SPST magnetic reed switch. Provide switch configuration (NO or NC) as required. The electrical load for the switch contacts shall be 100 VA at up to 250 volts. Float switches shall include a two-conductor cable 16 AWG with fine strands made for heavy flexing service and underwater use. Cable length shall be 50 feet minimum for a continuous run to the terminating control panel. A green grounding wire shall connect internally to the float housing. Floats shall be Siemens Model 9G-EF, Anchor Scientific Model SSTNM, or equal.
 - 2. Weight and buoyancy shall be such that contaminants will not result in the float switch changing operating level more than 1-inch.
 - 3. Operating temperature range shall be -31° to 194°F.
- B. Floats shall be mounted on a stainless steel cable with PVC-covered anchor according to manufacturer's instructions. All mounting hardware shall be stainless steel and provided with the floats.
- C. Provide stainless steel kellum grips for each float cable.
- D. All floats indicated on the drawings or specified herein to be intrinsically safe in design shall be as such. Provide intrinsically safe barriers as specified herein.

2.03 LIMIT SWITCHES

- A. Limit switches (door switches) where called for on the drawings shall be Square D, Class 9007, Type C, or equal. Door switches in NEMA 4X areas shall be Omron, model D4B-21**N. CONTRACTOR shall provide head and body style to fit application. Limit switches shall be wired intrinsically safe.

2.04 CURRENT SWITCHES

- A. Current switches where called for shall be Veris Industries, Hawkeye H800HV, or equal, and include DIN rail mounting hardware.

2.05 OPEN CHANNEL FLOW TRANSMITTERS

- A. Open channel flow transmitters shall utilize an ultrasonic, noncontacting method to measure flow through the flume with an accuracy of $\pm 0.25\%$ of measurement. Flow calculation shall be selectable from a "standard" exponent for the given open channel type, but it shall allow field entry of user-selected exponents. A 4-digit local display shall allow operator-selected display of flow rate, level, and 8-digit totalized flow. Flow rate shall be field-programmed for units of flow, gpm, mgd, etc. All adjustments shall be by digital values in EEPROM, providing memory storage through power failures without requiring battery backup. Totalized flow shall be stored to EEPROM to minimize lost data during a power outage. Field adjustments shall include zero, span, blanking, dampening, low flow totalization suppression, and sampler or totalizer pulse output. Programming shall be performed by a removable, portable keypad module maintaining NEMA 4 enclosure integrity during programming or when removed from the enclosure. Output shall be isolated 4-20 mA_{dc} into a 750-ohm load and a pulse output proportional to totalized flow.
- B. Transducers in non-rated locations shall be FM approved and have an operating range of -40°F to 200°F.
- C. Transducers in Class I locations shall be FM approved as being suitable for Class I, Division 1, Groups A, B, C, and D locations and shall have an operating range of -4°F to 200°F.
- D. The transducer radiating surface shall be self-cleaning and shall operate without problems in moisture, dust, and frost. It shall be suited for continuous submergence, with the interconnecting cable splice made above flood level. The transducer shall be designed to amplify acoustic output 54 times over normal outputs. Transducer beam angle shall be 6 degrees. CONTRACTOR shall coordinate transducer mounting height with maximum water level to be monitored.
- E. The interconnecting cable between transducer and the amplifier shall be provided with the instrument, limited to 1,200 feet, and be run in a conduit separate from other wires or cables. The transducers shall be temperature compensated through an integral temperature sensor. Provide a 120 Vac power source for the amplifier.
- F. The amplifier enclosure shall house the amplifier and digital indicator in a NEMA 4 enclosure suitable for indoor or outdoor installation. For all transmitters located outdoors, transmitter shall be installed in a fiberglass hinged-cover NEMA 4X enclosure with window and quick-opening hasps. Enclosure shall include TVSS devices specified herein,

anti-condensation heater, Hoffman DAH Series, or equal, with temperature control switch model ATEM. Provide sun shield for all transmitters located outdoors.

- G. The open channel flow transmitter shall be Siemens, Hydro Ranger, or equal.

2.06 ULTRASONIC LEVEL TRANSMITTERS

- A. Ultrasonic level transmitters shall utilize an ultrasonic, noncontacting method to measure level with an accuracy of $\pm 0.25\%$ of measurement. Level calculation shall be selectable from a "standard" exponent for the given tank type but shall allow field entry of user-selected exponents. A four-digit local display shall allow operator-selected display of level, and level shall be field-programmed for units of feet, inches, etc. All adjustments shall be by digital values in EEPROM, providing memory storage through power failures without requiring battery backup. Levels shall be stored to EEPROM to minimize lost data during a power outage. Field adjustments shall include zero, span, blanking, and dampening. Programming shall be performed by a removable, portable keypad module, maintaining NEMA 4X enclosure integrity during programming or when removed from the enclosure. Output shall be 4-20 mA_{dc} into a 350-ohm load and a pulse output.
- B. Transducers in non-rated locations shall be FM approved and have an operating range of -40°F to 200°F.
- C. Transducers in Class I locations shall be FM approved as being suitable for Class I, Division 1, Groups A, B, C, and D locations and shall have an operating range of -40°F to 200°F.
- D. The transducer radiating surface shall be self-cleaning and shall operate without problems in moisture, dust, and frost. It shall be suited for continuous submergence, with the interconnecting cable splice made above flood level. The transducer shall be designed to amplify acoustic output 54 times over normal outputs. Transducer beam angle shall be 6 degrees. Where differential level measurement is required, two transducers shall be provided. CONTRACTOR shall coordinate transducer mounting height with maximum water level to be monitored.
- E. The interconnecting cable between transducer and the amplifier shall be provided with the instrument, limited to 1,200 feet, and be run in a conduit separate from other wires or cables. The transmitters shall be temperature compensated through an internal temperature sensor within the transducer. Provide a 120 Vac power source for the amplifier.
- F. The amplifier enclosure shall house the amplifier and digital indicator in a NEMA 4 enclosure suitable for indoor or outdoor installation. For all transmitters located outdoors, transmitter shall be installed in a fiberglass hinged-cover NEMA 4X enclosure with window and quick opening hasps. Enclosure shall include TVSS devices specified herein, anti-condensation heater, Hoffman DAH Series, or equal, with temperature control switch model ATEM. Provide sun shield for all transmitters to be located outdoors.
- G. The level transmitters shall be Siemens, HydroRanger, or equal.

2.07 THERMOSTATS

- A. Thermostats associated with the SCADA system as specified in Section 16990–SCADA System I/O Listing shall be provided by System Supplier as specified in Section 16141–Wiring Devices. Thermostats not specified in Section 16990–SCADA System I/O Listing shall be provided as part of Section 16141–Wiring Devices.

2.08 TVSS DEVICES FOR CONTROL PANELS AND INSTRUMENTATION EQUIPMENT

- A. The incoming power supply of each control panel supervisory control center shall be protected with a transient voltage surge suppression (TVSS) device. TVSS unit shall be as manufactured by Citel Model DS4xS, or equal. Surge protection shall be provided for all phases and neutral.
- B. Each analog signal entering or leaving a supervisory control panel and leaving a building shall be provided with a DIN-rail mounted surge protection device as manufactured by Citel, Model DLA-24D3, or equal. Each transmitter shall be provided with a surge protection device as manufactured by Citel Model TSP15M, or equal, on the output and Citel Model DS4xS, or equal, on the power supply. Surge protection shall be provided for all phases and neutral.

2.09 INTRINSIC SAFETY BARRIERS

- A. Instrumentation equipment located in hazardous areas as noted on the drawings shall be wired to intrinsic safety barriers. Safety barriers for discrete devices shall include indicating LED and be DIN-rail mounted, as manufactured by Phoenix Contact, Model MACX MCR-EX-SL-2NAM, (voltage as required), PR Electronics, Model 5202B2, or equal. Safety barriers for analog devices shall be DIN-rail mounted, as manufactured by Phoenix, Model MACX MCR-EX-SL-RPSSI, PR Electronics, Model 5104B, or equal.

2.10 GAS DETECTORS AND MONITORING SYSTEMS

- A. Combustible and hazardous gas detectors shall consist of transmitters with displays and remotely mounted sensors. Sensor/transmitter unit shall be designed so that the sensors are able to be field-replaced without the use of tools and without exposing personnel to explosion hazards. Detectors shall be capable of detecting hydrogen sulfide (H₂S) and methane gas. Provide transmitters and sensors as shown on the drawings.
- B. Sensors shall contain all relevant sensor information (sensor manufacturer, date, gas type, gas range, calibration data, and default relay parameters) within the sensor module. Sensor shall not require a battery or other power source to maintain the sensor information.
 - 1. Methane gas sensors shall be IR Combustible type.
 - a. The sensor shall be a microprocessor-based infrared point gas detector capable of continuously monitoring 0% to 100% IR combustible methane gas LEL.
 - b. The sensor shall be based on dual wavelength, heated-optics technology, providing definitive compensation for temperature, humidity, and aging effects.
 - c. The sensor shall be capable of complete calibration using oxygen only. Sensor shall be capable of performing a full calibration by zero adjustment only one time per year.
 - d. The sensor shall detect an above 100% LEL condition (over-range). This condition shall be indicated on the transmitter display.

- e. The sensor shall not contain a flashback arrestor/frit.
 - f. Sensors shall have $\pm 2\%$ full scale/year zero drift stability, $\pm 1\%$ full scale repeatability, $\pm 2\%$ full scale accuracy for $< 50\%$ LEL, $\pm 5\%$ full scale accuracy for $> 50\%$ LEL, and a response time to a 90% change in gas concentration of < 2 sec with the sensor guard removed.
 - 2. H₂S sensors shall be electrochemical type, capable of monitoring 0 to 100 PPM. The oxygen sensors shall be electrochemical type, capable of monitoring 0 to 25% oxygen. The sensor shall detect an above 100 PPM or 25% O₂ condition (over-range). This condition shall be indicated on the transmitter display. Sensors shall have $< 5\%$ full scale/year zero drift stability, $< 10\%$ full scale/year span drift per year, $\pm 1\%$ full scale repeatability, $\pm 3\%$ full scale accuracy for $< 50\%$ PPM, $\pm 5\%$ full scale accuracy for $> 50\%$ PPM, and a response time to a 90% change in gas concentration of < 30 sec with the sensor guard removed.
 - 3. The sensors shall allow for a gas check without alternate calibration/gas check fittings or cap.
 - 4. Sensors shall be equipped with a 3/4-inch NPT conduit entry with explosion-proof conduit assembly containing terminal strip for wiring to sensor.
 - 5. Sensors shall be constructed of 316 stainless steel and be rated for Class I, Division 1, Groups B, C, and D locations.
 - 6. Each sensor shall be mounted at height and orientation recommended by sensor manufacturer.
- C. Transmitter shall be microprocessor-based, capable of powering and monitoring up to three remote sensors (maximum two combustible gas sensors).
- 1. Transmitter shall accept 24 Vdc power.
 - 2. Transmitter shall be equipped with Modbus output representative of % LEL and H₂S PPM, one latching alarm relay output for each sensor connected to the transmitter (up to three per transmitter), and one "Trouble" relay output. Relay outputs shall be rated for 5 amps at 120 Vac.
 - 3. Transmitter shall have a four-digit LED display with decimal place that shall continuously scroll through the % LEL and H₂S PPM sensed by each of the sensors. The units of measurement shall be displayed on the LED display.
 - 4. Transmitter shall be equipped with green and red LEDs. LEDs shall allow operator to quickly determine if the display/sensor combination is in normal operation, a fault condition is present, or an alarm condition is present.
 - 5. Transmitter shall have a 316 stainless steel enclosure and be rated for Class I, Division 1, Groups B, C, and D locations. Enclosure shall be equipped with minimum four 3/4-inch NPT conduit entries.
 - 6. Transmitter shall be Ultima X3 with relays as manufactured by MSA, or equal. Provide MSA, Ultima, or equal, 120 Vac to 24 Vdc power supplies as required to power all transmitters. Power supplies shall be in a separate enclosure and be rated for Class I, Division 1, Groups B, C, and D locations.
- D. The sensor and transmitter shall be suitable for use in -40°F to 140°F ambient temperatures and 0% to 95% relative humidity (noncondensing).
- E. The sensor and transmitter shall be guaranteed throughout the correction period as a complete unit. The LEL sensor shall have a minimum 2-year warranty. The LEL sensor IR source light shall have a minimum 10-year warranty.

- F. Provide two IR controllers for future calibrations and one calibration test kit with regulator and carrying case. Provide two sets of gas cylinders for each gas being monitored, one for use during set-up and training and one to be turned over to OWNER for future use.
- G. Local Alarm Devices:
1. Nonhazardous location, NEMA 4X, and Class I, Division 2 Warning Strobes:
 - a. General: The light shall provide a visual warning in the area where a potential hazard may occur in nonrated spaces, NEMA 4X locations, and Class I, Division 2 locations.
 - b. Required Features:
 - (1) Beacon light: LED, field-selectable between steady-on mode and flashing mode, field-set to 65 flashes per minute.
 - (2) Lens color: Red.
 - (3) Enclosure: UL listed; NEMA 4X and Class I, Division 2, Groups C and D.
 - (4) Power: 120 Vac.
 - c. Product and manufacturer: Model 105XBRMR120A as manufactured by Edwards Signaling, or equal.
 - d. Provide Model 105BX outlet box attachment and 105BM mounting bracket as manufactured by Edwards Signaling, or equal, for wall mounting alarm light.
 2. Class I, Division 1 warning strobes:
 - a. General: The light shall provide a visual warning in the area where a potential hazard may occur in Class I, Division 1 locations.
 - b. Required features:
 - (1) Beacon light: Xenon Lamp, 800,000 peak candela, 65 flashes per minute.
 - (2) Lens color: Red.
 - (3) Enclosure: UL listed; NEMA 4X and Class I, Division 1, Groups C and D.
 - (4) Power: 120 Vac.
 - c. Product and manufacturer: Model 116EXMSTR-N5 as manufactured by Edwards Signaling, or equal.
 - d. Provide Model 116EX-C wall mounting module and 116EX-B wall mounting bracket as manufactured by Edwards Signaling, or equal, for wall mounting alarm light.
 3. Safety sign:
 - a. General: Provide safety signs for mounting next to each warning strobe. Provide stainless steel mounting hardware as required.
 - b. Required features:
 - (1) Material: Laminated phenolic.
 - (2) Sign size: Minimum 16 inches wide by 12 inches high, 1/8-inch thick.
 - (3) Letter size: Minimum 3 inches high.
 - (4) Color: Yellow background with black lettering.
 - (5) Engraving for all warning light locations:
First Line: "DANGER: COMBUSTIBLE,"
Second Line: "GAS DETECTED."
 4. Horn:
 - a. General: The horn shall provide an audible warning in the area where a potential hazard may occur.
 - b. Required features:
 - (1) Decibel output: Minimum 100 dB at 10 feet.
 - (2) Enclosure: Cast aluminum/epoxy-coated corrosion-resistant housing.
 - (3) Horn diaphragm: Stainless steel.
 - (4) Power: 120 Vac.

- c. Product and manufacturer: Series 876-N5 in nonrated and NEMA 4X locations and Series 878EX-N5 in Class I locations, as manufactured by Edwards Signaling, or equal.
 - 5. Provide a Silence Pushbutton Control Station located adjacent to each interior horn/strobe location for silencing the alarm horn(s). The silence pushbuttons shall be momentary type and be Allen-Bradley Bulletin 800H, heavy-duty pushbuttons in a NEMA 4X control station. Control stations in hazardous locations shall be wired intrinsically safe as specified herein.
- H. Room/Building Entrance Indication and Warning Devices:
- 1. Nonhazardous location entrance lights:
 - a. General: The lights shall provide warning in nonhazardous locations outside the area when a potential hazard exists to prevent entry into that area.
 - b. Provide stackable 70 mm control tower light 855T base unit with light modules specified herein as manufactured by Allen-Bradley, or equal.
 - c. Stackable signal light assembly shall consist of a base unit with two LED light modules. The top light module shall be a red strobe light set to flash at 65 flashes per minute. The bottom light module shall be a steady-on green beacon light. Minimum light diameter shall be 2.7 inches. Stackable light assembly shall be suitable for outdoor use with lenses facing up.
 - d. Input power to signal lights shall be 120 Vac. Both lights shall have separately energized power leads located in the fixture base.
 - e. Provide vertical mounting bracket model 855T-BVMR as manufactured by Allen-Bradley, or equal, as required to mount stackable signal light assembly in a vertical configuration.
 - 2. Class I, Division 2 entrance lights:
 - a. General: The lights shall provide a visual warning in Class I, Division 2 locations outside the area when a potential hazard exists to prevent entry into that area.
 - b. Required features:
 - (1) Beacon lights: LED, field-selectable between steady-on mode and flashing mode; Red light shall be field-set to 65 flashes per minute and green light shall be field-set to steady-on mode.
 - (2) Lens colors: Red, Green.
 - (3) Enclosure: UL listed; NEMA 4X and Class I, Division 2, Groups C and D.
 - (4) Power: 120 Vac.
 - c. Product and manufacturer: Red and green lights shall be a Model 105XBRM*120A as manufactured by Edwards Signaling, or equal.
 - d. Provide model 105BX outlet box attachment and 105BM mounting bracket as manufactured by Edwards Signaling, or equal, for wall mounting each entrance light.
 - 3. Class I, Division 1 entrance lights:
 - a. General: The lights shall provide a visual warning in Class I, Division 1 locations outside the area when a potential hazard exists to prevent entry into that area.
 - b. Required Features:
 - (1) Red Beacon Light: Xenon Lamp, 800,000 peak candela, 65 flashes per minute.
 - (2) Green Beacon Light: LED, field-selectable between steady-on mode and 13 flashing modes, field-set to steady-on mode.
 - (3) Enclosure: UL listed; NEMA 4X and Class I, Division 1, Groups C and D.
 - (4) Power: 120 Vac.

- c. Product and manufacturer: Red light shall be a model 116EXMSTR-N5 as manufactured by Edwards Signaling, or equal. Green light shall be a Model 116EXMLEDG-Y6 as manufactured by Edwards Signaling, or equal.
 - d. Provide Model 116EX-C wall mounting module and 116EX-B wall mounting bracket as manufactured by Edwards Signaling, or equal, for wall mounting each entrance light.
4. Safety Sign:
- a. General: Provide safety signs for mounting next to each set of warning lights. Provide stainless steel mounting hardware as required.
 - b. Required features:
 - (1) Material: Laminated phenolic.
 - (2) Sign size: Minimum 16 inches wide by 12 inches high, 1/8-inch thick.
 - (3) Letter size: Minimum 3 inches high.
 - (4) Color: Yellow background with black lettering.
 - (5) Engraving for all warning light locations:
 - First Line: "GREEN: NORMAL,"
 - Second Line: "RED: DANGER COMBUSTIBLE,"
 - Third Line: "GAS DETECTED."

PART 3-EXECUTION

3.01 MAIN MCC MOTOR CONTROL CENTER NOTES

- A. Mechanical Fine Screens (MFS-10-01):
- 1. H-O-A Selector Switch (at the unit):
 - a. With the H-O-A selector switch in the Hand position, the motor shall start and run continuously bypassing all controls, unless otherwise noted. When the switch is put in the Off or Auto mode after being in the Hand mode, the unit shall continue to run until it returns to the "Home" position (ZS-10-01). Hand position shall be hardwired and not through the PLC. There is an intrinsic safety barrier furnished with the screen that shall be dedicated to the home position switch and installed within HCP-1 by Division 11.
 - b. With the H-O-A selector switch in the Off position, the motor shall be inoperable.
 - c. With the H-O-A selector switch in the Auto position, the motor shall be controlled from the HCP-1 as described under Section 11331–Screening Equipment.
 - d. The selector switch shall be hardwired to the motor control circuit via intrinsic safety barrier(s) in HCP-1.
 - 2. There is a high level float switch (LS-10-01) on the upstream side of the screen that shall start the associated screen (Auto mode only) and an alarm shall be activated at the HCP-1 OIP when the float switch is activated. An adjustable time delay relay (0 to 10 seconds) shall be provided to prevent intermittent starting by a bouncing float. The screen shall continue to run until the float switch is deactivated. Float switch shall be hardwired to the motor control circuit via an intrinsic safety barrier in HCP-1.
 - 3. There is a momentary NEMA 4X emergency stop switch that shall be interlocked with the unit such that when the switch is activated, the unit shall be shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. The screen shall be allowed to restart after resetting the emergency stop switch. Emergency stop switch shall be hardwired to motor control circuit via an intrinsic safety barrier in HCP-1, and be wired fail-safe.
 - 4. Motor has internal thermal overloads that shall shut down the motor in the event of overtemperature (Hand and Auto modes) and an alarm shall be activated at the

HCP-1 OIP. Manual reset at the unit shall be required to restart the motor. Internal thermal overloads shall be wired such that momentary power interruptions do not shut down the motor. Reset button shall be hardwired to the motor control circuit via an intrinsic safety barrier in HCP-1.

5. There are two overtorque proximity switches (ZS-10-02 and ZS-10-03) mounted on the screen by Division 11. If either proximity switch contact closes, the motor shall shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. The proximity switches shall be wired to the starter bucket via an intrinsic safety barrier in HCP-1. Manual reset at the unit shall be required to restart the motor once it has been shut down on an over-torque condition.
6. There is a 120-volt overcurrent sensing relay furnished with the screen that shall be installed in the starter bucket by Division 16. When an overcurrent condition is detected, the motor shall be shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. Manual reset at the unit shall be required to restart the motor once it has been shut down on an overcurrent condition.
7. All the above controls shall be hardwired and not through the PLC. Division 11 Supplier shall provide the Section 16940 Contractor with a copy of the wiring diagrams for control of this unit.

B. Screenings Wash Press (SWP-10-01):

1. H-O-A Selector Switch (at the unit):
 - a. With the H-O-A selector switch in the Hand position, the motor shall be controlled from the F-O-R selector switch (at the unit). Hand position shall be hardwired and not through the PLC.
 - b. With the H-O-A selector switch in the Off position, the motor shall be inoperable.
 - c. With the H-O-A selector switch in the Auto position, the motor shall be controlled from HCP-1 as described under Section 11331–Screening Equipment.
2. F-O-R Selector Switch (at the unit):
 - a. With the F-O-R selector switch in the Forward position, the motor shall start and run continuously in the forward direction bypassing all controls, unless otherwise noted. The motor shall completely stop before switching motor rotation direction.
 - b. With the F-O-R selector switch in the Off position, the motor shall be inoperable.
 - c. With the F-O-R selector switch in the Reverse position, the motor shall operate in the reverse direction. The motor shall completely stop prior to switching motor rotation direction. Reverse position shall spring-return to the Off position. When in reverse operation, there shall be an adjustable timer (0.0 to 5.0 seconds) to limit the amount of time the unit can operate in the reverse direction. Once the timer expires, the unit shall be shut down, even if the selector switch is held in the reverse position. To restart the unit in the reverse direction, the selector switch must first be returned to the Off position.
3. There is a momentary, NEMA 4X, emergency stop switch at the unit that shall be interlocked with the unit such that when the switch is activated, the unit shall be shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. The unit shall be allowed to restart after resetting the emergency stop switch. Emergency stop switch shall be hardwired to motor control circuit via intrinsic safety barrier in HCP-1, and be wired fail-safe.
4. Motor has internal thermal overloads that shall shut down the motor in the event of overtemperature (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. Manual reset at the unit shall be required to restart the motor. Internal thermal overloads shall be wired such that momentary power interruptions do not shut down the motor.

5. There is a 120-volt overcurrent sensing relay furnished with the wash press that shall be installed in the starter bucket by Division 16. When an overcurrent condition is detected, the motor shall be shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. HCP-1 shall attempt to clear the overcurrent condition as described in Section 11331–Screening Equipment when in the Auto mode prior to motor shutdown. Manual reset at the unit shall be required to restart the motor.
 6. The wash water solenoids (SV-10-01 through SV-10-04) shall be interlocked with the drive motor such that the solenoid valves open when the motor is running in the forward direction (Hand mode only). The solenoid valves open/close contact shall be hardwired from the MCC in parallel with the PLC output signal in HCP-1 for control of the solenoid valves. The solenoid valves shall be powered from HCP-1 as described under HCP-1. Provide interface relays as required.
 7. All the above controls shall be hardwired and not through the HCP-1 PLC. Division 11 Supplier shall provide the 16940 Contractor with a copy of the wiring diagrams for control of this unit.
- C. Grit Washer Auger (GW-10-01):
1. H-O-A Selector Switch:
 - a. With the H-O-A selector switch in the Hand position, the motor shall be controlled from the F-O-R selector switch. Hand position shall be hardwired and not through the PLC.
 - b. With the H-O-A selector switch in the Off position, the motor shall be inoperable.
 - c. With the H-O-A selector switch in the Auto position, the motor shall be controlled from the HCP-1 as described under Section 11331–Screening Equipment.
 2. F-O-R Selector Switch:
 - a. With the F-O-R selector switch in the Forward position, the motor shall start and run in the forward direction bypassing all controls, unless otherwise noted. The motor shall completely stop before switching motor rotation directions.
 - b. With the F-O-R selector switch in the Off position, the motor shall be inoperable.
 - c. With the F-O-R selector switch at the unit in the Reverse position, the motor shall operate in the reverse direction. Reverse position shall be spring return to Off. When in the reverse mode, there shall be an operator adjustable timer (0.0 to 5.0 seconds) to limit the amount of time the unit can be operated in the reverse direction. Once the timer expires, the unit shall be shut down even if the selector switch is held in the reverse position. To restart the unit in the reverse direction, the selector switch must be returned to the Off position.
 3. Motor has internal thermal overloads that shall shut down the motor in the event of overtemperature (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. Manual reset shall be required to restart the motor. Internal thermal overloads shall be wired such that momentary power interruptions do not shut down the motor.
 4. There is a 120-volt overcurrent sensing relay furnished with the grit washer auger that shall be installed in the starter bucket by Division 16. When an overcurrent condition is detected, the motor shall be shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. Manual reset shall be required to restart the motor once it has been shut down on an overcurrent condition.
 5. All the above controls shall be hardwired and not through the PLC. Division 11 Supplier shall provide the 16940 Contractor with a copy of the wiring diagrams for control of this unit.

D. Grit Washer Agitator (GW-10-02):

1. H-O-A Selector Switch:
 - a. With the H-O-A selector switch in the Hand position, the motor shall start and run continuously bypassing all controls, unless otherwise noted. Hand position shall be hardwired and not through the PLC.
 - b. With the H-O-A selector switch in the Off position, the motor shall be inoperable.
 - c. With the H-O-A selector switch in the Auto position, the motor shall be controlled from HCP-1 as described under Section 11331–Screening Equipment.
2. Motor has internal thermal overloads that shall shut down the motor in the event of overtemperature (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. Manual reset shall be required to restart the motor. Internal thermal overloads shall be wired such that momentary power interruptions do not shut down the motor.
3. There is a 120-volt overcurrent sensing relay furnished with the grit washer agitator that shall be installed in the starter bucket by Division 16. When an overcurrent condition is detected, the motor shall be shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP. Manual reset shall be required to restart the motor once it has been shut down on an overcurrent condition.
4. There is a NEMA 7 limit switch (ZS-10-04) provided on the grit washer agitator inspection hatch. The limit switch shall be interlocked with the unit such that when the inspection hatch is opened, the unit shall shut down (Hand and Auto modes) and an alarm shall be activated at the HCP-1 OIP.
5. All of the above controls shall be hardwired and not through the PLC. Division 11 Supplier shall provide the 16940 Contractor with a copy of the wiring diagrams for control of this unit.

E. Grit Pump and Vacuum Priming System (GP-10-01):

1. H-O-A Selector Switch:
 - a. With the H-O-A selector switch in the Hand position, the motor shall start and run at the speed set on the drive HIM. Hand position shall be hardwired and not through the PLC.
 - b. With the H-O-A selector switch in the Off position, the motor shall be inoperable.
 - c. With the H-O-A selector switch in the Auto position, the motor shall be controlled from the HCP-2 as described under Section 11327–Grit Pump.
2. The grit pump shall include an adjustable time delay (0 to 3 minutes) so that once it is shut down (Hand and Auto modes), it will not be allowed to restart until the time delay has elapsed. This time delay shall be hardwired and not through the PLC.
3. Motor has internal thermal overloads that shall shut down the motor in the event of overtemperature (Hand and Auto modes) and an alarm shall be activated at the HCP-2 OIP. Manual reset shall be required to restart the motor. Internal thermal overloads shall be wired such that momentary power interruptions do not shut down the motor.
4. All of the above controls shall be hardwired and not through the PLC.

F. Grit Trap (GT-10-01):

1. O-O Selector Switch:
 - a. With the O-O selector switch in the On position, the motor shall start and run continuously. Hand position shall be hardwired and not through the PLC.
 - b. With the O-O selector switch in the Off position, the motor shall be inoperable.
2. Motor has internal thermal overloads that shall shut down the motor in the event of overtemperature and an alarm shall be activated at the HCP-2 OIP. Manual reset shall

be required to restart the motor. Internal thermal overloads shall be wired such that momentary power interruptions do not shut down the motor.

3. All of the above controls shall be hardwired and not through the PLC.

3.02 MCC-1 MOTOR CONTROL CENTER NOTES

A. Headworks Supply Fan (SF-10-01)

1. H-O-A Selector Switch:
 - a. With the H-O-A selector switch in the Hand position, the motor shall start and run continuously bypassing all controls, unless noted otherwise.
 - b. With the H-O-A selector switch in the Off position, the motor shall be inoperable.
 - c. With the H-O-A selector switch in the Auto position, the motor shall be controlled from a single-stage cooling thermostat such that the motor runs continuously except that when the room temperature drops below the thermostat setting, the motor shall stop. When the room temperature rises above the thermostat setting, the motor shall re-start.
2. Provide extra capacity control power transformer for 120 V power to the associated exhaust fan damper. Associated damper shall open when the exhaust fan is running, and otherwise closed.

END SECTION

SECTION 16941

CONTROLS AND INSTRUMENTATION DRAWINGS

PART 1-GENERAL

1.01 SUMMARY

- A. Work Included: Applicable provisions of Division 1 shall govern work in this section.

1.02 SUBMITTALS

- A. Submit drawings in accordance with provisions of Section 01300–Submittals.

1.03 COORDINATION

- A. The requirements set forth in this section are intended to apply to the drawings provided as specified in Section 16480–Motor Control, and Section 16940–Controls and Instrumentation.

PART 2-PRODUCTS

NOT APPLICABLE

PART 3-EXECUTION

3.01 GENERAL REQUIREMENTS

- A. All drawings shall have the following information:
 - 1. Project information, including name of OWNER and specific project name.
 - 2. Drawing title, accurately representing what is on the drawing.
 - 3. Unique drawing identifier, consisting of a unique drawing number or drawing number with individual sheet number. If sheet numbers are used, total number of sheets must be identified on each sheet.
 - 4. System Supplier company name, address, and phone number.
 - 5. Original design information, including person responsible for design, date of original design, person responsible for checking of design, and date of design check.
 - 6. Revision block indicating revision number, date, description of revision, and person responsible for revision.
- B. All drawings shall have line numbers that can be uniquely referenced from other drawings.
- C. All drawings showing wiring shall include unique wire numbers assigned to wiring that is installed between devices in the panel. The wire number shall be shown on the drawings.
- D. All drawings showing relays shall include reference to the drawings where the relay contacts are shown. Spare relay contacts that are not used shall be identified.

3.02 DRAWINGS REQUIRED

- A. Index of Drawings: Index of Drawings shall list drawing number, sheet number (if applicable), and drawing title for each drawing in drawing package.
- B. Symbol Sheet: Symbol Sheet shall include:
 - 1. Explanation of all symbols used on the drawings, including, but not limited to, normally open/normally closed contacts, flow switches, limit switches, pressure switches, selector switches, pushbuttons, timers, control relays, solenoids, fuses, circuit breakers, terminal blocks, and contactors. Symbol sheet does not need to be specific to project, but must contain explanation of all symbols used on the drawings (i.e., special symbols used for a particular project must be added to standard symbol sheets).
 - 2. List of abbreviations used on the drawings.
 - 3. Explanation of continuation method for circuits that can not be shown on a single sheet.
- C. Exterior Enclosure Layout Drawing: Exterior layout drawing shall show location of all externally-mounted equipment. Exterior layout drawing shall include:
 - 1. Enclosure dimensions, enclosure NEMA rating (i.e., NEMA 1, NEMA 4X stainless steel, NEMA 4X nonmetallic, etc.), and enclosure color or finish.
 - 2. Location and actual depiction of panel latches, hinges, mounting holes and lifting eyes.
 - 3. Location and accurate representation of equipment mounted on enclosure (i.e., switches should look like actual switches being installed; indicating lights should look like actual lights being installed).
 - 4. Equipment nameplate location.
 - 5. Description for each piece of equipment or unique identifier and parts list, or bill of materials.
 - 6. Nameplate list including nameplate wording, size, construction (i.e., lamicoid with Black background and White letters), and mounting method (i.e., stainless steel screws). Label size must include size in inches or reference to standard sizes included on symbol sheet, or elsewhere in drawing package.
 - 7. Identification of area reserved for equipment located inside enclosure, but not actually mounted on enclosure back panel, such as UPSs, fiber optic patch panels, and lighting packages.
- D. Interior Enclosure Layout Drawing: Interior layout drawing shall show location of all internally-mounted equipment. Interior layout drawing shall include:
 - 1. Back panel dimensions and finish.
 - 2. Location and accurate representation of equipment (i.e., terminal blocks should look like actual terminal blocks; receptacle should look like actual receptacle, etc.).
 - 3. Dimensions of internally-mounted equipment are not necessary, but equipment should be drawn to scale such that an accurate representation of the way equipment will be mounted is shown on the drawing.
 - 4. Description for each piece of equipment or unique identifier and parts list, or bill of materials.
- E. Interconnection Diagram, Network Diagram or Block Diagram: Interconnection diagram, Network Diagram or Block Diagram shall show all cabling between system components and identify any station addressing or node numbers that are assigned to equipment. All cables shall be identified by cable type, including specific manufacturer and model/part

number. Party responsible for furnishing and installing cable shall also be included. Some examples of cables that must be shown are:

1. Antenna cables.
2. Communications cables between system components (fiber and/or copper). This includes fiber optic jumpers between fiber patch panels and equipment, and Ethernet patch cables between switches and devices.
3. Communications cables (fiber and/or copper) between PLCs, controllers, operator interface equipment and security devices (e.g., card readers, electric strikes, and motion detectors) that are not shown on the elementary schematics.

- F. Elementary Schematic: Elementary schematics shall be developed for each motor or supplied equipment and shall include:
1. Nominal voltage, AC or DC designation, number of phases (if AC), and frequency in hertz (if AC) for each source of electrical supply to the enclosure.
 2. Prospective short-circuit current available at the point of electrical supply to the enclosure.
 3. Type of power supply system grounding (e.g., wye phase midpoint grounded, delta phases corner grounded, wye phases midpoint grounded, delta phases ungrounded, etc.).
 4. Complete documentation of electrical circuit from supply to motor or supplied equipment. Documentation shall include disconnecting means, main overcurrent protection (when supplied), branch overcurrent protection (when supplied), control circuit and special purpose control protection, motor control, overload protection, local disconnect (when supplied) and motor horsepower, and full load amps from nameplate or supplied equipment full load amps.
 5. Documentation of PLC or controller inputs and outputs.
 6. Documentation of all circuit breaker/motor protector ratings, fuse sizes, control power transformer VA ratings, dip switch settings, etc.
- G. Wiring Diagram: Wiring diagrams shall show all terminations for all cables external to the enclosure. Terminations may be shown on the elementary schematics as long as the termination information is concise and easily understood by the personnel installing the field wiring. Termination information shall be shown for all devices, including devices that are not part of System Supplier's scope of supply. A box with two dots or continuation arrows indicating continuation to a piece of equipment are not acceptable.
- H. Calculations Summary: Calculations summary shall include calculations performed to:
1. Determine size of UPS.
 2. Determine air conditioning equipment requirement.
 3. Determine control power transformer sizing. Control power transformer sizing calculations may be generic based on typical circuits.
- I. Functional Testing Recommendations: Testing recommendations shall include description of functional tests that must be performed by operators. Functional test description shall be included for UPS, indicating lights, and other devices whose condition can only be determined by testing.

3.03 SAMPLE DRAWINGS

- A. Sample drawings showing an acceptable format are included in the appendix. The samples included in the appendix do not represent the only acceptable method of showing the required information.

END OF SECTION

SECTION 16949

SHORT-CIRCUIT, COORDINATION, AND ARC FLASH HAZARD STUDY

PART 1—GENERAL

1.01 SUMMARY

- A. Work included: CONTRACTOR shall retain the services of an independent third-party firm to perform a Short-Circuit, Coordination, and Arc Flash Hazard Study, as specified herein. The studies shall be submitted to ENGINEER prior to receiving final approval of the equipment shop drawings and prior to release of equipment for manufacture. See Section 1.04 Submittals for additional requirements.
- B. The analysis, testing, and inspection shall include all portions of the new and existing electrical distribution system. This shall include, but not be limited to, the following items. Equipment not specifically noted below that is part of the distribution shall also be included.
 - 1. Utility service entrance including primary switching and fusing.
 - 2. Pad-mounted exterior transformers.
 - 3. Automatic transfer switches.
 - 4. Standby generators.
 - 5. Generator distribution equipment.
 - 6. Low voltage motor control centers.
 - 7. OEM-provided control panels with electrical supply over 100 amperes at 480 volts.
 - 8. Motor control panels.
 - 9. Power panels.
 - 10. Lighting panels.
- C. Normal system connections and those which result in maximum fault conditions shall be adequately covered in the study. Alternative scenarios shall be included to illustrate normal and standby power sources and the relative effects on the distribution system. This shall include scenarios where dual source contributions may be present, such as with closed transition transfer switches or paralleling switchgear.
- D. Related Sections and Divisions: Applicable provisions of Division 1 shall govern work in this section.

1.02 REFERENCES

- A. NFPA70—National Electrical Code.
- B. NFPA70E—Standard for Electrical Safety in the Workplace, Latest Edition.
- C. IEEE Standard 1584—IEEE Guide for Performing Arc Flash Hazard Calculations.
- D. OSHA 29 Code of Federal Regulations (CFR) Part 1910, Subpart S.
- E. ANSI/IEEE Standards C37, 242, and 399.
- F. UL 489—Underwriters Laboratories.

1.03 QUALITY ASSURANCE

- A. The firm shall be currently involved in high- and low-voltage power system evaluation. The study shall be performed, stamped, and signed by a registered professional engineer (electrical) in the State where the project is located. Credentials of the individual(s) performing the study and background of the firm shall be submitted to ENGINEER for review prior to start of the work. A minimum of 5 years' experience in power system analysis shall be required for the project manager.
- B. The firm performing the study shall demonstrate capability and experience to provide assistance during start-up, as required.

1.04 SUBMITTALS

- A. The following submittal process shall be followed and be coordinated with the suppliers of equipment specified in Divisions 2, 5, 8, 11, 13, 14, and 15, along with other Division 16 sections. In general, the report specified below shall be completed prior to equipment shop drawings being approved and prior to equipment being released for manufacture, such that equipment changes may be made during shop drawing review if changes are recommended by the report. If completion of the report may cause delay in equipment manufacture, partial approval from ENGINEER may be obtained if the preliminary submittal includes data sufficient to determine that the selection of device ratings, settings, and characteristics will be satisfactory.
- B. The following submittals shall be provided for review by ENGINEER.
 - 1. Statement of Qualifications: Prior to equipment shop drawings being submitted, the third party testing firm shall submit a statement of qualifications including resumes of individuals who will perform the work, specific software and analysis tools that will be used, and at least three example reports that were completed for projects similar in size and nature.
 - 2. Final Report: At the time of, or prior to equipment shop drawings being submitted, the finalized report shall be submitted for formal review by ENGINEER. The report shall include all equipment being provided based on shop drawing submittals, along with estimated cable lengths. This submittal shall be a completed, finalized report that will be updated with actual cable lengths once installed.
 - 3. Report Update, Field Testing, and Inspection: Once all equipment is operating based on its design intent, the specified field testing, inspection, device settings, and thermographic surveys shall be completed. The third party testing firm shall visit the site to confirm that the equipment matches the shop drawings. Additionally, the previously submitted final report shall be updated with actual installed cable lengths, device settings, results of testing and field inspections, the thermographic survey, and changes made during construction. This item and the above items shall be completed prior to substantial completion.
- C. The final report shall meet the following requirements:
 - 1. Submit two bound copies of the final report. Provide two compact discs with the final report, in PDF format, burned on each disc. The two CDs shall also include all report files in Word format, one-line diagrams in PDF format, and all power analysis software files and associated libraries.
 - 2. Organize and submit the report with the following sections. Below are minimum requirements, and the report shall be tailored to meet specific project requirements and equipment:

- a. Part I: Overview.
- b. Part II: Short-Circuit Study:
 - (1) Purpose.
 - (2) Explanation of data.
 - (3) Assumptions.
 - (4) General and specific procedures followed.
 - (5) Analysis of results.
 - (6) Recommendations.
 - (7) Fault Analysis Input Report.
- c. Part III—Coordination Study:
 - (1) Purpose.
 - (2) Explanation of data.
 - (3) Assumptions.
 - (4) General and specific procedures followed.
 - (5) Analysis of results.
 - (6) Recommendations, including trip curves and device settings for project-specific equipment.
 - (7) Spreadsheet or report showing the range of all device settings and recommended settings.
- d. Part IV—Arc Flash Study:
 - (1) Purpose.
 - (2) Explanation of Data.
 - (3) Assumptions.
 - (4) Analysis of results, including all items in Motor Control Centers, Switchgear, Switchboards, control panels, disconnects, etc.
 - (5) General and specific procedures followed.
 - (6) Recommendations, including system modifications that may reduce arc flash hazard based on analysis of results.
 - (7) Arc flash evaluation report including sample labels for major distribution equipment.
- e. Appendices:
 - (1) One-line diagrams of the system in similar format as the Contract Documents from the power analysis software showing project-specific equipment, wire and cable types and lengths, fault currents, and recommended device settings.
 - (2) Protective device summaries generated by the power analysis software.
 - (3) Reference data.
 - (4) Paper copy of warning labels to be provided for the project.

D. Refer to Part 3—Execution for additional requirements and specific analyses to be performed.

PART 2—PRODUCTS

2.01 POWER ANALYSIS SOFTWARE

- A. The study and assessment shall be performed based on SKM PowerTools software utilizing Dapper, Captor, Arc Fault, and Arc Flash evaluation modules. Equivalent or alternative software packages may be used, but shall be submitted for review by ENGINEER as part of the preliminary submittal.

2.02 ARC FLASH HAZARD LABELS

- A. Labels shall be provided for equipment specified in all Division 16 technical sections, as well as for equipment provided in Divisions 2, 5, 8, 11, 14, and 15 where an arc flash hazard may exist. This shall include junction boxes and motors 50 hp and larger. A separate label shall be installed on each MCC vertical section, switchboard section, panel board, motor junction box, etc. Provide labels as manufactured by Conney Safety Products, or equal, and meet the following minimum requirements:
1. Self-adhesive, vinyl, 6 inches by 4 inches minimum.
 2. Equipment identification corresponding to the Contract Documents.
 3. Study date.
 4. Arc-flash boundary.
 5. Flash-hazard boundary.
 6. Flash hazard level (cal/cm²).
 7. Shock-hazard boundaries (limited approach and restricted approach).
 8. Personal Protective Equipment (PPE) level.
 9. Required PPE.

2.03 ONE-LINE DIAGRAM

- A. In each electrical room, provide a one-line diagram meeting the requirements of IEEE/ANSI Standard 141, mounted on a 24-inch by 36-inch minimum Styrofoam backboard.

PART 3-EXECUTION

3.01 DATA COLLECTION

- A. CONTRACTOR and testing firm shall gather the required data for shop drawings and existing equipment for preparation of the studies. Firm performing the system studies shall visit the site as needed to properly carry out the work and meet the requirements of these specifications.
- B. CONTRACTOR and testing firm shall expedite collection of the data to assure completion of the studies defined above. The following minimum information shall be collected and used:
1. Available fault current from the local utility company.
 2. If applicable, existing equipment ratings including bus bracing, interrupting device ratings, and age/condition.
 3. Installed cable or busway lengths, along with the specific rating, type and manufacturer.

3.02 SHORT-CIRCUIT AND COORDINATION STUDY

- A. Include in the appropriate report sections noted above, calculation methods and assumptions, base per unit quantities selected, one-line diagrams, source impedance data including power company system characteristics, typical calculations, and recommendations. Calculations shall be provided for multiple distribution system scenarios when source equipment can provide multiple power feeds to downstream equipment (i.e., standby generators).

- B. Calculate short-circuit interrupting and momentary (when applicable) duties for an assumed three-phase bolted fault at each bus (each change of impedance), at each supply switchgear lineup (new and existing), transformer primary and secondary terminals (new and existing), switchboard (new and existing), Motor Control Center, as well as other significant locations throughout the system, including all three phase motors. Provide a ground fault current study for the same system areas (new and existing), including the associated zero sequence impedance data. Include in tabulations, fault impedance, X to R ratios, asymmetry factors, motor contribution, short-circuit kVA, and symmetrical and asymmetrical fault currents.
- C. In the Protective Device Coordination Study, provide time-current curves graphically for new and existing distribution equipment, indicating the coordination proposed for the system, centered on conventional, full-size, log-log forms. Include with each curve sheet a complete title and one-line diagram with legend identifying the specific portion of the system covered by that particular curve sheet. Include a detailed description of each protective device identifying its type, function, manufacturer, and time-current characteristics. Tabulate recommended device tap, time dial, pickup, instantaneous, and time-delay settings.
- D. Include on the curve sheets power company relay and fuse characteristics, system low voltage equipment circuit breaker trip device characteristics pertinent transformer characteristics, and characteristics of other system load protective devices such as protective relaying equipment and multifunction relays. Include at least all devices down to largest three-feeder circuit breakers in each new and existing switchboard.
- E. Include all adjustable settings for new and existing ground fault protective devices. Include manufacturing tolerance and damage bands in plotted fuse and circuit breaker characteristics. Terminate device characteristic curves at a point reflecting the maximum symmetrical or asymmetrical fault current to which the device is exposed.
- F. Select each primary protective device required for a Delta-Wye connected transformer so that its characteristic or operating band is within the transformer characteristics, including a point equal to 58% of the ANSI withstand point to provide secondary line-to-ground fault protection. Where the primary device characteristic is not within the transformer characteristics, show a transformer damage curve. Separate transformer primary protective device characteristic curves from associated secondary device characteristics by a 16% current margin to provide proper coordination and protection in the event of secondary line-to-line faults.
- G. Include complete fault calculations as specified herein for each proposed and ultimate source combination for both new and existing equipment. Note that source combinations may include present and future supply circuits, large motors, or generators as noted on one-lines.
- H. Utilize equipment load data for the study obtained by CONTRACTOR from Contract Documents, including Contract addendums issued prior to Bid opening.
- I. Include fault contribution of all motors and generators in the study, including scenarios where the generators and utility sources are both supplying electricity concurrently, such as with a closed transition transfer or paralleling power generation scheme. Notify ENGINEER in writing of circuit protective devices not properly rated for fault conditions. Provide recommended settings for motor starters and note any system inadequacies or

potentially hazardous conditions. Show each MCC full-load current plus symmetrical and asymmetrical of the largest motor-starting current to ensure protective devices will not trip major or group operation.

- J. When a standby generator is provided, include phase and ground coordination of the generator protective devices to meet NEC 700.27 requirements. Show the generator decrement curve and damage curve along with the operating characteristic of the protective devices. Obtain the information from the generator manufacturer and include the generator actual impedance value, time constants, and current boost data in the study. Do not use typical values for the generator.
- K. Evaluate proper operation of ground relays in four-wire distributions with more than one main service circuit breaker or when generators are provided, and discuss the neutral grounds and ground-fault current flows during a neutral-to-ground fault.

3.03 ARC FLASH HAZARD STUDY

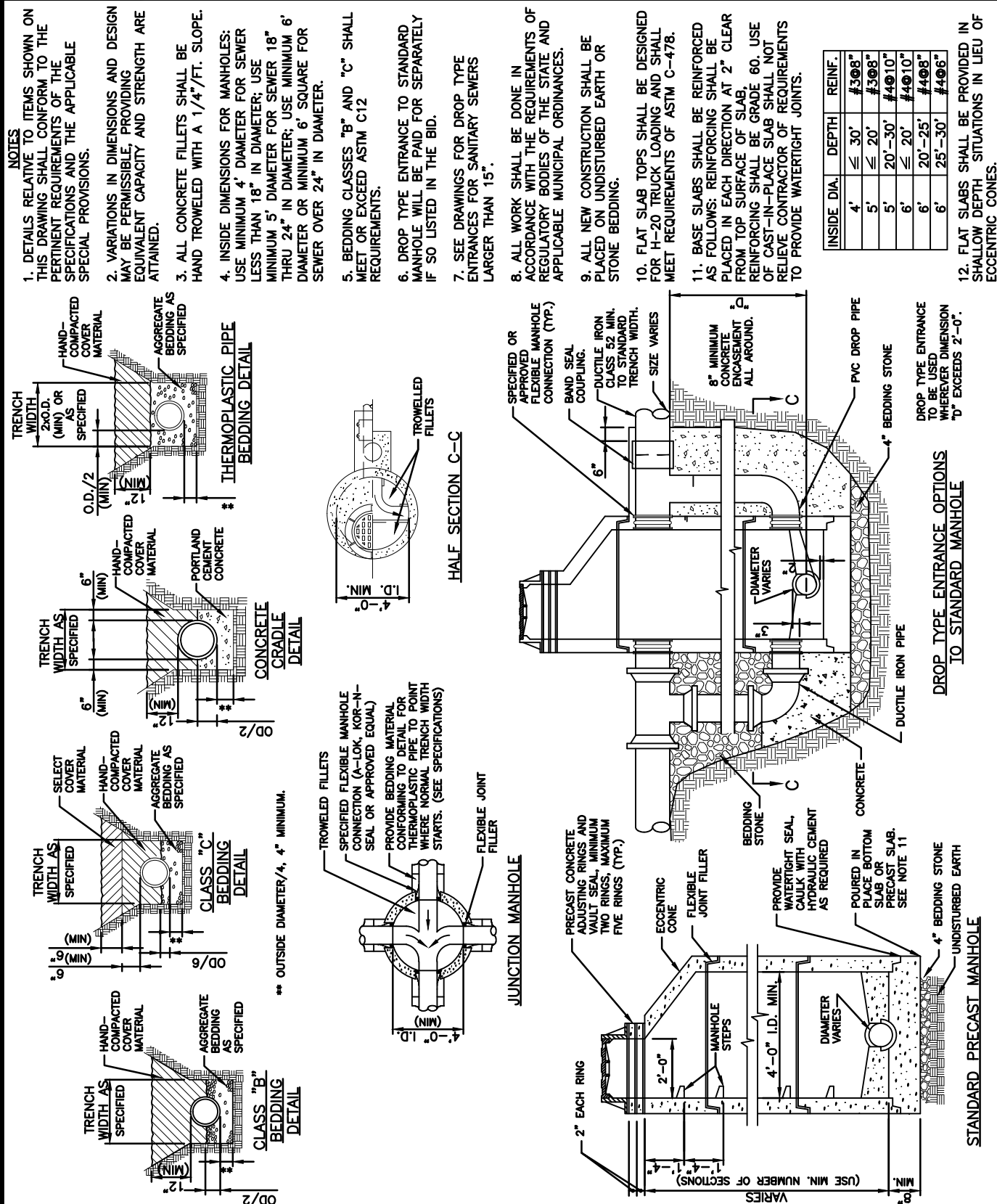
- A. As part of the Short-Circuit and Coordination Study, the Arc Flash Hazard Study shall be included. Include in the appropriate report sections noted above, the following minimum requirements:
 - 1. Determine and document all possible utility and generator sources and scenarios that are capable of being connected to each piece of electrical gear. Calculations shall be based on highest possible source connection.
 - 2. Arc flash values for two normal cases to define the highest values (low short-circuit and high short-circuit).
 - 3. Arc flash values for two maintenance cases which define the arc flash values available at the equipment, that would be available if the instantaneous trip of the upstream circuit breaker is set at a minimum value. This is recommended for personnel working on live equipment.
 - 4. Recommendations to reduce the arc flash incident energy in all areas that require Class 2 and higher PPE.
 - 5. Calculations to conform to National Fire Protection Association (NFPA) 70E calculation standards. All incident energy units shall be calculated in calories per square centimeter.
- B. Furnish and install labeling as specified herein based upon the results of the Arc Flash Hazard Study.

3.04 FIELD SETTINGS

- A. CONTRACTOR shall perform field adjustments of the new and existing protective devices as required to place the equipment in final operating condition. The settings shall be in accordance with the updated final version of the Short-Circuit Study, Coordination Study, and Arc Flash Hazard Study.
- B. Necessary field settings of devices and adjustments and minor modifications to equipment to accomplish conformance with the final version of the Short-Circuit and Protective Device Coordination Study shall be carried out by CONTRACTOR at no additional cost to OWNER.

END OF SECTION

DRAWINGS



SANITARY SEWER APPURTENANCES

STANDARD DETAIL



01-975-43A

OCTOBER 2011

APPENDIX

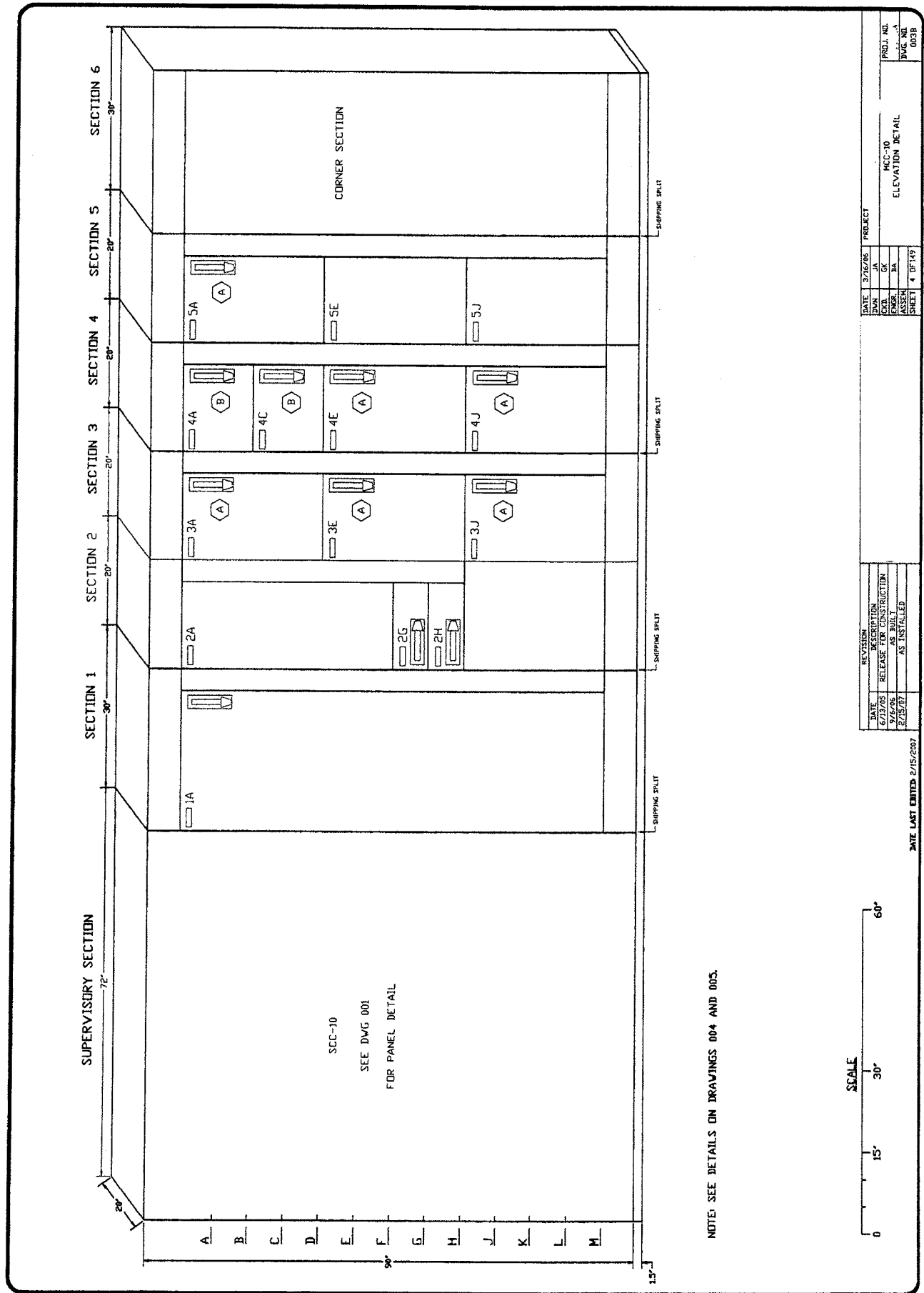
SAMPLE DRAWINGS

Sample symbol sheet

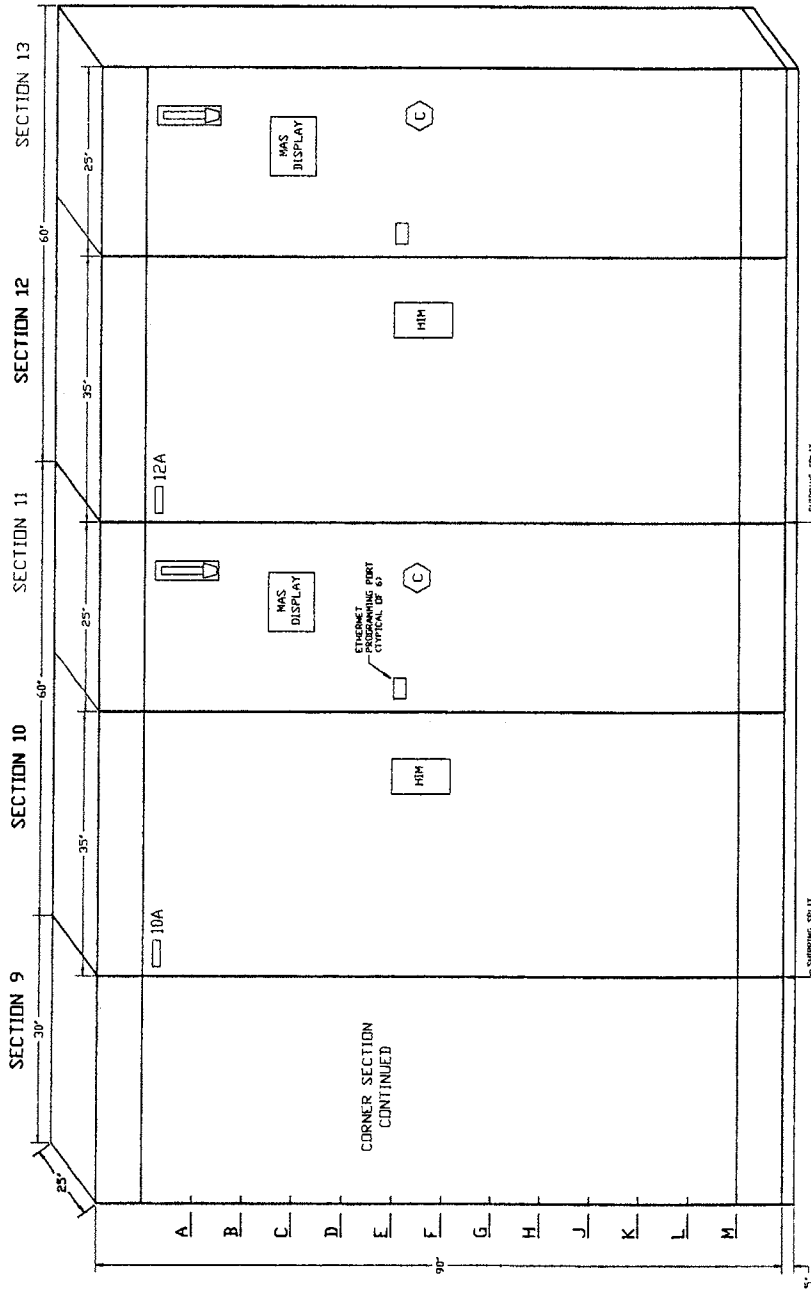
Standard Abbreviations

<u>Abbreviation</u>	<u>Description</u>	<u>Abbreviation</u>	<u>Description</u>
A	Air Compressed	OV	Overvoltage
AC	Air Condition	PB	Pushbutton
AD	Auto Dialer	PC	Pull Cord
AH	Alarm Horn	PC	Personal Computer
AL	Alarm Light	PFC	Power Factor Capacitor
AM	Amp Meter/Ammeter	PL	Pilot Light
ANN	Annunciator	PLC	Programmable Logic Controller
AR	Alternating Relay	PM	Power or Phase Monitor
AWG	American Wire Gauge	PN	Pneumatic
BA	Battery	PR	Pressure Regulator
BLU	Blue	PS	Pressure Switch
BRN	Brown	PS	Power Supply
CA	Cable	PSH	Pressure Switch High
CB	Circuit Breaker	PSL	Pressure Switch Low
CR	Control Relay	REC	Receptacle
CT	Current Transformer	SP	Surge Protector
DB	Distribution Block	SS	Selector Switch
DI	Diode	STP	Shielded Twisted Pair
DS	Disconnect Switch	SV	Solenoid Valve
EC	Electronic Control Device	TD	Time Delay Relay
ETM	Elapsed Time Meter	TG	Toggle Switch
EN	Enclosure	TS	Temperature Switch
FO	Fiber Optic	TSP	Twisted Shielded Pair
FS	Flow Switch	TT	Temperature Transmitter
FU	Fuse	UPS	Uninterruptible Power Supply
GFI	Ground Fault Interrupter	UTP	Unshielded Twisted Pair
GND	Ground	VA	Voltampere
GRN	Green	VFD	Variable
HTR	Heater	VM	Voltmeter
LA	Lightning Arrestor	WHT	White
LP	Lighting Panel	WS	Weight Switch
LR	Latching Relay	WT	Weight Transmitter
LS	Level Switch	XFMR	Transformer
MS	Motor Starter Contactor	SI	Signal Isolator
M	Motor	SS	Speed Switch
NP	Nameplate	ZS	Position Switch
OIT	Operator Interface Terminal		
OL or O/L	Overload		
ORG	Orange		

Sample List of
Abbreviations

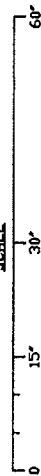


Sample Exterior
Layout Drawing



NOTE: SEE DETAILS ON DRAWINGS 004 AND 005.
SECTIONS 10 THROUGH 13 ARE MOUNTED BACK-TO-BACK
WITH SECTIONS 14 THROUGH 17.

SCALE

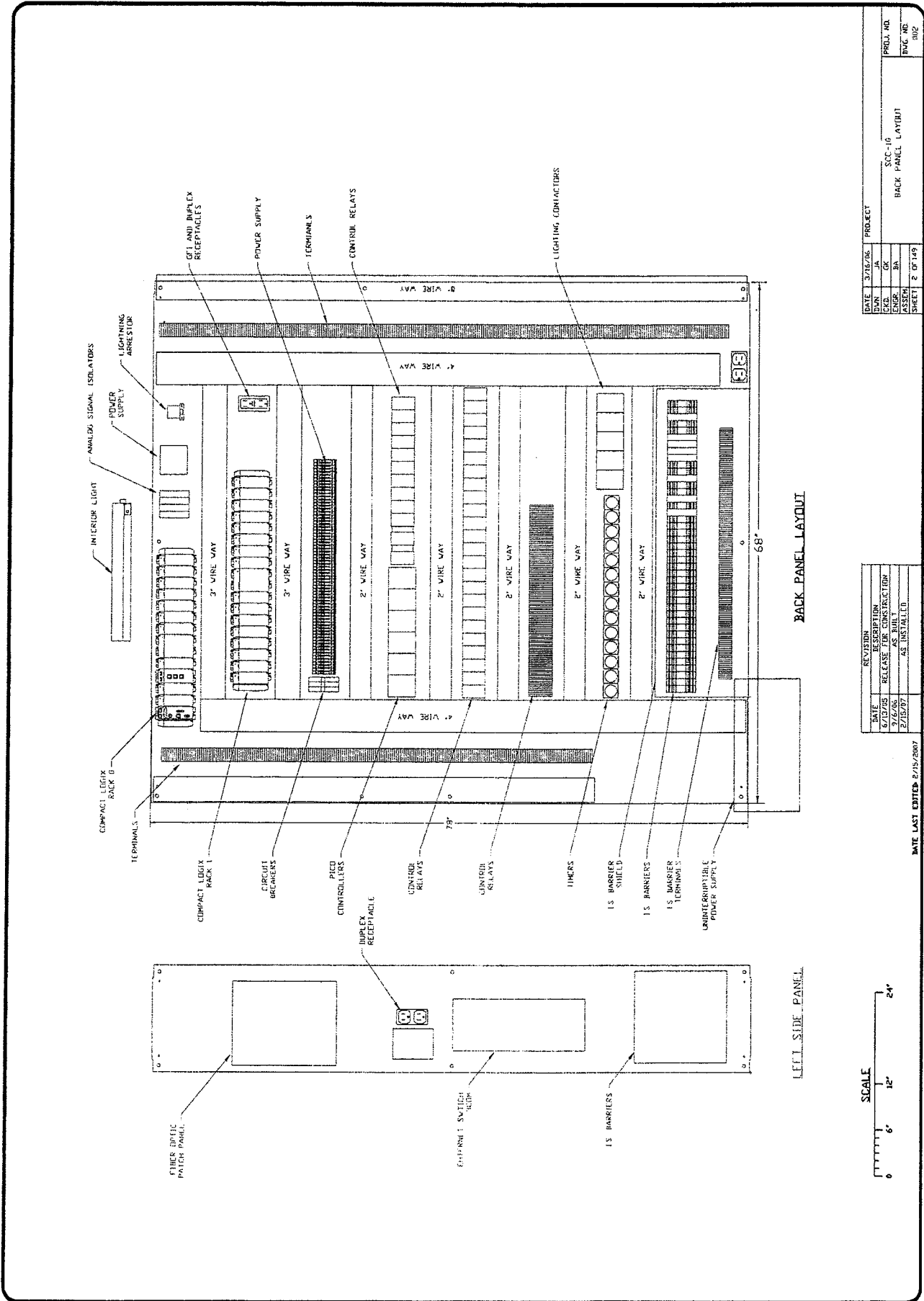


DATE	REVISION
6/12/05	RELEASE FOR CONSTRUCTION
9/16/06	AS BUILT
2/15/07	AS INSTALLED

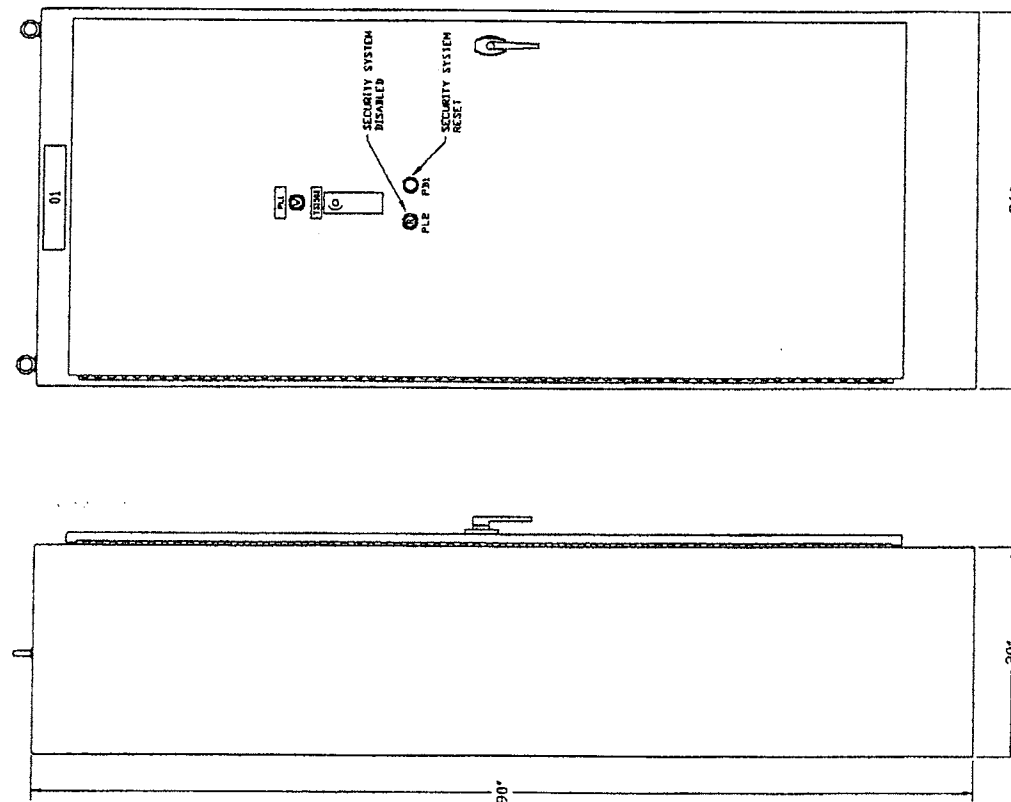
DATE LAST ENTERED 2/15/2007

DATE	3/16/06	PROJECT
DATE	3/16/06	PROJECT
ENR	GK	MCC-10
ASSESS	BA	ELEVATION DETAIL
SHEET	6 OF 119	
PROJ. NO.		003D
DWG. NO.		003D

Sample Exterior
Layout Drawing



Sample Interior Layout
Drawing



PANEL LAYOUT

MANUFACTURE SOURCE				
	LINE 1	LINE 2	LINE 3	REMARKS
T146				
01	SEC-MAN		2-10	
	POWDER DIA 10'S		1X3	
P11				
T15140	LOW BUBBLING TEMPERATURE		1X3	

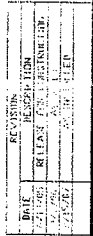
[illegible]

SUBMITTAL USE ONLY
NOT FOR
CONSTRUCTION
DATE LAST EDITED: 12/6/2007

A vertical scale bar labeled "SCALE" with markings at 0, 6, 12, and 24 inches.

NOTES:

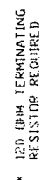
1. ENCLOSURE IS A NEMA TYPE J2 FREESTANDING HOFFMAN A903620F.S. WITH INNER PANEL HOFFMAN A90036FL
2. FINISH IS ANSI 61 GRAY.
3. U. 508A

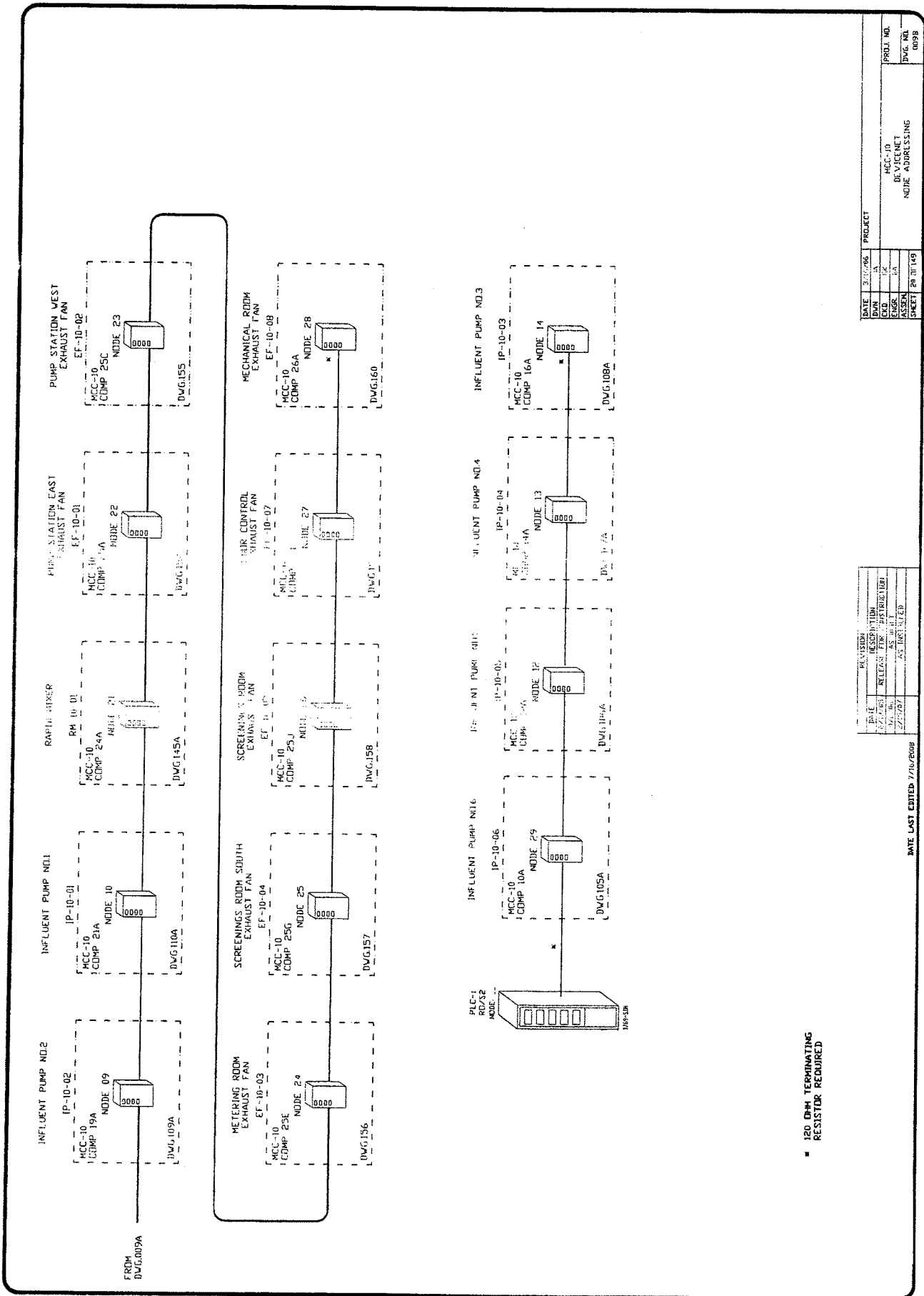


DATE LAST EDITED 11/16/2007

SEC-10
PLC I/O SCHEDULE

Sample Interconnection Diagram



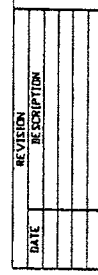


Sample Network Diagram

DATE	3/1/96	PROJECT
REV	1	
ENGR	1	
ASST	1	
SHEET	20	30/149
PROJ. NO.	MCC-10 DE VENT NODE ADDRESSING	
DWG. NO.	0098	

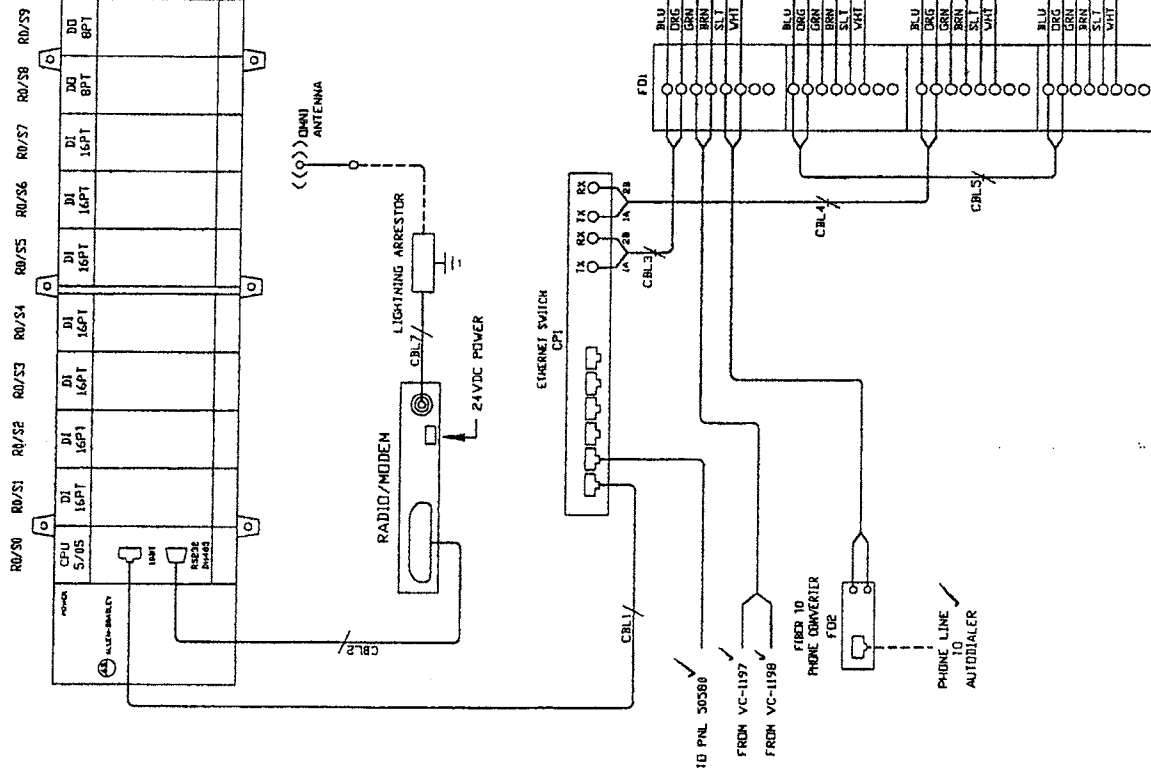
DATE	3/1/96	DESCRIPTION
REV	1	RELEASE FOR DISTRIBUTION
ENGR	1	AS NOTED
ASST	1	AS NOTED

DATE LAST EDITED 7/16/2008



DATE LAST EDITED: 02/09/01

SLS00 I/O SCHEDULE



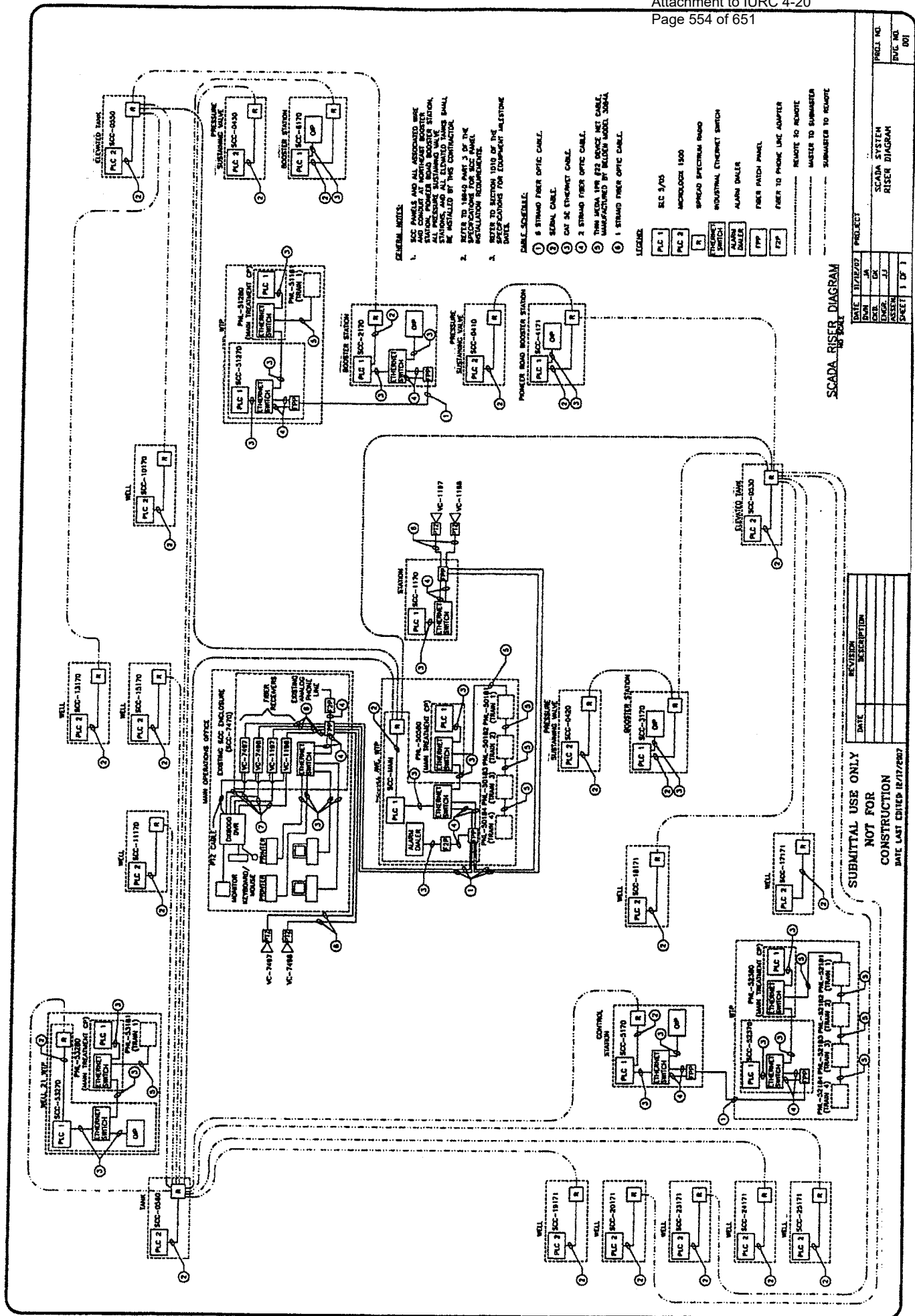
QTY	TACS	DESCRIPTION	MFG	CATALOG
1	R0	PLC RACK	ALLEN BRADLEY	1746-A10
1	R0S0	PLC POWER SUPPLY	ALLEN BRADLEY	1746-P2
1	R0/S0	PLC CPU WITH ETHERNET	ALLEN BRADLEY	1747-L552
7	R0/S1	PLC DIGITAL I/O MODULE	ALLEN BRADLEY	1746-IA16
	R0/S2	PLC ANALOG I/O MODULE		
	R0/S3	PLC ANALOG I/O MODULE		
	R0/S4	PLC ANALOG I/O MODULE		
	R0/S5	PLC ANALOG I/O MODULE		
	R0/S6	PLC ANALOG I/O MODULE		
	R0/S7	PLC ANALOG I/O MODULE		
2	R0/S8	PLC DIGITAL I/O MODULE	ALLEN BRADLEY	1746-DA16
	R0/S9	PLC ANALOG I/O MODULE		
1	CP1	PLC POINT RELAY CONTACT OUTPUT (ISOLATED)	HIRSCHMANN	943 434-021
1	FD1	FIBER OPTIC PATCH PANEL, BLACK	SIEMON COMPANY	SVIC3-N-01
4	FD1	BULKHEAD CONNECTOR MODULE	SIEMON COMPANY	RIC-F-SCB-01
1	FD2	TELEPHONE LINE EXTENDER	AMERICAN FIBERTEK	MT-86CC
		86 SERIES		
		12VAC 500ma		
		N/A		
1	CBL1	UTP PATCH CABLE	HUBBELL	PCXSER03
		3 FEET		
1	CBL2	SERIAL COMMUNICATIONS CABLE	CABLE WHOLESAL	1001-03203
		3 FEET		
3	CBL3	FIBER OPTIC PATCH CABLE	HUBBELL	BFCSGCC1MM
	CBL4	1 METER (1 PAIR) (2) FIBERS		
	CBL5	SC WH 425		
1	CBL7	ANTENNA CABLE, RG142B/U	TESSCO	448250
		RG142 - 2FT LENGTH		
		NMALE - FEMALE		

DATE	REVISION	DESCRIPTION

DATE LAST EDITED 12/4/2007

DATE	10/12/2007	PROJECT	PLC I/O SCHEDULE
DWN	JA	PROJ. NO.	
CHK	JA	SHEET NO.	002A
ASST	JA	SHEET	3 OF 24

Sample Interconnection Diagram

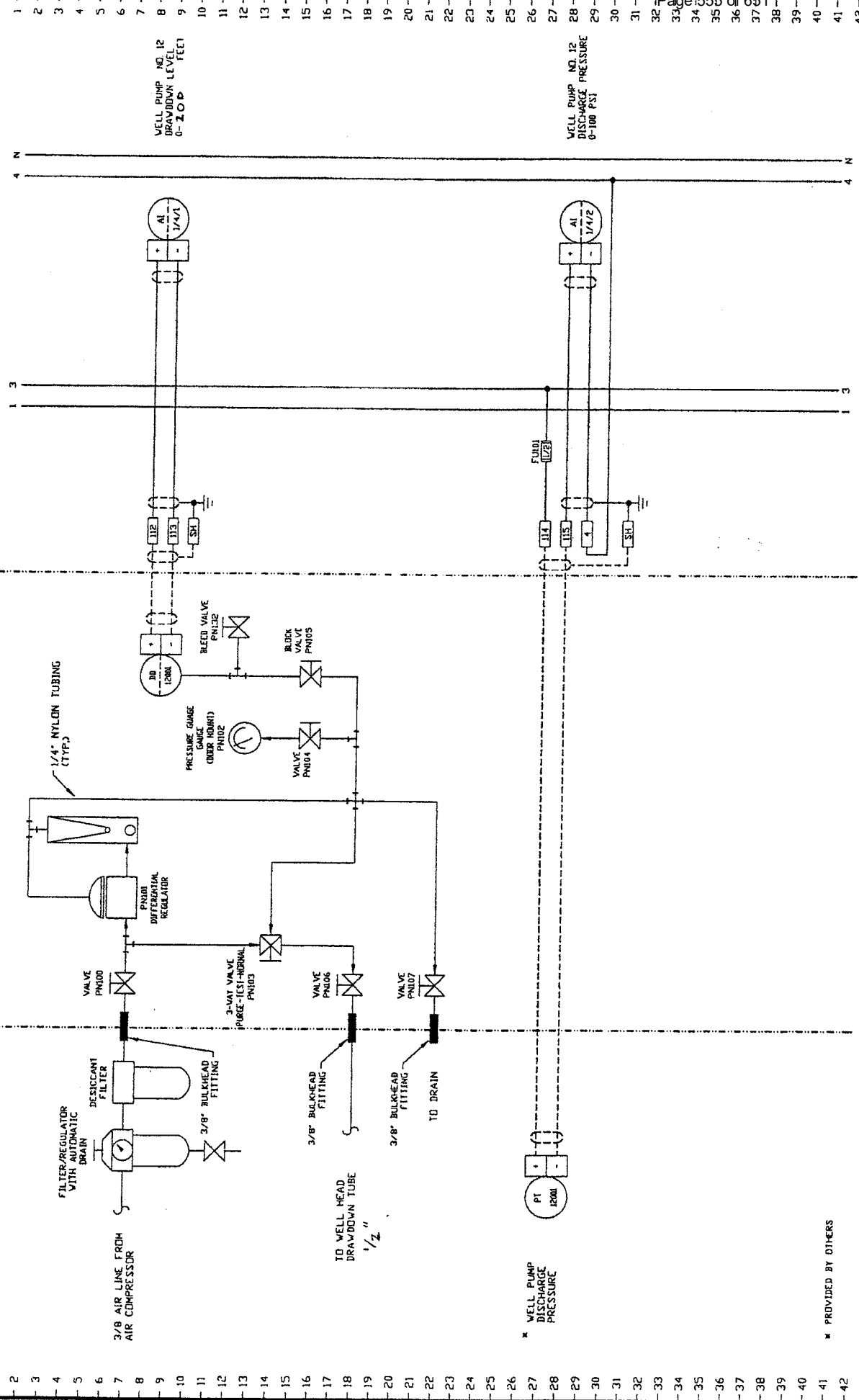


Sample Interconnection Diagram

FIELD OR AS NOTED

DRAWDOWN TRANSDUCER PANEL (1674A1-002)

SCC-MAIN



SUBMITTAL USE ONLY
NOT FOR
CONSTRUCTION
DATE LAST EDITED: 12/10/2007

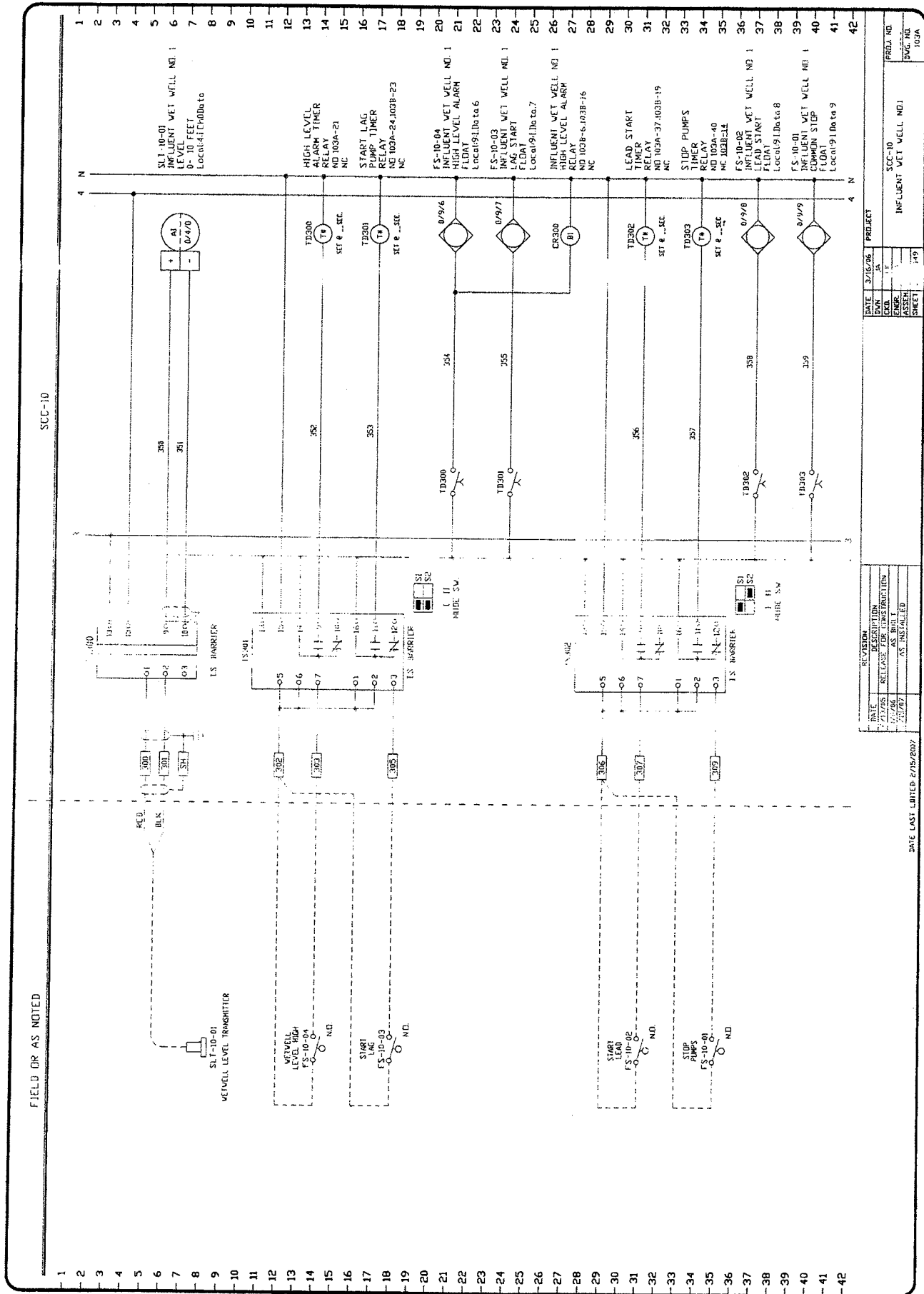
DATE	REVISION	DESCRIPTION

DATE	11/12/2007	PROJ. NO.	SCC-MAIN
BY	JA	REV.	05
CHECKED	GR	DATE	11/12/07
DESIGNED	JJ	SCALE	8 1/2" = 3'
DRAWN	JA		

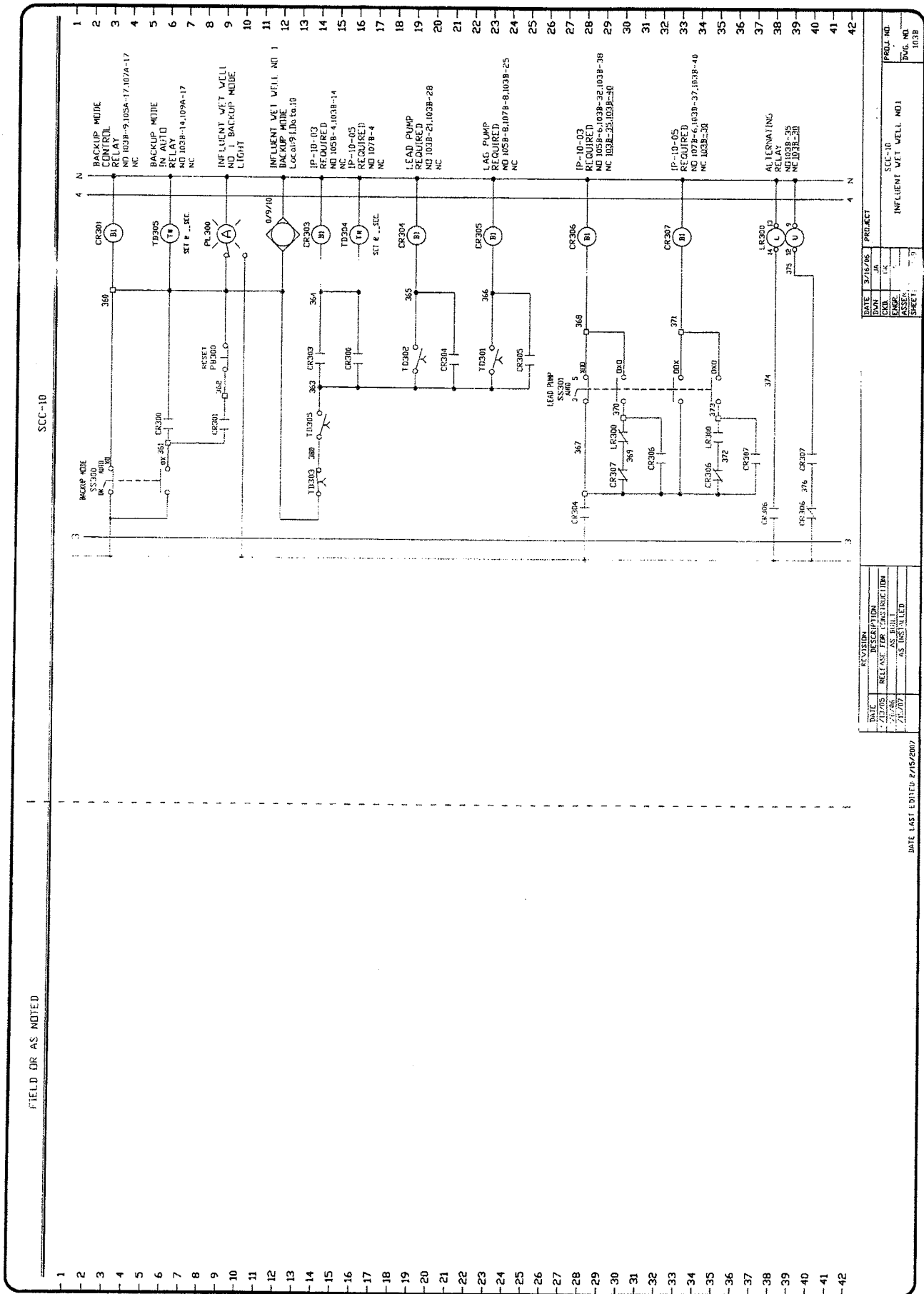
PROJ. NO.	SCC-MAIN
DWG. NO.	1018

Sample elementary schematic

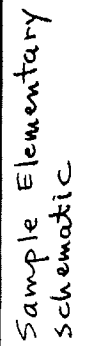
PROVIDED BY OTHERS

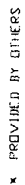


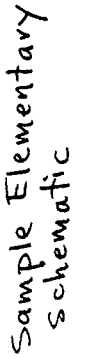
Sample Elementary
Schematic

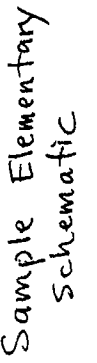


Sample Elementary Schematic

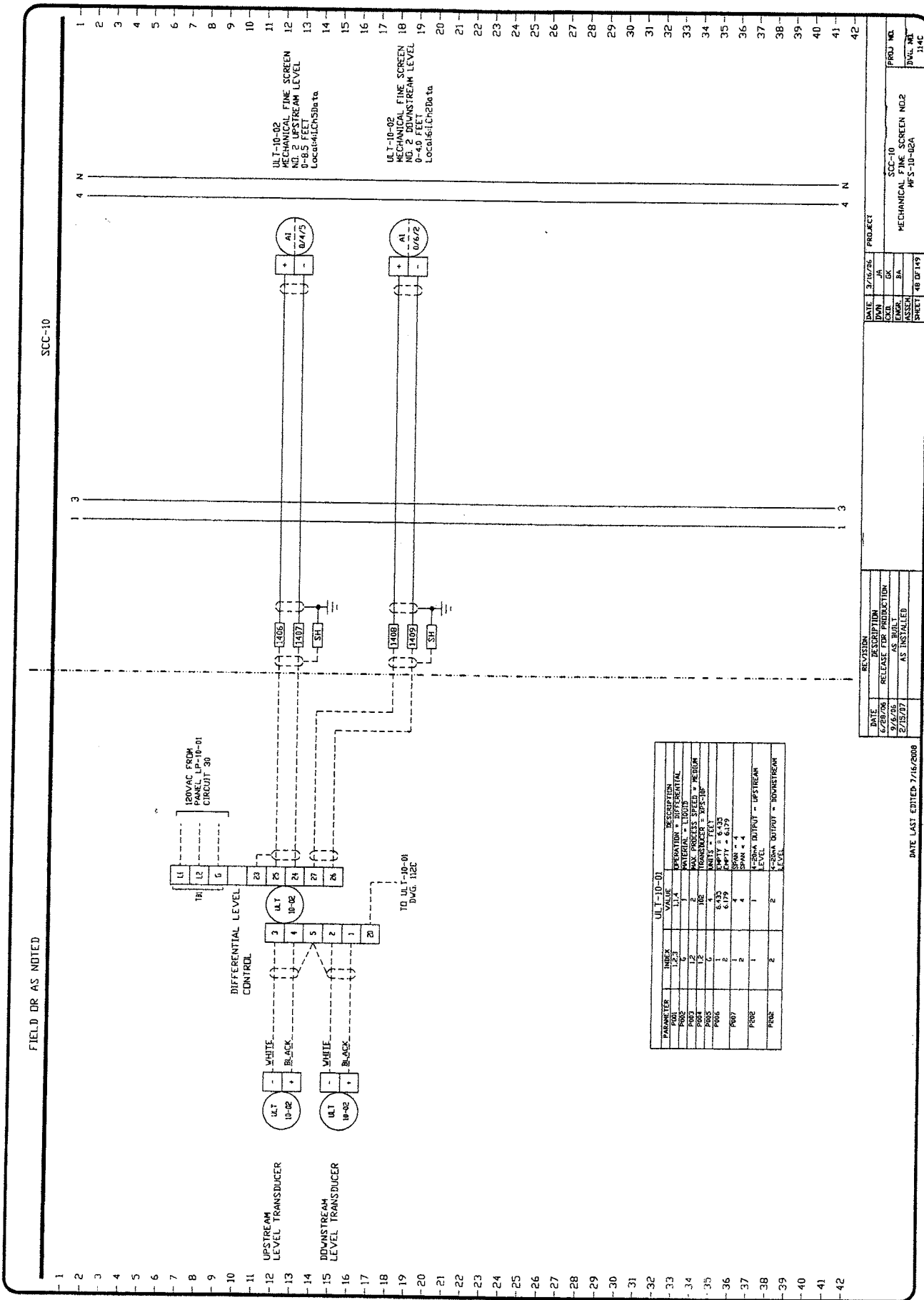








Sample Elementary
Schematic



SOILS INFORMATION



Report of Geotechnical Exploration

Proposed Twin Lakes WWTP Improvements

9201 East 123rd Avenue

Crown Point, Indiana

ATC Project No. H053981501

Prepared for:

Mr. Charles Alexander
Twin Lakes Utilities Inc.
10996 Four Season Place, Suite 100G
Crown Point, Indiana 46307

Prepared by:

ATC Group Services LLC
2224 Industrial Drive, Suite A
Highland, IN 46322
Phone: 219-922-7235
Facsimile: 219-922-7243

December 29, 2015

Document Information

Prepared for: Twin Lakes Utilities Inc.
Project Name: Proposed Twin Lakes WWTP Improvements
File Reference: ATC-Twin Lakes Improvements -Geotech Report
Job Reference: ATC Project No. H053981501
Date: December 29, 2015

Report Prepared by:

ATC Group Services LLC
2224 Industrial Drive, Suite A
Highland, IN 46322
Telephone: (219) 922-7235
Facsimile: (219) 922-7243

Document Control

Version	Date	Author	Author Initials	Reviewer	Reviewer Initials
1	December 29, 2015	Jose Vargas	JV	Akhtar (Art) Zaman	AZ

© ATC 2012. Copyright in the whole and every part of this document belongs to ATC and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person other than by agreement with ATC.

This document is produced by ATC solely for the benefit and use by the client in accordance with the terms of the engagement. ATC does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by any third party on the content of this document.

December 29, 2015

Mr. Charles Alexander
Twin Lakes Utilities Inc.
10996 Four Season Place, Suite 100G
Crown Point, Indiana 46307

Re: Report of Geotechnical Engineering Exploration
Proposed Twin Lakes WWTP Improvements
9201 East 123rd Avenue, Crown Point, Indiana
ATC Project No.: H053981501

Dear Mr. Alexander:

ATC Group Services LLC (ATC) is pleased to submit herewith our report of a geotechnical engineering exploration for the proposed Twin Lakes WWTP Improvements at the referenced location in Crown Point, Indiana. The services were performed in accordance with ATC Proposal No. 2015-347G dated November 25, 2015 that was authorized via PO 202641 dated December 10, 2015.

This report contains the results of our field and laboratory testing program, an engineering interpretation of the data with respect to the available project characteristics and our geotechnical recommendations to aid design and construction of the foundations and other earth-related phases of this project.

ATC appreciates the opportunity to be of service to you on this project. If we can be of any further assistance, or if you have any questions regarding this report, please do not hesitate to contact us at 219-922-7235.

Respectfully submitted,
ATC Group Services LLC



Jose Vargas
Staff Scientist
Jose.vargas@atcassociates.com



Akhtar (Art) Zaman, PE
Senior Project Engineer
akhtar.zaman@atcassociates.com

Distribution (via email): Mr. Charles Alexander, Twin Lakes Utilities Inc.

Table of Contents

1	Introduction.....	1
1.1	Purpose and Scope	1
1.2	Project and Site Characteristics.....	1
2	Field and Laboratory Exploration	2
2.1	Field Exploration	2
2.2	Laboratory Exploration.....	2
3	General Subsurface Conditions.....	3
3.1	Subsurface Soil Profile.....	3
3.2	Groundwater Conditions	3
4	Geotechnical Recommendations.....	4
4.1	Shallow Foundation Recommendations	4
4.2	Mat Foundation Recommendations	5
4.3	Ground Supported Floor Slabs	5
4.4	Groundwater Considerations for Lift Station Design.....	5
4.5	Temporary Earth Retention System.....	6
4.6	Lateral Pressures on Below Grade Walls	6
4.7	Drainage.....	6
5	Recommended Earthwork Procedures	7
5.1	Site Preparation	7
5.2	Excavation and Slope Stability.....	8
5.3	Engineered Fill	8
5.4	Foundation Subgrade Observation	9
5.5	Groundwater Control.....	9
6	Limitations of Study	10

Appendix

Boring Location Plan
Uplift Consideration for Submerged Structures
Lateral Pressures on Below-Grade Walls
Test Boring Logs
Laboratory Test Results
Soil Classification System & Important Information about Geotechnical Report

1 Introduction

The report presents the results of a geotechnical engineering exploration for the proposed Twin Lakes WWTP Improvements in Crown Point, Indiana. The study was performed in accordance with ATC Proposal No. 2015-347G dated November 25, 2015.

1.1 Purpose and Scope

The purpose of the study was to:

- Obtain information regarding the subsurface soil and groundwater conditions based on test borings,
- Evaluate the suitability of the encountered materials to support the proposed construction,
- Provide geotechnical engineering recommendations for the design of the proposed foundations based on the field and laboratory findings, and
- Provide recommendations regarding earthwork and foundation construction activities for the project.

The scope of this study included;

- A site reconnaissance and limited review of available geologic information,
- Field and laboratory testing, and
- An engineering evaluation of the encountered subsurface conditions.

Assessment of site environmental conditions, including the detection of pollutants in the soil or groundwater, delineation of jurisdictional wetlands, etc., was beyond the scope of this study.

1.2 Project and Site Characteristics

New improvements are planned at the existing Twin Lakes Waste Water Treatment Plant (WWTP) at the referenced address in Crown Point, Indiana. No detailed drawings or other information was available about the foundations of the existing structures at the facility. However, a geotechnical study completed by ATEC Associates in 1996 recommended to support all existing structures on concrete mat foundations. Based on the available existing topographic drawing, the proposed improvement area is relatively flat with corresponding surface elevation of about 731 ft, MSL, at the subject area. The existing ground surface has a mild downward slope west of the proposed area towards to the south and west to the adjacent Stony Run creek.

While the project is currently in design stage, we understand that three (3) new structures are planned near the northeast portion of the existing wastewater treatment facility. They are: a pole building, a mechanically cleaned bar screen and a vortex grit tank.

Based on the information provided to us, the pole building will reportedly be a one-story structure covering about 40 ft by 23 ft that will be supported by poles/shallow piers. Maximum pole embedment is expected to be no deeper than about 10 ft below the existing grade. The bar screen will reportedly be about 2 ft wide and 5 ft deep and expected to be supported on a concrete mat. The grit tank will reportedly have an inside diameter of 10 ft and bear at a depth of about 11 ft below the existing grade and possibly bear on a concrete mat. In addition, a new gravel driveway will be constructed in front (east) of the new building.

In the absence of any loading information, we assume that the proposed foundation wall, column or mat foundations will not exceed about 5 kips per lineal ft, 100 kips and 1,500 psf, respectively. We further assume that no grade-raise fills will be necessary for the proposed improvements.

2 Field and Laboratory Exploration

2.1 Field Exploration

The field exploration included a total of two (2) soil test borings to a depth of 30 ft below the current grade at the locations shown approximately on the attached Boring Location Plan (Figure No. 1). Both soil boring locations were established at the site by ATC representative by estimating distances from various site features and based on the drawings provided to us. Since these measurements are not precise, the boring locations shown on the attached drawing should be considered approximate. Surface elevations reported on the boring logs were interpolated from the available topographic drawing.

Indiana 811 was notified to mark existing public underground utilities present at the site. In addition, a private utility locator service was hired to mark any private underground features near the test locations prior to field drilling and sampling.

The test borings were completed with a truck-mounted drill-rig equipped with a rotary head. Conventional hollow-stem augers were used to advance the boreholes through the soil. Representative samples of the in-situ soils were obtained at selected intervals employing split-barrel sampling procedures in accordance with ASTM D-1586-11, Standard Test Method for Penetration Test and Split Barrel Sampling of Soils. Split-spoon samples were obtained at intervals of 2.5 ft and 5 ft. Standard Penetration Tests (SPT) values were recorded for each split spoon sample. The SPT (N) value corresponding to each split-spoon sample provides general information about the strength and consistency of the naturally occurring materials. The Soil Classification Sheet provided in the Appendix explains the SPT test procedure in brief.

Groundwater observations were made during and immediately after completion of the drilling operations. SPT values and groundwater observations are noted on the respective Test Boring Logs. All holes were backfilled with auger cuttings after drilling.

2.2 Laboratory Exploration

Samples from the field were placed in sealed containers and brought to the ATC laboratory for further analysis. A supplemental laboratory exploration was conducted to determine pertinent engineering characteristics of the subsurface materials necessary to analyse the behavior of the foundations for the proposed project. The laboratory program included a visual classification on all samples, moisture contents, plasticity index and unconfined compressive strength tests (using hand penetrometer) on selected samples. All laboratory tests were conducted in general accordance with applicable ASTM specifications and procedures and the test results are provided on the respective boring logs or in the appendix.

The Test Boring Logs in the Appendix describe visual classifications of all soil strata encountered using the Unified Soil Classification System (USCS). A Field Soil Classification Sheet explaining terms and symbols used on the logs, is provided in the Appendix. Please note that we will store the samples for thirty (30) days after which they will be discarded unless you request otherwise.

3 General Subsurface Conditions

The subsurface materials encountered and groundwater observations at each boring are described in detail in the respective Test Borings Logs provided in the Appendix. It should be noted that stratification lines shown on the boring logs represent approximate transitions between material types. In-situ strata changes could occur gradually or at slightly different levels. Also, it should be noted that the boring logs depict conditions at the soil boring locations only and the subsurface conditions at other locations may vary. In addition, some conditions, such as groundwater level, could change with time.

3.1 Subsurface Soil Profile

Borings B-1 and B-2 revealed dark brown to black topsoil mixed with gravel (fill) from the present surface to depths of about 1.5 ft and 4 inches, respectively, below the existing ground surface.

Both borings then noted brown sandy clay with silt (CL/ML) and lean clay (CL) to depths of about 24 ft and 26 ft, respectively, underlain by brown to gray silty sand (SM) to the termination depth of 30 ft below the existing surface. Based on the field Standard Penetration Test (SPT) values, the granular soils were loose to medium dense and natural cohesive soils were medium stiff to very stiff. Moisture contents of the native cohesive soil varied between about 13% and 23%. No bedrock was revealed within the depth investigated during the study.

The following table summarizes unconfined compression and plasticity index tests performed on selected samples:

Table 3-1 Laboratory Unconfined Compression and Plasticity Index Test Results

Boring Nos.	Sample Depth (ft)	Unconfined Compressive Strength (psf)	Shear Strength (psf)	Moisture Content %	Liquid Limit	Plastic Limit	Plasticity Index	USCS Class
B-1	11-12.5	8,050	4,025	11.7	22	13	9	CL
B-2	18.5-20	5,000	2,500	12.3	21	11	10	CL

3.2 Groundwater Conditions

Groundwater observations were made during the drilling operations by noting free water on the drilling and sampling tools and in the open boreholes immediately following withdrawal of the drilling augers. Groundwater was encountered in both borings at depths of about 24 ft and 26 ft, respectively, below the existing ground surface during the drilling. However, both boreholes caved-in at depths of about 4 ft and 5 ft, respectively, below the existing ground surface, immediately after removing the drilling augers. It must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, water level in the nearby Stony Run creek and other factors. Please note that perched or trapped water contained in saturated granular seam within cohesive clayey soil are common and may be present at different depths.

4 Geotechnical Recommendations

The following design recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered at the test borings. If there is any change in the project information, including structure locations within the site, a review should be made by this office to ensure the continued validity of our recommendations.

4.1 Shallow Foundation Recommendations

Provided all existing vegetation, topsoil, organic and otherwise unsuitable materials are completely removed and replaced from the footing areas, the proposed building may be supported on conventional shallow footings that bear on suitable natural soil of the type encountered in the test borings or engineered fill placed on such soils and designed using a maximum net allowable bearing pressure of 2,500 pounds per square ft (psf). All unsuitable materials must be removed from below the foundation areas and replaced with engineered fill or lean concrete as outlined below in Sections 5.3 and 5.4. While the borings indicate that the existing topsoil old fill is present to a maximum depth of about 1.5 ft, the depth of unsuitable materials may be deeper at other locations. All footing bearing surfaces should be examined by an ATC representative to verify that the footings bear on suitable materials before placing concrete.

Based on the recommended allowable bearing pressure, the anticipated footing sizes and depths, it is estimated that post-construction total and differential settlements will not exceed about 1 inch and ½ inches, respectively, between similarly loaded columns or along continuous footings that are 30 ft long or less. Proper quality control during construction will help to minimize future settlements.

In applying net allowable soil bearing pressure in the footing design, the weight of the footings and backfill over the footings, including the floor slab, need not be included in total loads for dimensioning footings. The shallow piers/ poles should be at least 12 inches in diameter, Wall footings should be at least 16 inches in width, and isolated column footings should be at least 24 inches square, regardless of the actual contact pressures developed, to minimize the possibility of punching shear failure. The bottoms of all exterior footings (as well as any in unheated areas) should bear at a minimum depth of 42 inches below finished exterior grades to provide suitable frost protection. Interior footings in heated areas may be placed at any convenient depth as long as they bear on suitable materials and designed for the corresponding allowable bearing pressure.

Uplift forces on the footings can be resisted by the weight of the footings and the soil material that is placed over the footings. It is recommended that the soil weight be limited to that immediately above and within the perimeter of the footings (unless a much higher factor of safety is used). A total soil unit weight of 115 pounds per cubic foot (pcf) can be used for the backfill material above the footings, provided it is compacted as recommended in Section 5.3 of this report. It is also recommended that a factor of safety of at least 1.2 be used for calculating uplift resistance from the footings (provided only the weight of the footing and the soil immediately above it are used to resist uplift forces).

Lateral forces on shallow spread footings can be resisted by the passive lateral earth pressure against the side of the footing and by friction between the subgrade soil and the base of the footing. An allowable passive pressure of 500 psf can be used for that portion of the footing that is below a depth of 2.5 ft below the final exterior grade (no portion of the footing above this depth should be used for lateral resistance). An allowable coefficient of friction value of 0.20 (which includes a factor of safety of 1.5) may be used between concrete and the underlying soil.

Geologic mapping and the results of the test borings suggest that the subsurface conditions at this site meet the criteria for Site Class D (which corresponds to a shear wave velocity of between 600 ft/sec and 1,200 ft/sec) based on Section 1613.5.2 of the 2012 International Building Code (IBC).

4.2 Mat Foundation Recommendations

Test borings suggest that the natural sandy clay with silt or the underlying clay is suitable to support the proposed structures on reinforced concrete mat foundations. Provided the proposed mat foundations bear on suitable natural soil of the type as encountered in the test borings, the proposed mat foundations may be designed with a gross allowable pressure not exceeding 3,500 psf. In using gross allowable soil pressures, the weight of the footing and backfill over the footing should be included to calculate the dimensions. Based on the recommended allowable bearing pressure, it is estimated that total settlement of the mat foundation should not exceed about 1 inch. Proper quality control during the construction is vital in limiting any future settlements. The exposed subgrade should be carefully evaluated by an ATC representative and any organic, soft or otherwise unsuitable materials, if encountered, should be undercut and replaced with suitable engineered fill.

Based upon the soil conditions encountered at the proposed site and the recommended site preparation operations presented in the Earthwork Recommendations section of this report, the modulus of vertical subgrade reaction (k_{30}) for the shallow soil is expected to be at least of 25 pounds per square inch per inch of vertical deflection (pci). The mat should be appropriately reinforced to support the proposed loads. An allowable coefficient of friction between the base of the foundation concrete and underlying clayey soils of 0.20 (which includes a factor of safety of 1.5) can be used to resist lateral forces.

Based on geologic mapping and the results of the test borings, the subsurface conditions at this site meet the requirements of Site Class "D" (which corresponds to a shear wave velocity of between 600 ft/sec and 1,200 ft/sec) based on Table No. 1613.5.2 of the 2006 International Building Code (IBC).

4.3 Ground Supported Floor Slabs

The ground supported floor slabs may be supported on the existing shallow soil or engineered fill provided all existing topsoil, vegetation, highly organic (over 5%), or otherwise unsuitable soils are removed and the subgrade appears satisfactory under a proofroll observation, as discussed in Section 5.1. Suitable subgrade soil should be surface compacted prior to the placement of concrete or new fill.

The floor slabs should be supported on at least a 4-inch thick layer of compacted well-graded granular base material (such as sand and gravel or crushed limestone) placed over properly prepared subgrade. It is recommended that the floor slabs be free floating, that is fully ground supported and not structurally connected to walls or foundations. This is to minimize the possibility of cracking and displacement of the floor slabs because of differential movements between the slab and the foundations. Based upon the soil conditions encountered at the proposed site and at least 4-inches of compacted granular coarse aggregate is placed below the floor slab and all existing soft and organic materials are replaced with engineered fill, the modulus of vertical subgrade reaction (k_{30}) for the shallow soil is estimated to be at least of 100 pounds per square inch per inch (psi/inch) of vertical deflection.

A vapor barrier may be placed immediately beneath the slab to facilitate the application of moisture sensitive floor coverings, if desired. The floor slab should be appropriately reinforced to support the loads proposed and should include control joints to preclude random cracking. Particular attention should be paid to the placement of backfill against the building foundations as inadequate compaction at these locations may cause cracking of the slab edges and corners due to subsidence of the backfill.

4.4 Groundwater Considerations for Lift Station Design

Although no groundwater was encountered above the anticipated bearing elevations of the proposed mat foundations, perched groundwater may be present seasonably during and following periods of heavy precipitation, it is recommended that the design high groundwater level be considered at the existing ground surface and no deeper than 5 ft below the existing grade. Please note that it will be necessary to include design measures to resist buoyancy and hydrostatic pressures in the design of the below grade elements.

Buoyant forces can be resisted by increasing the weight of the structure and/or by providing a "lip" around the exterior walls (as illustrated in Figure No. 2 in the Appendix) so that the weight of the soils overlying the extended portion contributes to the uplift resistance. A total unit weight of soil above the lip of the slab of 120 pcf should be used to determine the weight of soil overlying the lip. Recommendations for computing lateral earth and hydrostatic pressures on the below grade walls are presented in the following section.

4.5 Temporary Earth Retention System

Temporary earth retention systems will be required to retain the surrounding soils during deep excavations for the proposed improvements. While no detailed information was available, we anticipate that the retention system will consist of sheet piling or a shoulder pile and lagging system. The design of this system, which is beyond the scope of this work, depends on the type of system used, number of tie-back rows, etc., and should be performed by an experienced specialty contractor who is familiar with the site conditions.

A total soil unit weight of 120 pcf may be used for the natural soil in the calculation. A submerged soil unit weight of 57.6 pcf should be used below water level, where applicable. An undrained cohesion value of 1,500 psf is recommended for the cohesive soil that was encountered in the test borings. Please note that, since these values do not include any safety factors, adequate factor of safety must be used during the design.

4.6 Lateral Pressures on Below Grade Walls

All permanent below grade walls must be designed to withstand horizontal pressures produced by the soil backfill as well as hydrostatic pressures from groundwater. The magnitude of lateral earth pressure against below grade walls is dependent on the method of backfill placement, the type of backfill soil used, drainage provisions and whether or not the wall is permitted to yield during and or after placement of the backfill. When a wall is held rigidly against horizontal movement the lateral earth pressure against the wall is greater than the "active" lateral earth pressure that is typically used in the design of free standing retaining wall. Therefore, rigid walls should be designed for higher, "at-rest" lateral earth pressures, using an at-rest lateral earth pressure coefficient, K_0 while free-standing retaining walls can be designed for active lateral earth pressures (using an active lateral earth pressure coefficient, K_a). A design illustration to aid in computing lateral earth and hydrostatic pressures against the walls is included in Figure No. 3 in the Appendix.

It is recommended that a well-graded granular material be used for backfill behind the below grade portions of the structures. Provided well-graded granular soil is used for backfill, a total soil unit weight of 130 pcf (and a submerged unit weight of 67.5 pcf) and a coefficient of lateral earth pressure at-rest (K_0) of 0.45 can be used for calculating the lateral earth pressure for rigid walls.

Figure No. 3 in the Appendix can also be used in the calculation of the active lateral earth pressure against free-standing retaining walls. In this case, an active lateral earth pressure coefficient (K_a) of 0.33 and a total soil unit weight of 130 pcf (and a submerged unit weight of 67.5 pcf) can be used provided that well-graded granular backfill material is used behind these walls as described in the preceding paragraph. A passive lateral earth pressure coefficient of 3 can be used for that portion of the retaining wall footing that is below a depth of 2.5 ft below the final exterior grade (no portion of the footing above this depth should be used for lateral resistance). An allowable coefficient of friction between the base of the foundation concrete and underlying soils of 0.20 (which includes a factor of safety of 1.5) can be used to resist lateral forces.

It has been assumed herein that the static weight per axle of equipment utilized for the compaction of the backfill materials will not exceed 2 tons per axle for non-vibratory equipment and 1 ton per axle for vibratory equipment. All heavy equipment, including compaction equipment heavier than recommended above, should not be allowed closer to the wall (horizontal distance) than the vertical distance from the backfill surface to the bottom of the wall. If it is desired to use heavier compaction equipment adjacent to the below grade wall, it is recommended that this office be contacted to determine the resulting earth pressures.

4.7 Drainage

Adequate drainage should be provided at the site to minimize any increase in moisture content of the foundation soils. All areas surrounding the structures should be sloped away from the structures to prevent ponding of water. The site drainage should also be such that the run-off onto adjacent properties is controlled. Positive drainage should also be maintained during construction.

5 Recommended Earthwork Procedures

Since this exploration identified actual subsurface conditions only at the test boring locations, it was necessary for our geotechnical engineers to extrapolate these conditions in order to characterize the entire project site. Even under the best of circumstances, the conditions encountered during construction can be expected to vary somewhat from the test boring results and may, in the extreme case, differ to the extent that modifications to the foundation recommendations become necessary. Therefore, we recommend that ATC be retained as geotechnical consultant through the earth-related phases of this project to correlate actual soil conditions with test boring data, identify variations, conduct additional tests that may be needed and recommend solutions to earth-related problems that may develop.

5.1 Site Preparation

All areas that will support new improvements should be properly prepared for long-term performance. It is important to note that improper earthwork may deteriorate the otherwise suitable subgrade especially in cohesive soil. All deep excavations should also be properly protected to minimize deterioration of the subgrade. The time period between late spring and early fall are typically favorable for earthwork in the project area. Earthwork activities undertaken during late fall and winter often encounter substantial difficulties associated with snow, rain and cold temperatures.

All existing vegetation, highly organic (over 5%) or otherwise unsuitable material, as well as frozen, wet, soft or loose soil should be removed from the structural areas. After rough grade has been established in cut areas and prior to placement of fill, the exposed subgrade should be carefully observed by an ATC representative by probing or other methods of testing. The exposed subgrade should furthermore be observed by proofrolling with a tandem-axle dump truck loaded with at least 20 tons or similar in the proposed pavement or slab on grade areas. The purpose of the proofrolling is to locate soft, weak, or excessively wet soils present at the surface or beneath a thin crust of relatively stronger soil during the construction. The proofroll should cover the entire area in two perpendicular directions. If an area is too small to be proofrolled then it must be observed by an ATC representative, to establish its suitability. All unsuitable materials observed during the evaluation should be replaced or stabilized appropriately. Suitable subgrade should be surface compacted.

The near surface materials encountered in the test borings consist of primarily clayey and silty soils. Depending on the weather conditions, these soils may become soft and unstable under construction traffic. It is very important for the contractor to realize that construction traffic must be controlled within the structural areas to minimize disturbance and deterioration of the subgrade. The extent to which this may be a problem is difficult to determine beforehand since it is dependent upon several factors including cut and fill depths, weather conditions, drainage provisions, variations in soil conditions across the site, sequencing and scheduling of the earthwork and construction traffic, etc.

In general, yielding subgrade problems are more prominent in cut areas (where saturated or nearly saturated silty or clayey soils are exposed by the excavation) or where little or no fill is placed. Depending on these factors, it may be possible to stabilize some yielding subgrade soils by diskings, aerating and then re-compacting the soils. However, this is often unsuccessful, particularly when the weather conditions do not permit drying of wet soil. In such case, it may be necessary to undercut and replace with coarse aggregate with geogrid or to use chemical modification (such as lime, fly-ash, cement, etc.). An ATC representative should be present throughout the earthwork to verify that they are performed as recommended and identify areas where special stabilization is necessary.

5.2 Excavation and Slope Stability

There should not be any significant difficulty in excavating the soils at this site with conventional equipment. Unless specified otherwise, all permanent cut slopes should be no steeper than 3 horizontal to 1 vertical. All temporary excavations for the construction of foundations, utilities, etc., should be properly laid back or braced in accordance with Occupational Safety and Health Administration (OSHA) requirements and in no case should be steeper than 1.5 horizontal to 1 vertical. Flatter cut slopes may be required in cases where there is ground water seepage or the foundation soils are particularly poor. Where new fill is placed against existing slopes that are steeper than 6 (horizontal) to 1 (vertical), it will be necessary to bench the new fill into the existing slope in order to provide a good bond between the existing soil and the new fill and to prevent the development of a zone of weak soil at the interface. If spatial constraints will not permit an open cut, bracing will be required for any excavation deeper than 5 ft.

Care must be exercised when excavating near existing facilities such as streets, underground utilities, etc., to protect the integrity of the existing facilities. Bracing or underpinning may be required if it becomes necessary to excavate below and in close proximity to such facilities. All temporary bracing and/or underpinning should be designed and installed by an experienced specialty contractor.

5.3 Engineered Fill

Once the subgrade has been properly prepared, fill may be placed in order to attain desired final grades. In general, any non-organic, naturally occurring, non-expansive soils can be used for structural fill. However, we recommend only crushed limestone, sand and gravel or lean concrete in the foundation areas (if necessary). It appears that majority of the existing soils encountered in the test borings appears to be suitable as engineered fill provided they meet the following criteria. However, some moisture treating of the existing moist clayey fill soil may be necessary during earthwork activities. The proposed soil fill materials should consist of soil with the following characteristics:

- Organic content less than 5% by dry weight of soil,
- Liquid Limit less than 50 and Plasticity Index less than 30,
- Free of large rock fragments (no particles larger than 3 inches in diameter), debris, roots, rubble, wood or any other deleterious materials,
- The amount retained on a $\frac{3}{4}$ inch sieve should be less than 30%,
- The maximum dry density (ASTM D-698) should be at least 100 pcf,
- The soil fill should meet the requirements of the Unified Soil Classification System (USCS) (ASTM D-2487) as either CL, CL-ML, SM, SC, SP, SW, SP-SM, SC-SM, SP-SC, SW-SM, SW-SC, GW, GW-GM or GW-GC,
- The use of an essentially one-size material should not be permitted.

All engineered fill should be compacted to a dry density of at least 98% of the standard Proctor maximum dry density (ASTM D-698). The compaction should be accomplished by placing the fill in about 8 inches thick (or less) loose horizontal lifts and mechanically compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to document moisture conditions and verify that specified compaction that is being achieved. Compaction of any fill by flooding is not considered acceptable. The soils should be placed and compacted at moisture contents within 3% of the optimum moisture content as determined by the specified Proctor test. Modification to this range may be necessary depending on the characteristics of the fill and should be based on an evaluation by an ATC representative during construction. Suitable equipment for either aerating or adding water should be available as the soil moisture and weather conditions dictate. In general, smooth-wheel vibratory rollers or skid-plates are suitable for compacting sand and gravel type soils, and sheeps-foot non-vibratory rollers or jumping jacks are suitable for compacting cohesive soils.

It is recommended that ATC be retained to perform continuous review of construction of the soils related phases of this project. Otherwise, ATC can assume no responsibility for construction compliance with the design concepts, specifications, or our recommendations. As part of this review, field density tests should be performed as frequently as necessary to assist in the evaluation of the fill with respect to the above recommendations.

5.4 Foundation Subgrade Observation

The exposed foundation subgrade should be carefully observed by an ATC representative to verify that the new footings will be placed on suitable bearing materials. Representative hand auger borings may be performed in the excavations to verify that the materials at the foundation subgrade resemble those described on the Test Boring Logs. In addition, in situ shear strength tests may also be conducted in conjunction with the auger borings.

All existing vegetation, old fill, topsoil, soft, organic or otherwise unsuitable soils must be removed from the proposed foundation areas and replaced with suitable engineered fill or lean concrete. It should be noted that utilizing engineered fill will require the excavation to be widened by imaginary planes extending outward and downward a 2 (vertical) to 1 (horizontal) slope from the perimeter of the footings to accommodate the translation of vertical to horizontal loading. The use of lean concrete does not require the excavation to be widened, but it does require that the concrete be allowed to set-up so that it can support the weight of the foundation concrete. The depth of the undercut (if any) should be determined by an ATC representative present during the foundation excavations.

Special care should be exercised to remove any sloughed, loose or soft materials near the base of the excavation slopes. In addition, special care should be taken to "tie-in" the compacted fill with the excavation slopes, with benches as necessary, to insure that no pockets of loose or soft materials will be left in place along the excavation slopes below the foundation bearing level.

All foundation bearing surfaces should be protected against freezing, flooding and undue disturbance, since the foundation soils will tend to soften and loose strength when subjected to these conditions. Footing concrete should be placed the same day that footing excavations are completed, unless lean concrete is used to backfill the excavations to design bearing elevation, in which case the footing concrete should be placed as soon as it can be suitably supported by the lean concrete. The saturated silty soils at this site are prone to a loss of strength and an increase in compressibility if unduly disturbed, particularly if excess moisture is present. The contractor may need a thin concrete 'mud-mat' over such soils to protect the subgrade soil.

5.5 Groundwater Control

Groundwater was encountered at a depth of about 24 ft below the existing grade in the borings. However, groundwater conditions may change and perched water may be encountered at shallower depths. The contractor must be prepared to handle both surface and groundwater during the construction activities.

If water accumulates or ponds in the construction area, it should be promptly and properly removed. Minor dewatering may be completed by pumping from a sump from an excavation terminating in clayey soil. In saturated granular soils, typically cased-wells or well points installed outside the excavation limits are required to lower groundwater. It is recommended that the dewatering operation be closely monitored to make sure that the fine silty particles are not being transported and resulting in loss of support.

Any dewatering should be designed and performed by an experienced contractor. Improper dewatering may deteriorate the subgrade and may damage nearby structures. The most appropriate dewatering system should be determined at the time of construction based upon those field conditions encountered.

6 Limitations of Study

ATC notes the following limitations associated with this geotechnical exploration.

Differing Conditions: Our recommendations for this project were developed utilizing soils information obtained from the test borings that were made at the proposed site. At this time, we would like to point out that soil test borings only depict the soil conditions at the specific locations and time at which they were made. The soil conditions at other locations on the site may differ from those occurring at the boring locations. If deviations from the noted subsurface conditions are encountered during construction, they should be brought to the attention of the soils engineer. This study did not include an assessment of the possibility of the presence of abandoned or active underground utilities on the site.

Changes in Plans: The conclusions and recommendations herein have been based upon the available soil information and the preliminary design details furnished by a representative of the owner of the proposed project and/or as assumed herein. Any revision in the plans for the proposed construction from those anticipated in this report should be brought to the attention of the soils engineer to determine whether any changes in the foundation or earthwork recommendations are necessary.

Recommendations vs. Final Design: This report and the recommendations included within are not to be considered a final design, but rather as a basis for the final design to be completed by others (architect, civil or structural engineer, etc.). It is the client's responsibility to insure that the recommendations of the geotechnical engineer are properly integrated into the design, and that the geotechnical engineer is provided the opportunity for design input and comment after the submittal of this report, as needed.

We recommend that this firm be retained to review the final construction documents to confirm that the proposed project design sufficiently considers our geotechnical recommendations. We also suggest that our firm be represented at pre-bid and/or pre-construction meetings regarding this project to offer any needed clarifications of the geotechnical information to all involved.

Construction Issues: Although general constructability issues have been considered in this report, the means, methods, techniques, sequences and operations of construction, safety precautions, and all items incidental thereto and consequences of, are the responsibility of the parties to the project other than ATC. This office should be contacted if additional guidance is needed in these matters.

Report Interpretation: This company is not responsible for the conclusions, opinions, or recommendations by others based upon the data included herein. It is the client's responsibility to seek any guidance and clarifications from the geotechnical engineer needed for proper interpretation of this report.

Environmental & Other Considerations: The scope of our services does not include any environmental assessment investigation for the presence or absence of hazardous, toxic or corrosive materials in the soil, groundwater, or surface water within or beyond the site studies. Additionally, an evaluation of slope stability was beyond the scope of our work.

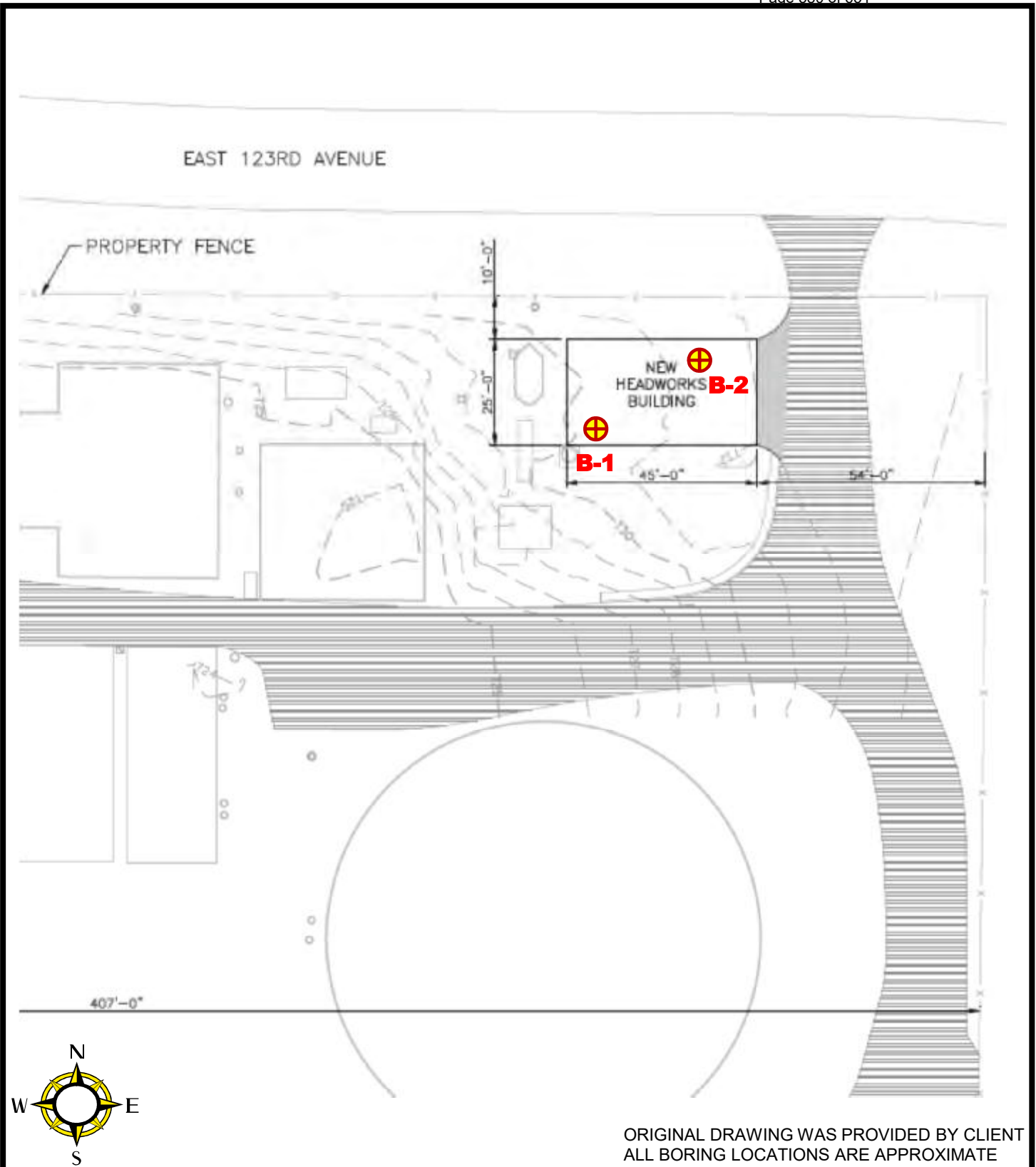
Any statements in this report or on the test boring logs regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client. Unless complete environmental information regarding the site is already available, an environmental assessment is recommended prior to the development of this site.

Standard of Care: Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This statement is made in lieu of all other warranties either expressed or implied.

Proposed Twin Lakes WWTP Improvements

Appendix

Boring Location Plan
Uplift Consideration for Submerged Structures
Lateral Pressures on Below-Grade Walls
Test Boring Logs
Laboratory Test Results
Field Classification System and
Important Information about Geotechnical Engineering Report



BORING LOCATION PLAN

PROPOSED TWIN LAKES WWTP IMPROVEMENTS
9201 E. 123RD AVENUE
CROWN POINT, INDIANA
CLIENT: TWIN LAKES UTILITIES INC.

Project Number: H053981501

Drawn By: JV

DATE: 12-10-15

Scale: NONE

Checked By: JA



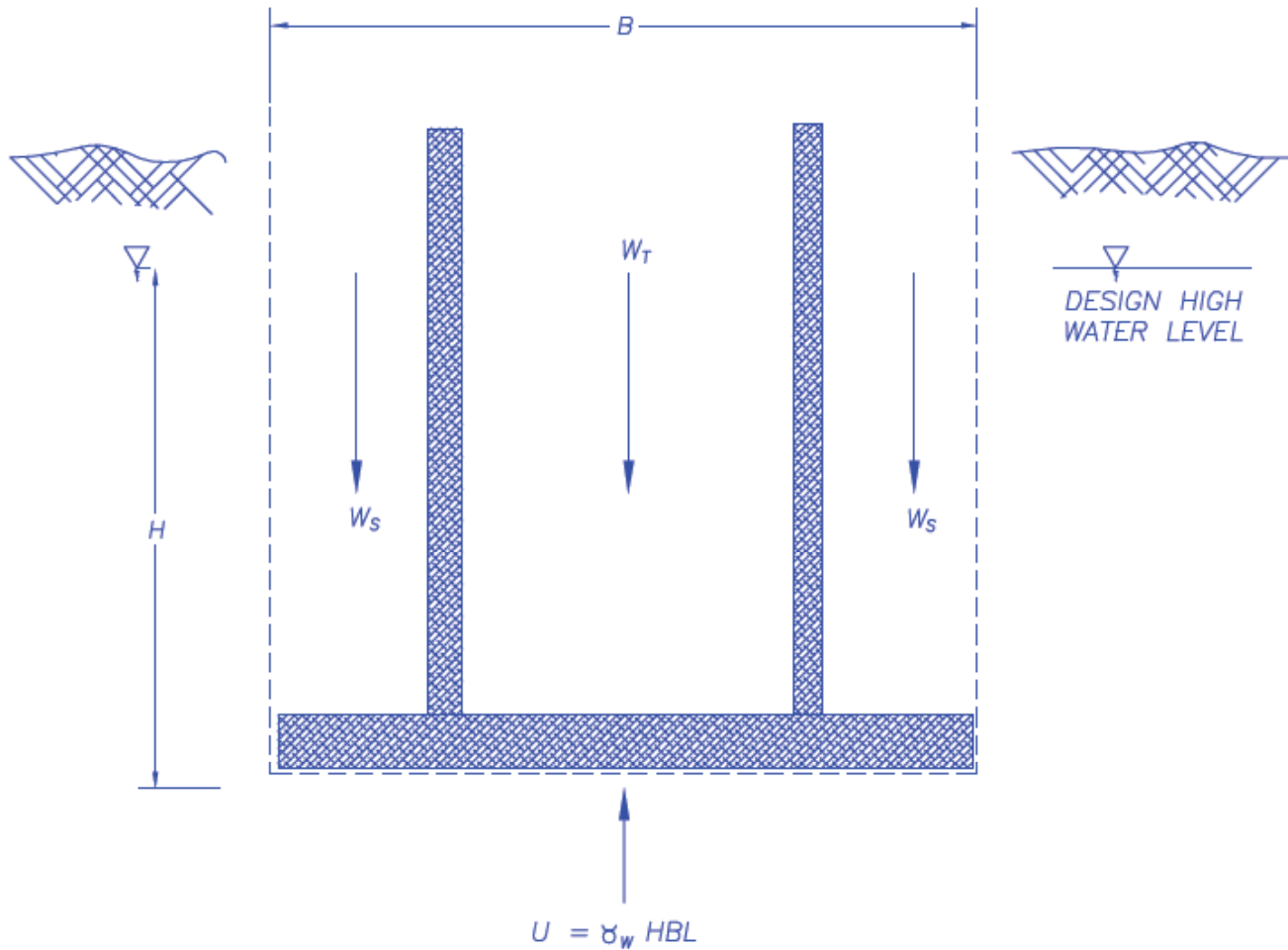
Approximate Boring Locations

Approved By: AZ

ATC
GROUP SERVICES LLC

Figure:

1



NOTE: FOR THIS DESIGN APPROACH, TOTAL (NOT BUOYANT) WEIGHTS OF SOIL AND STRUCTURE MATERIALS WITHIN THE DASHED LINES SHOULD BE USED

- H = DEPTH FROM DESIGN HIGH GROUND WATER LEVEL TO BOTTOM OF STRUCTURE (ft.)
- γ_w = UNIT WEIGHT OF WATER (lbs./ cu. ft.)
- U = TOTAL UPLIFT FORCE (lbs.)
- W_T = WEIGHT OF STRUCTURE (lbs.)
- W_S = WEIGHT OF SOIL OVER FOUNDATION SLAB (lbs.)
- B = WIDTH OF STRUCTURE BASE (ft.)
- L = LENGTH OF STRUCTURE BASE (ft.)

DESIGN ILLUSTRATION-UPLIFT CONSIDERATION OF SUBMERGED BELOW GRADE STRUCTURES

PROPOSED TWIN LAKES WWTP IMPROVEMENTS
9201 EAST 123RD AVENUE
CROWN POINT, INDIANA
CLIENT: TWIN LAKES UTILITIES INC.

Project Number: H053981501

Drawn By: JV

Drawn File: 05398

Checked By: AZ

DATE: 12/14/15

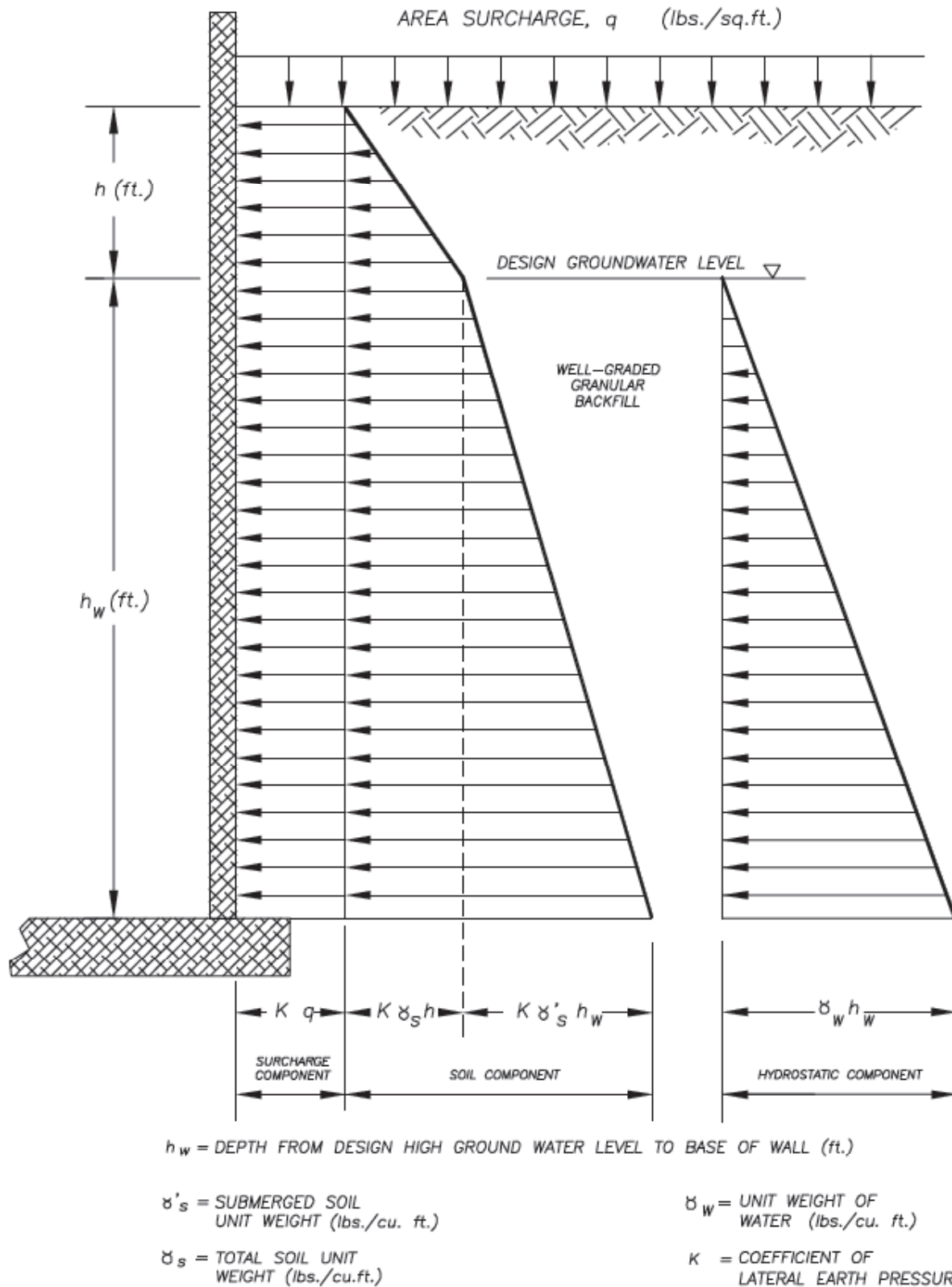
Scale: NONE

Approved By: AZ

ATC
GROUP SERVICES LLC

Figure:

2



**LATERAL EARTH PRESURE AGAINST BELOW-GRADE WALLS
ASSUMING UNDRAINED BACKFILL W/ HYDROSTATIC PRESSURE**

Project Number: H053981501
Drawn File: 05398
DATE: 12-14-15
Scale: NONE

Drawn By: JV
Checked By: JV
Approved By: AZ

PROPOSED TWIN LAKES WWTP IMPROVEMENTS
9201 EAST 123RD AVENUE
CROWN POINT, INDIANA
CLIENT: TWIN LAKES UTILITIES INC.

ATC
GROUP SERVICES LLC

Figure:
3



2224 Industrial Drive, Suite A
Highland, IN 46322
(219) 922-7235
Fax (219) 922-7243

CUII Response to IURC DE #4
Attachment IURC 4-23
Page 583 of 651
TEST BORING LOG

CLIENT Twin Lakes Utilities Inc. BORING # B-1
PROJECT NAME Proposed Twin Lakes WWTP Improvements JOB # H053981501
PROJECT LOCATION 9201 East 123rd Avenue DRAWN BY JV
Crown Point, Indiana APPROVED BY AZ

DRILLING and SAMPLING INFORMATION

TEST DATA

Date Started	12/14/15	Hammer Wt.	140	lbs.	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Groundwater	Standard Penetration Test, blows/6 inches	Qu-tsif Unconfined Compressive Strength	HP-tsif Hand Penetrometer	Moisture Content %	Liquid Limit (LL)	Plastic Limit (PL)	Remarks
Date Completed	12/14/15	Hammer Drop	30	in.														
Drill Foreman	RG/GTC	Spoon Sampler OD	2	in.														
Inspector	JV	Rock Core Dia.	NA	in.														
Boring Method	HSA	Shelby Tube OD	NA	in.														
					SURFACE ELEVATION 731*													
					Dark Brown to Black Topsoil (Fill)	0.3												*Surface Elevation Interpolated from Topographic Drawing. PID Readings on all SS Samples were below Detection Limit.
					Brown to Dark Brown Silt with Clay (Fill)	1.5		1	SS			4-5-5		2.0	17.0			
					Brown Sandy Clay with Silt (CL/ML), Trace Gravel, Moist, Medium Stiff to Very Stiff		5	2	SS			3-4-6		3.5	17.1			
							3	SS			3-6-7		4.5	18.2				
							10	4	SS			5-8-11		4.5+	17.7			
							5	SS			3-5-8	4.0	3.75	11.7	22	13		
					Brown to Gray Lean Clay (CL), Trace Sand, Moist, Medium Stiff to Stiff	13.0		6	SS			3-3-6		3.5	12.8			
							15											
							20	7	SS			3-5-7		4.0	12.8			
					Brown to Gray Silty Sand (SM), Trace Gravel, Wet, Loose to Medium Dense	24.0		8	SS			2-4-5			12.6			
							25											
					Noted Thin Silt at about 29.5 ft.			9	SS			4-5-7			17.6			
					Boring Terminated at 30 ft.	30.0	30											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater

● Noted on Drilling Tools 24.0 ft.
⊗ At Completion (open hole) None ft.
⏴ After _____ hours _____ ft.
⏴ After _____ days _____ ft.
⊗ Cave Depth 4.0 ft.

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling
HA - Hand Augers



2224 Industrial Drive, Suite A
Highland, IN 46322
(219) 922-7235
Fax (219) 922-7243

CUII Response to IURC DE #4
Attachment IURC 4-3
Page 584 of 651

TEST BORING LOG

CLIENT Twin Lakes Utilities Inc. BORING # B-2
PROJECT NAME Proposed Twin Lakes WWTP Improvements JOB # H053981501
PROJECT LOCATION 9201 East 123rd Avenue DRAWN BY JV
Crown Point, Indiana APPROVED BY AZ

DRILLING and SAMPLING INFORMATION

TEST DATA

Date Started <u>12/14/15</u>	Hammer Wt. <u>140</u> lbs.	<div>SOIL CLASSIFICATION</div> <div>SURFACE ELEVATION 731*</div> <div>Sand and Gravel with Topsoil (Fill) / Brown Sandy Clay with Silt (CL/ML), Trace Gravel, Moist, Medium Stiff to Very Stiff</div> <div>Brown to Gray Lean Clay (CL), Trace Sand, Moist, Stiff</div> <div>Brown to Gray Silty Sand (SM), Trace Gravel, Wet, Medium Dense</div> <div>Boring Terminated at 30 ft.</div>	Stratum Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Groundwater	Standard Penetration Test, blows/6 inches	Qu-tsif Unconfined Compressive Strength	HP-tsif Hand Penetrometer	Moisture Content %	Liquid Limit (LL)	Plastic Limit (PL)	Remarks	
Date Completed <u>12/14/15</u>	Hammer Drop <u>30</u> in.		0.3													*Surface Elevation Interpolated from Topographic Drawing. PID Readings on all SS Samples were below Detection Limit.
Drill Foreman <u>RG/GTC</u>	Spoon Sampler OD <u>2</u> in.			1	SS				3-5-5		3.5	22.5				
Inspector <u>JV</u>	Rock Core Dia. <u>NA</u> in.		5	2	SS				2-5-12		3.5	19.6				
Boring Method <u>HSA</u>	Shelby Tube OD <u>NA</u> in.			3	SS				5-10-12		4.5	14.1				
		10	4	SS				3-6-8		4.5+	14.9					
		13.0	5	SS				3-7-11		3.0	14.6					
		15	6	SS				2-4-8		3.5	17.5					
		20	7	SS				3-4-7	2.5	2.75	12.3	21	11	PI-10.		
		25	8	SS				4-4-7		3.0	16.7					
		26.0														
		30.0	9	SS				5-7-7								
		30														

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater

● Noted on Drilling Tools 26.0 ft.
⊗ At Completion (open hole) None ft.
⏴ After _____ hours _____ ft.
⏴ After _____ days _____ ft.
⊗ Cave Depth 5.0 ft.

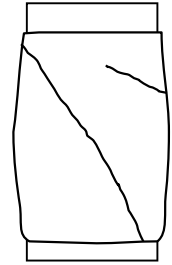
Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling
HA - Hand Augers

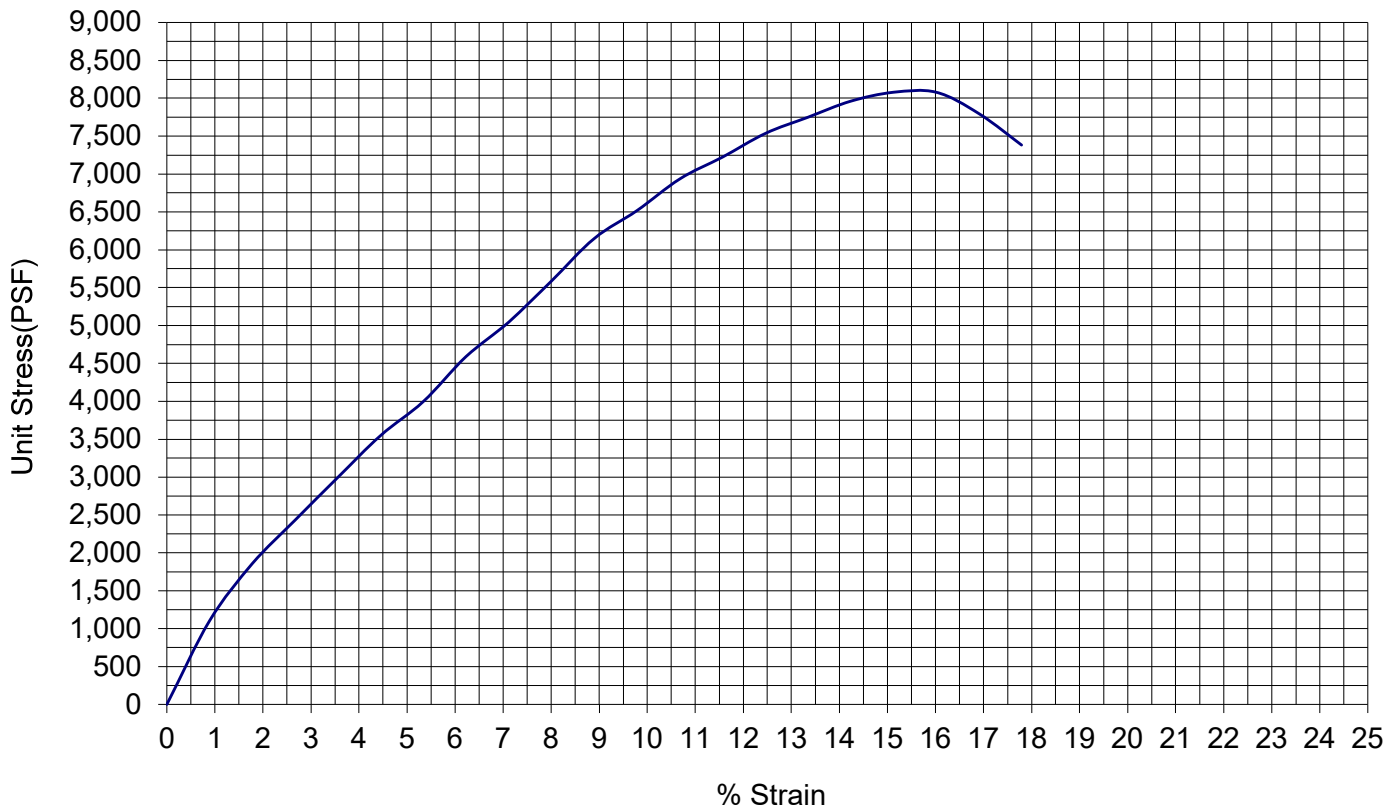


2224 Industrial Drive, Suite A Unconfined Compressive Strength Test
Highland, Indiana 46322 **Test Method**
(219) 922-7235 Fax: (219) 922-7243 **ASTM D-2166-00**

Client: Twin Lakes Utilities Inc.
Project: Proposed Twin Lakes WWTP Improvements, Crown Point, IN
Project Number: H053811501 **Report:** UT- 1 **Date:** 12/28/2015
Sample Obtained From: Boring B-1 11 ft. - 12.5 ft.
Sample Description: Brown Lean Clay



Failure Sketch



Unconfined Comp. Strength	8,050 psf	Shear Strength	4,025 psf
Dry Density	130.6 pcf	Water Content	11.7 %
Average Height	2.81 inch	Average Diameter	1.4 inch
Height/Diameter Ratio	2.03	Sample Type	Split-spoon
Average Rate of Strain	1% per min	Strain at Failure	15.0 %

Atterberg Limits	Liquid Limit	Plastic Limit	Plasticity Index	Classification
	22	13	9	CL

Test Performed By: JA/ZM

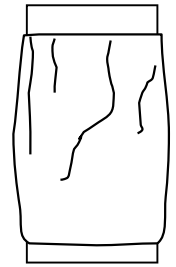
Reviewed By: AZ

Remarks: _____

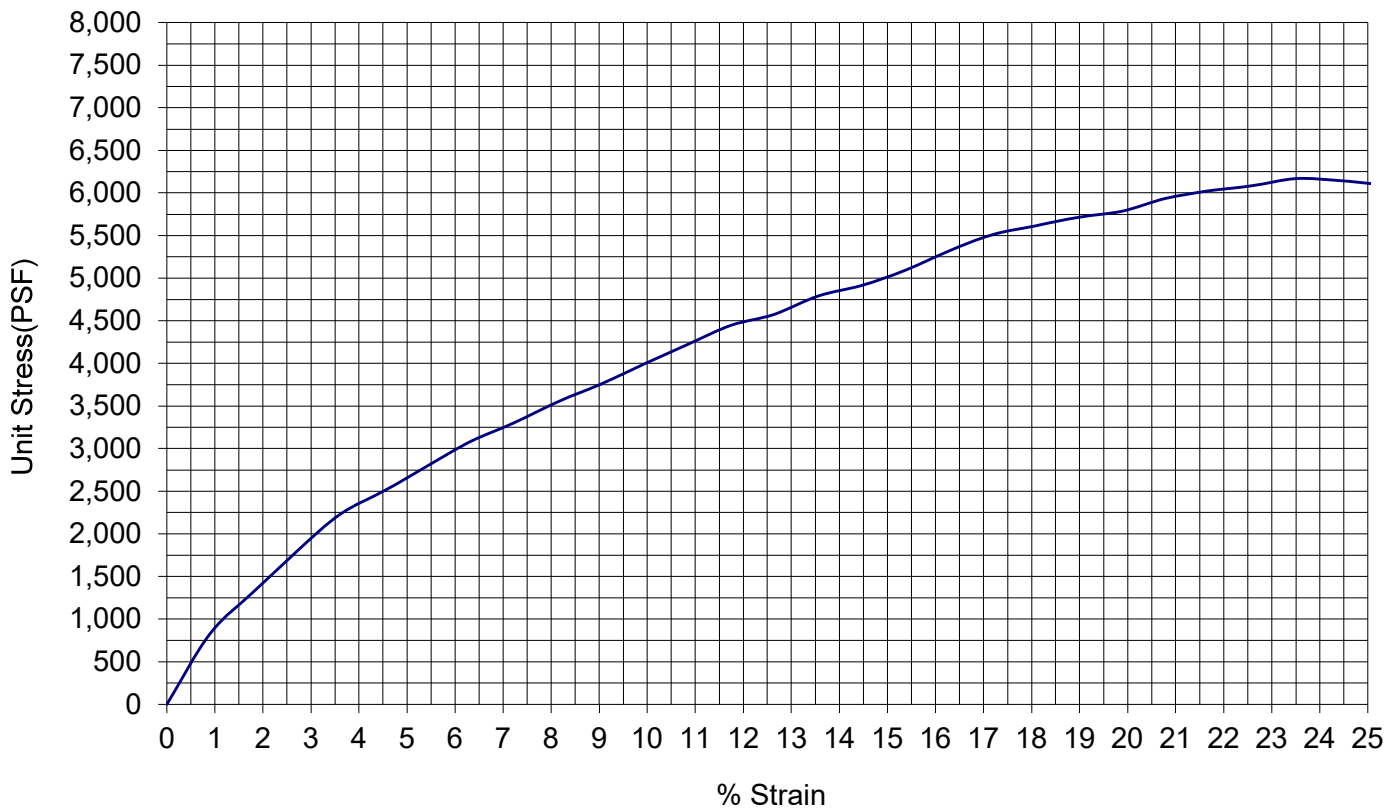


2224 Industrial Drive, Suite A Unconfined Compressive Strength Test
Highland, Indiana 46322 **Test Method**
(219) 922-7235 Fax: (219) 922-7243 **ASTM D-2166-00**

Client: Twin Lakes Utilities Inc.
Project: Proposed Twin Lakes WWTP Improvements, Crown Point, IN
Project Number: H053811501 **Report:** UT- 2 **Date:** 9/4/2014
Sample Obtained From: Boring B-2 18.5 ft. - 20 ft.
Sample Description: Gray Lean Clay



Failure Sketch



Unconfined Comp. Strength	5,000 psf	Shear Strength	2,500 psf
Dry Density	131.4 pcf	Water Content	12.3 %
Average Height	2.77 inch	Average Diameter	1.4 inch
Height/Diameter Ratio	1.99	Sample Type	Split-spoon
Average Rate of Strain	1% per min	Strain at Failure	15.0 %

Atterberg Limits	Liquid Limit	Plastic Limit	Plasticity Index	Classification
	21	11	10	CL

Test Performed By: JA/ZM

Reviewed By: AZ

Remarks: _____



2224 Industrial Drive, Suite A, Highland, IN 46322
Phone: 219-922-7235
Fax: 219-922-7243

ASTM D 4318-10

Liquid Limit, Plastic Limit and Plasticity Index of Soils

Client: Twin Lakes Utilities Inc.

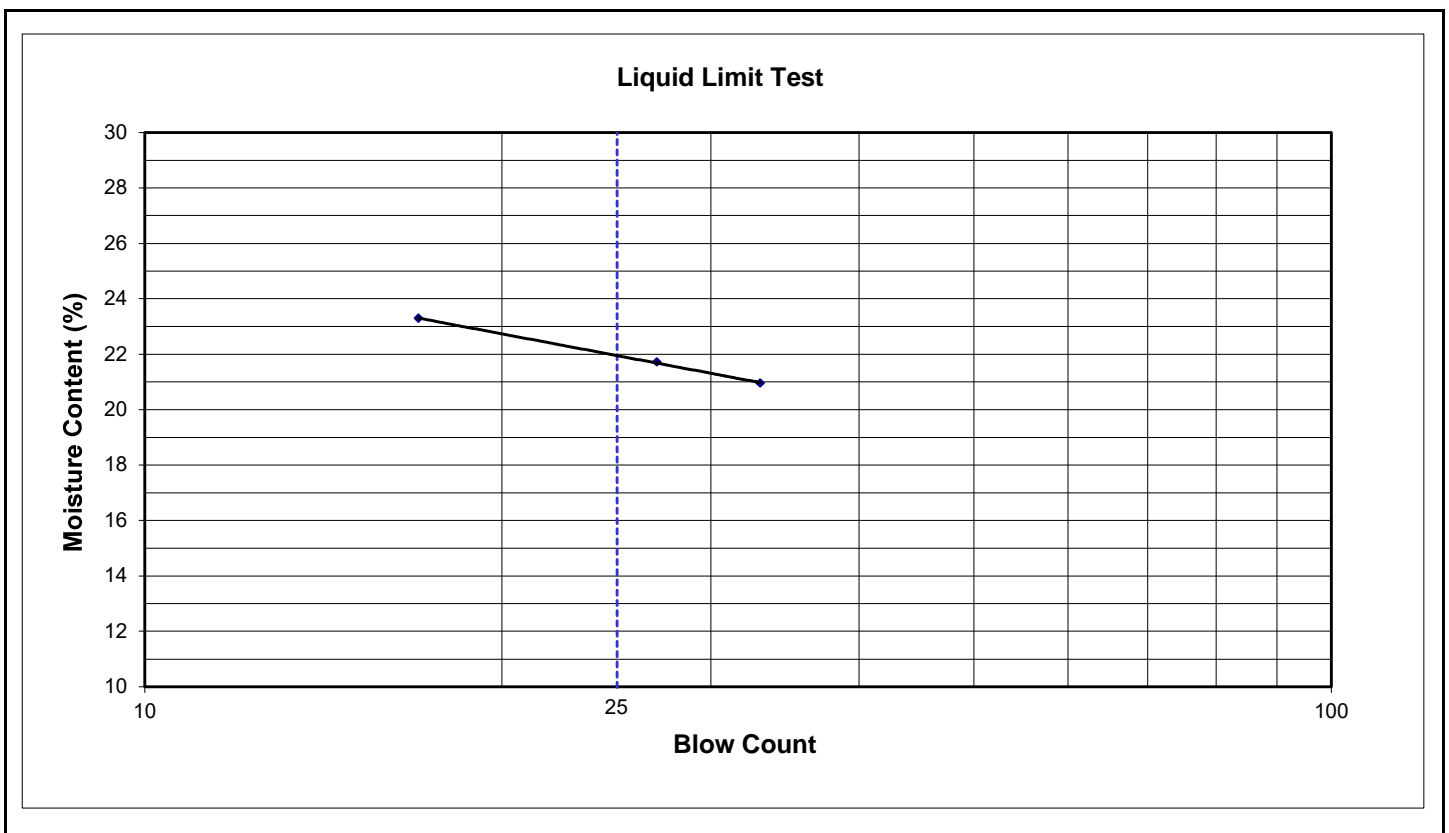
Project: Proposed Twin Lakes WWTP Improvements, Crown Point, IN

Project No.: H053481501 **Lab No.:** 4541 **Report No.:** PI-1

Sample Obtained from: Boring B-1 (11-12.5 ft)

Sample Description: Brown Lean Clay

Date Received: 12/18/15 **Date Tested:** 12/29/2015



Plastic Limit	<u>13</u>	Liquid Limit	<u>22</u>
Plasticity Index (PI)	<u>9</u>	Test Method	<u>Multipoint</u>
Retained on No. 40 Sieve, %	<u><10</u>	USCS Classification:	<u>CL</u>

Remarks _____

Test Performed By: JV **Reviewed By:** AZ



2224 Industrial Drive, Suite A, Highland, IN 46322
Phone: 219-922-7235
Fax: 219-922-7243

ASTM D 4318-10

Liquid Limit, Plastic Limit and Plasticity Index of Soils

Client: Twin Lakes Utilities Inc.

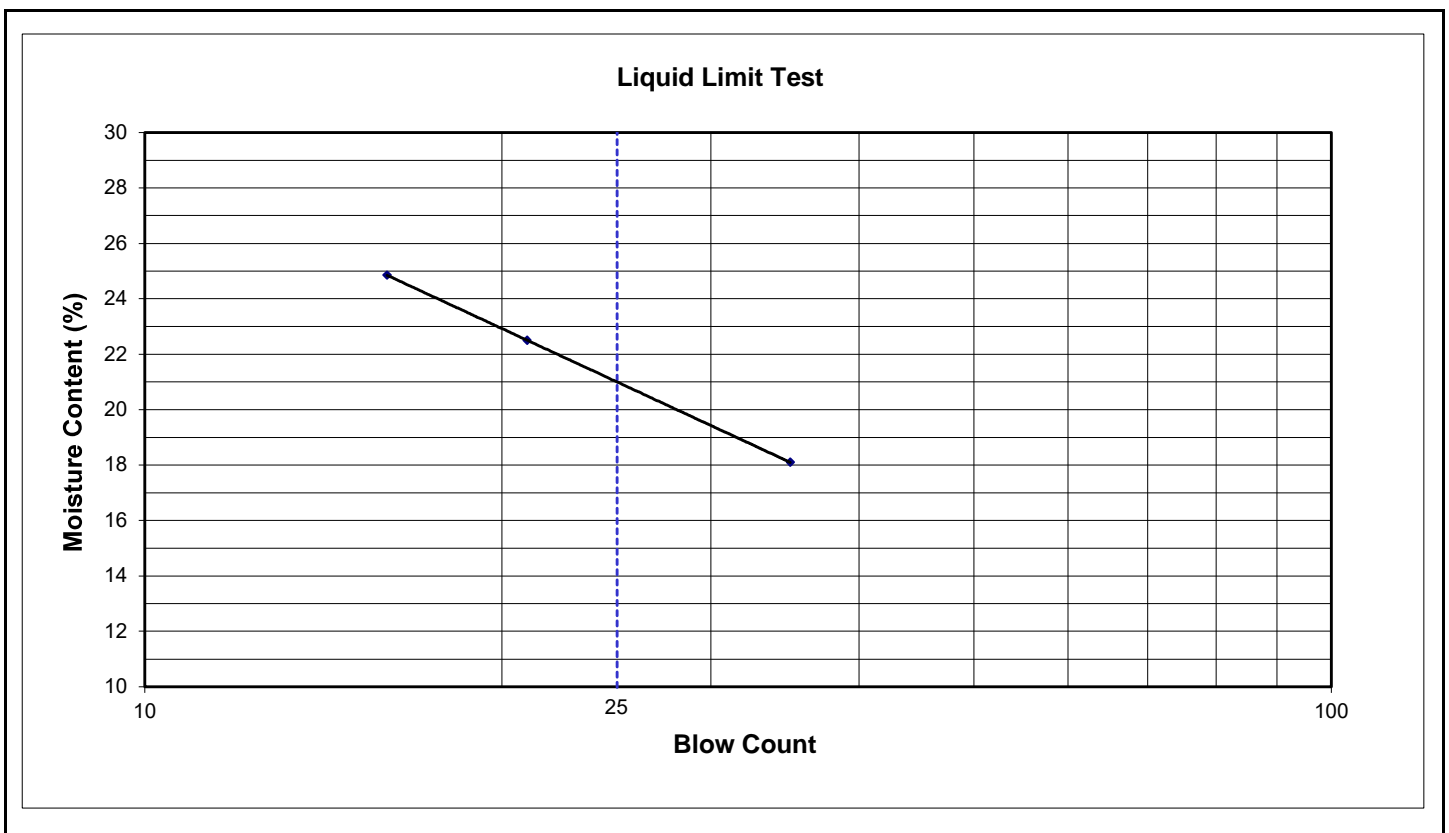
Project: Proposed Twin Lakes WWTP Improvements, Crown Point, IN

Project No.: H053481501 **Lab No.:** 4541 **Report No.:** PI-2

Sample Obtained from: Boring B-2 (18.5-20 ft)

Sample Description: Gray Lean Clay

Date Received: 12/18/15 **Date Tested:** 12/29/2015



Plastic Limit	<u>11</u>	Liquid Limit	<u>21</u>
Plasticity Index (PI)	<u>10</u>	Test Method	<u>Multipoint</u>
Retained on No. 40 Sieve, %	<u><10</u>	USCS Classification:	<u>CL</u>
Remarks	<u></u>		

Test Performed By: ZM **Reviewed By:** AZ

FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

NON-COHESIVE SOILS (Silt, Sand, Gravel and Combinations)

<u>Density</u>		<u>Particle Size Identification</u>	
Very Loose	- 5 blows/ft or less	Boulders	- 8 inch diameter or more
Loose	- 6 to 10 blows/ft	Cobbles	- 3 to 8 inch diameter
Medium Dense	- 11 to 30 blows/ft	Gravel	- Coarse - 1 to 3 inch
Dense	- 31 to 50 blows/ft		Medium - ½ to 1 inch
Very Dense	- 51 blows/ft or more		Fine - ¼ to ½ inch
		Sand	- Coarse 2.00mm to ¼ inch (dia. of pencil lead)
			Medium 0.42 to 2.00mm (dia. of broom straw)
			Fine 0.074 to 0.42mm (dia. of human hair)
		Silt	0.074 to 0.002mm (cannot see particles)
<u>Relative Proportions</u>			
Descriptive Term	Percent		
Trace	1 - 10		
Little	11 - 20		
Some	21 - 35		
And	36 - 50		

COHESIVE SOILS (Clay, Silt and Combinations)

<u>Consistency</u>		<u>Plasticity</u>	
Very Soft	- 3 blows/ft or less	Degree of Plasticity	Plasticity Index
Soft	- 4 to 5 blows/ft	None to slight	0 - 4
Medium Stiff	- 6 to 10 blows/ft	Slight	5 - 7
Stiff	- 11 to 15 blows/ft	Medium	8 - 22
Very Stiff	- 16 to 30 blows/ft	High to Very High	over 22
Hard	- 31 blows/ft or more		

Classification on the logs are made by visual inspection of samples.

Standard Penetration Test — Driving a 2.0" O.D. 1-3/8" I.D. sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary for ATC to drive the spoon 6 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the test are recorded for each 6 inches of penetration on the drill log (Example — 6-8-9). The standard penetration test result can be obtained by adding the last two figures (i.e., 8 + 9 = 17 blows/ft). (ASTM D-1586-11).

Strata Changes — In the column "Soil Descriptions" on the drill log the horizontal lines represent strata changes. A solid line (_____) represents an actually observed change. A dashed line (_ _ _ _ _) represents an estimated change.

Ground Water observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply this report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an

assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by:* the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.*

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help

others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.



8811 Colesville Road/Suite G106, Silver Spring, MD 20910

Telephone: 301/565-2733 Facsimile: 301/589-2017

e-mail: info@geoprofessional.org www.geoprofessional.org

Geotechnical Engineering Investigation
Twin Lakes Utilities W.W.T.P
9201 East 123rd Avenue
Crown Point, Indiana
ATEC Project No. 51764.0001



Prepared for:
Twin Lakes Utilities, Inc.
9201 East 123rd Avenue
Crown Point, Indiana 46307
Attention: Mr. Jamie Weidner, Area Manager

December 24, 1996

ATEC Associates, Inc.



1300-A Airport North Office Park
Fort Wayne, Indiana 46825
(219) 489-4660, FAX (219) 489-0159

Goshen Office
(219) 534-0545, FAX (219) 534-6267
Highland Office
(219) 922-7235, FAX (219) 922-7243

December 24, 1996

Twin Lakes Utilities, Inc.
9201 East 123rd Avenue
Crown Point, Indiana 46307
Attention: Mr. Jamie Weidner, Area Manager

Re: Geotechnical Engineering Investigation
Twin Lakes Utilities W.W.T.P
9201 East 123rd Avenue
Crown Point, Indiana
ATEC Project Number 51764.0001

Gentlemen:

Submitted herewith is the report of our geotechnical engineering investigation at the site of the referenced project. This study was authorized on November 10, 1996 by Mr. Jamie Weidner, Twin Lakes Utilities Area Manager by his acceptance of our Proposal-Agreement Number 96-50124 (Revised), dated October 28, 1996.

This report contains the results of our findings, an engineering interpretation of these with respect to the available project characteristics and recommendations to aid design and construction of foundations and other earth-connected phases of this project. We wish to remind you that we will store the samples for 30 days after which time they will be discarded unless you request otherwise.

We appreciate the opportunity to be of service to you on this project. If we can be of any further assistance, or if you have any questions regarding this report, please contact our office.

Very truly yours,
ATEC Associates, Inc.

Rami M. Anabtawi, P.E.
Senior Project Engineer
Materials Engineering & Testing Services Manager

Robert W. McMichael, P.E.
Technical Services & Business Development Director

Copies: (2) Mr. Andrew Kling-Rezek, Henry, Meisenheimer & Gende, Inc.

TABLE OF CONTENTS

	<u>PAGE</u>
1.0 PURPOSE AND SCOPE	1
2.0 PROJECT CHARACTERISTICS	1
2.1 Site Location	1
2.2 Site Description	1
3.0 GENERAL SUBSURFACE CONDITIONS	4
3.1 Regional & Site Geology	4
3.2 Regional Seismicity	4
3.3 Soil Conditions	5
3.3.1 Fill Materials	5
3.3.2 Natural Soils	6
3.3.3 Groundwater	8
4.0 DESIGN RECOMMENDATIONS: FOUNDATIONS	10
4.1 Foundation Concept	10
4.2 Below-Grade Structures	11
4.3 Above-Grade (Biosolid) Tank	12
4.3.1 General Foundation Considerations	13
5.0 DESIGN RECOMMENDATIONS: SOIL-SUPPORTED FLOOR SLABS	14
6.0 DESIGN RECOMMENDATIONS: GROUNDWATER CONSIDERATIONS	15
6.1 General	15
6.2 Design Groundwater Level	15
6.3 Uplift Control Systems	16
7.0 DESIGN RECOMMENDATIONS: BELOW-GRADE WALLS	16
7.1 General	16
7.2 Non-Yielding Walls	17
7.3 Yielding Walls	17
8.0 GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS	18
8.1 Excavations	18
8.2 Site Preparation	19
8.3 Construction Dewatering	21
8.4 Compaction	21
8.5 Construction Inspection	22
9.0 LABORATORY INVESTIGATION	22
10.0 WARRANTY AND LIMITATIONS OF STUDY	23
APPENDIX	

**Geotechnical Engineering Investigation
Twin Lakes Utilities W.W.T.P.
9201 East 123rd Avenue
Crown Point, Indiana
ATEC Project Number 51769.0001**

1.0 PURPOSE AND SCOPE

The purpose of this study was to determine the general subsurface conditions by drilling test borings and to evaluate these with respect to foundation concept and design for the proposed project. Also included is an evaluation of the site with respect to potential construction problems and recommendations dealing with the earthwork and quality control during construction.

2.0 PROJECT CHARACTERISTICS

2.1 Site Location

Twin Lakes Utilities, Inc. and Rezek, Henry, Meisenheimer & Gende, Inc. are developing plans to expand the existing Twin Lakes wastewater treatment plant (WWTP) in Crown Point, Indiana. A detailed discussion of the new facilities is provided in the following paragraphs.

2.2 Site Description

The WWTP is located on 123rd Avenue, adjacent to Stony Run Creek, just to the south of Four Seasons Subdivision. Specifically, the site is bordered on the north by 123rd Avenue, and Four Seasons Subdivision (Lake Holiday) beyond, to the south by an

Twin Lakes WWTP

December 24, 1996

existing lagoon, to the west by Stony Run Creek, and to the east by a crushed stone-surface driveway and a fence beyond. The location of the study site is depicted in Figure 1 of the Appendix (Site Vicinity Map).

The primary existing features at the plant include a lagoon, two clarifiers (No. 1 & No. 2), one Digester, an effluent lift station, one aeration tank, sludge and thickening tanks, and a control room. New construction will consist of:

- 1 - 102 ft diameter package treatment tank
- 1 - 70 ft diameter sludge storage (biosolid) tank
- 1 - 40 ft by 50 ft aeration tank
- 1 - 43 ft by 20 ft chlorine tank

The locations of the new and existing features are depicted in Figure 2, Boring/Site Plan. According to information provided by Mr. Andrew Kling of Rezek, Henry, Meisenheimer & Gende, Inc., the package treatment and sludge storage tanks will be of steel walls bolted to concrete mats, and the chlorine and aeration tanks will be of concrete walls supported over concrete mats. Moreover, according to a telephone conversation on December 20, 1996 with Mr. Ken Figge, Structural Engineer for Rezek, Henry, Meisenheimer & Gende, Inc., the contact pressure beneath the sludge storage tank will be about 1500 lbs./sq. ft. No other structural data or pertinent information was available to ATEC as of this writing. The new facilities will have their lowest levels below grade at elevations indicated in Table 1.

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

Table 1: Below Grade Levels of Proposed and Adjacent Structures			
FACILITY	PROPOSED BOTTOM OF STEEL TANKS ELEVATION, MSL	APPROX. DEPTH BELOW EXISTING GRADE, FT	BOTTOM OF FOUNDATION EL. OF ADJOINING STRUCTURE, MSL
Package Treatment Tank	709.50	17 to 24	na
Sludge Storage Tank	725.50	1/2 to 2	na
Aeration Tank	708.25	16	na
Chlorine Tank	709.00	16	na

At the time of our field investigation, most of the project site was grass-covered, with a level to sloping topography. According to a site plan (provided by Rezek, Henry, Meisenheimer & Gende, Inc.), existing grade within the proposed aeration, sludge storage and chlorine tanks varies from about Els. 723 to 725. Existing grade within the new package treatment tank is on the order of about ELs. 726 to 733. Under the circumstances, the bottoms of the steel/concrete tanks will rest approximately 16 to 24 ft below the existing ground surface. An exception to this is the new sludge storage tank, where it will be supported above grade.

Since most of these structures will have below-grade aspects, these will be supported on relatively rigid structural mats. The contact pressure beneath the sludge storage tank will reportedly be at about 1500 lbs./sq. ft. The resulting contact pressure at the base of each of the remaining mats (i.e., from the weight of the walls, mats, equipments and liquid) has not been provided to ATEC. However, it is anticipated that either a net pressure relief or a small pressure increase will occur. Their walls and floors will be designed to resist the hydrostatic water pressure and uplift force resulting from a design highwater condition. These matters are discussed later in this report.

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

There will be an approximately 35 ft to 60 ft extension to the existing levee in the vicinity of the new package treatment tank. Therefore, it is anticipated that between about 3 to 8 ft of new fill slopes will be placed around the new package treatment tank. The new and existing grades within the new sludge storage tank will be at about the same elevation.

3.0 GENERAL SUBSURFACE CONDITIONS

3.1 Regional & Site Geology

According to the *United State Department of Agriculture, Soil Survey of Lake County, Indiana*, the near-surface soils in the vicinity of the site are of the Rensselaer-Gilford association. These soils consist of poorly drained and very poorly drained soils that formed in moderately fine textured to moderately textured glacial outwash. Based on the available geological literature, the Rensselaer and Gilford soil series are high in organic-matter content.

3.2 Regional Seismicity

Northwestern Indiana is typically considered to be an area of low seismic risk. The project site lies in Seismic Risk Zone No. 1 based on the system developed by Algermissen (1969). Zone 1 is normally associated with minor damage corresponding to intensities V and VI based on the modified Mercalli intensity scale. On this scale, Seismic Risk Zone 0 is the least seismic category. Under the circumstances, no special geotechnical design considerations are warranted.

Twin Lakes WWTP

December 24, 1996

3.3 Soil Conditions

The general subsurface conditions were investigated by drilling eleven (11) borings at the locations (determined and established in the field by Rezek, Henry, Meisenheimer and Gende, Inc.) shown in the Boring/Site Plan (Figure 2). Due to existing surface features, Boring Nos. B-4, B-10 and B-11 were offset 10 ft (east), 5 ft (west), and 10 ft (south) of their intended locations, respectively. The subsurface conditions disclosed by the borings are discussed in the following paragraphs. The letters in parentheses, which follow the soil description, refer to the soil classifications in accordance with the Unified Soil Classification System.

3.3.1 Fill Materials

Material described as fill and "possible fill" was disclosed at most of the boring locations. This material generally had a clayey texture and dark to black in coloration and was intermixed with topsoil, fine roots and organic matter. This material was found to extend from the surface to a depth of about 3.5 or 8.5 ft. At certain boring locations (i.e., in Borings B-1, B-3, and B-6), organic-containing sandy silty clay layer, classified as "possible fill" (OL-CL) was disclosed to about 3.5 to 12.5 ft (i.e., Boring B-6). This material was described as possible fill due to unusual texture and coloration. Delineating the quality and extent of the previously placed fill or "possible fill" materials was beyond the scope of this investigation. Given that some organic materials was intermixed within the clayey fill, this fill materials was probably not placed in a strict engineered fashion and the underlying surface was not properly prepared. Note, however, that the depth and extent of the fill materials may vary significantly between the test borings. The apparent depth of such material is provided in Table 2.

Twin Lakes WWTP

December 24, 1996

Table 2: Summary of Approximate Fill Depths		
BORING NO.	ESTIMATED ELEVATION OF BOTTOM OF FILL, MSL	APPARENT THICKNESS OF FILL OR " POSSIBLE FILL" MATERIAL, FT
B-1	719	6
B-3	715.5	8.5
B-4	717.5	8.5
B-6	711.5	12.5
B-10	729	4
B-11	726	6

3.3.2 Natural Soils

Surficial topsoil in excess of about 6 in. was not encountered. Below any topsoil and fill materials, a variety of soil types were disclosed. The following paragraphs summarizes the soil conditions at the test boring locations. The soil borings (in the Appendix) should be referred to for more detailed descriptions of the materials encountered at each of the soil test boring.

Boring Nos. B-1 & B-2 (Chlorine Tank)

The native material below the fill consisted of silty clays (CL) and clayey silt (CL-ML) extending about 23 (EL. 702) to 26 ft (EL. 699) below existing grade. Occasional sand seams were also disclosed within the clayey material. The consistency of these clayey soils were stiff (N=11 bpf) to very stiff (N between 16 to 27 bpf). Calibrated penetrometer tests indicate that the unconfined compressive strength is between about 1.8 to greater than about 6 tons/sq. ft. Below the clays, alternating layers of clayey sand (SC), silty sand (SM) and fine to medium sand or silty sand (SP-SM) were disclosed to

Twin Lakes WWTP

December 24, 1996

the terminal depths of the borings. The relative density of the granular soils was generally medium dense, based on the results of the SPT "N-values".

Boring Nos. B-3 through B-6 (Sludge Storage Tank)

A variety of soils were disclosed below the apparent depth of the fill material. Silty sandy clay (CL) with a trace of organic matter and fine roots was disclosed in the upper 3.5 to 12.5 ft (i.e., in Boring B-3, B-4 and B-6). Below these material, alternating layers of clayey silt (CL-ML), silty clays (CL), fine to medium coarse sand (SP) were disclosed. Below 8.5 to 12.5 ft depths, primarily, granular materials consisted of wet, silty fine sand (SM), medium coarse sand and gravel (SP) and sandy silt or silt (ML) were disclosed to the terminal depths (30 to 32.5 ft) of the borings.

In generally, the relative density or consistency of the materials was either medium dense or stiff to very stiff in the upper 8.5 to 12.5 ft depths, changing to medium dense and very stiff below, based on the SPT "N-values".

Boring B-7 (Aeration Tank)

Brown and gray silty clay (CL) and interbedded fine silty sand (SM) with various sand and gravel size fractions was disclosed to about 18.5 ft depth. Underlying the clay, alternating layers of fine sand and gravel (SP), clayey silt (ML-CL), clayey sand (SC), overlying at about 37 ft depth by gray silty clays was disclosed in this boring. In general, the consistency of the clayey soils was medium stiff to very stiff and the granular soils were medium dense to very dense, based on the SPT "N-values":

Twin Lakes WWTP

December 24, 1996

Boring B-8 through B-11 (Package Treatment Tank)

In the upper 10 to 18 ft depth, brown and gray silty clays (CL) and clayey silt (CL-ML) were disclosed. The upper clayey soils were generally medium stiff to stiff in consistency. These soils extended to about 32 ft in Boring B-11. Underlying the clayey soils, alternating layers (mostly granular) consisting of sandy silt (ML), clayey sand (SC), fine to medium coarse sand (SP), silty sand (SM) and silty clay (CL) zones were disclosed to the terminal depths (40 to 47.5 ft). The relative density of these materials was generally medium dense changing to dense below about 30 to 35 ft depth. Loose sand was also noted below 18 to 22 ft depth in Boring B-8.

3.3.3 Groundwater

Groundwater readings obtained during the drilling operations (i.e., "on the rods") were generally between 8 (i.e., in Boring B-7) to 35.5 ft (i.e., in Boring B-11) below the existing ground surface. However, the majority of the groundwater was recorded between 16 to 23 ft during drilling operations. Table 3 below provides a summary of the recorded groundwater levels in the borings at the time of our investigation.

Twin Lakes WWTP

December 24, 1996

Table 2: Summary of Approximate Groundwater Depths at the Borings		
BORING NO.	ESTIMATED ELEVATION OF RECORDED GROUNDWATER OF THE DRILLING RODS, MSL (FT)	ESTIMATED ELEVATION OF GROUNDWATER AFTER COMPLETION OF DRILLING , MSL (FT)
B-1	704.5 (20.5)	701.5 (23.5)
B-2	706 (19)	707.5 (17.5)
B-3	708 (16)	709.5 (14.5)
B-4	702.5 (23.5)	716 (10)*
B-5	710.5 (13.5)	NA
B-6	705 (19)	NA
B-7	716 (8)	NA
B-8	707.5 (18.5)	NA
B-9	707.5 (18.5)	NA
B-10	716 (17)	NA
B-11	696.5 (35.5)	708.5 (23)

* Groundwater level after 24 hour reading

These observations were related to the presence of isolated, discontinuous granular seams. Groundwater observations, taken about 24 hours after completion of the drilling operations were also made, where possible. It must be noted that fluctuations in the level of the groundwater may occur due to variations in the surface water level in the adjacent Stony Run Creek, rainfall, temperature and other factors not evident at the time of the investigation.

4.0 DESIGN RECOMMENDATIONS: FOUNDATIONS

The design recommendations included in Sections 4.0 through 7.0 have been developed on the basis of the previously described project characteristics (Section 2.0) and subsurface conditions (Section 3.0). If there is any change in these project criteria, including project location on the site, a review should be made by this office to determine if modifications to the recommendations provided herein will be required.

4.1 Foundation Concept

Based on our understanding of the scope of proposed construction, significant structures requiring spread-type foundations are not anticipated. The near surface fill or "possible fill" materials and any underlying organic-containing soils are not considered suitable for the support of structural elements or certain heavy equipment, such as those proposed for this construction. It is our understanding that each of the new structures will be supported on a mat foundation. Pile or drilled pier foundations do not appear to be viable given the required depth of excavations, 16 to 24 ft below existing grade (and in the case of drilled piers, the non-cohesive nature of the soils and groundwater issues will make construction of this very difficult).

It will be necessary to incorporate uplift control or pressure relief features into any below grade structure that will not contain liquid or solids at all times. Such features are discussed in the various sections of this report.

4.2 Below-Grade Structures

The new below-grade tank structures (i.e., package treatment, aeration and chlorine tanks), can be supported on mat foundations provided that due care is exercised when dewatering and in preparing the bearing surfaces. Due to their underground placement, it is anticipated that there may be a net pressure reduction (even when full of water) in that the gross contact pressure resulting at the base of each structure will probably be less than the present state of pressure due to the weight of the existing soil and/or fill overburden. It is anticipated that total recompression settlements for the below-grade structures will not exceed about 0.5 in. and will probably be less than 0.25 in. Nonetheless, it will be necessary to inspect the base of each excavation in the manner described in Section 8.1 of this report. If necessary, mat foundations could support an additional contact pressure of up to 2000 lbs./sq. ft provided that the bases are suitably inspected and prepared. No structure should be founded on existing fill, possible fill, topsoil, organic-containing soils or other unsuitable materials.

It will be necessary to provide dewatering of excavations extending below the groundwater table throughout the construction period. Because of the presence of wet and water bearing granular seams (e.g., Boring B-2 and B-7 through B-10), it is anticipated that construction dewatering will be difficult. This issue is addressed in Section 8.2. It will also be necessary to design below grade walls and floors for a design high groundwater condition and to provide resistance to buoyant uplift forces. These issues are discussed in Section 6.0 of this report.

Even with careful dewatering, the granular soils exposed in the excavation(s) will be susceptible to disturbance. Therefore, it is recommended that a firm granular "working-mat" be constructed in the tank area(s). This should consist of a minimum of 6 in. of

Twin Lakes WWTP

December 24, 1996

crushed stone (e.g., INDOT No. 2 stone) choked with 6 to 8 in. loose lift of compacted crushed stone aggregate (i.e., INDOT No. 53 or 73).

In order to provide a structural design for the mat foundations, it will be necessary to estimate a modulus of subgrade reaction or "K" value. For large loaded areas supported only on firm natural soils or on well-compacted fill extending to firm natural soils, a K value of 125 lbs/cu. in. is recommended.

4.3 Above-Grade (Biosolid) Tank

The new sludge storage (biosolid) tank will be supported above-grade at or near existing grade. Boring Nos. B-3 through B-6 disclosed about 6 to 12.5 ft of existing man-placed fill and/or possible fill materials. Considering the texture, consistency and variable relative density of the fill within this area, it is not possible to make accurate settlement predictions for a mat foundation supported on the existing (presumably undocumented) fill. However, there is an increased potential for settlement to occur if the existing fill and "possible fill" is left in place. Accordingly, if foundation settlement is to be reduced (but not necessarily eliminated), the most positive means of supporting this tank would be to remove existing man-placed fill or possible fill materials (including underlying organic-containing materials) in their entirety and replaced these with new, selected granular fill (i.e., INDOT No. 53 or 73 crushed limestone). This would require dewatering and removal of between 6 to 12.5 of existing unstable soils (fill). Anything less than complete removal of existing fill or "possible fill" carries some risk of unacceptable settlement. If the complete removal of existing fill and its replacement option is considered too costly, ATEC recommends removal of at least the upper 6 to 8 ft below existing grade of man-placed fill materials and their replacement with granular backfill materials following proper site preparations (see Section 8.2 of this report). This

Twin Lakes WWTP

December 24, 1996

approach should serve to reduce the potential for undesirable post-construction settlement. Note, some removal of obvious unstable organic-containing materials (fill) may still be required at the base of the resulting excavation, if so deemed appropriate by the geotechnical engineer or designee.

The edges of the mat should be extended below the frost depth (4 ft below exterior grade), and the mat should be designed for a net allowable soil pressure of up to 1500 lbs./sq. ft. The tank should be proportioned to provide approximately the same contact pressure as produced under the central portion of the tank. Based on this partial removal option, it is estimated that the settlements under the center of the tank should be on the order of approximately 3 in. or less, but will depend upon actual contact pressure. Settlements around the perimeter of the tank will be less than this. It is recommended that ATEC be contacted to assist in this evaluation and make any appropriate modifications to the recommendations contained herein.

All new fill material must be limited to a relatively well-grade granular material (e.g., INDOT No. 53 or 73 crushed limestone). All new fill compacted beneath the tank must be compacted to at least 95 percent of the modified Proctor maximum dry density (ASTM D-1557).

Alternately, the owner may consider changing the location of the proposed biosolid tank at the site.

4.3.1 General Foundation Considerations

Recommendations provided above are given in the form of allowable net bearing pressures. When using net pressure, the weight of the footing and backfill over the

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

footing, including the weight of the floor slab, need not be considered; hence, only loads applied at or above the finished floor need to be used for dimensioning the footing.

Exterior footings and footings in unheated areas must bear at or below the local frost depth of 4 ft.

Care should be exercised when selecting bearing elevations wherever new and existing foundations come in close proximity to one another. Figure 3 of the Appendix illustrates this concept. Depending upon the size of excavation, the proximity and level of excavation with respect to existing structure and other factors, it may be necessary to underpin the existing structure and/or provide bracing and support for the sides of the excavation, even if the adjacent footings meet the criteria shown on Figure 3. ATEC should be contacted where questionable circumstances arise.

Resistance to lateral loadings will be provided by friction between the base of the foundation and the underlying soil. A coefficient of friction of 0.35 can be used to determine the available resistance.

5.0 DESIGN RECOMMENDATIONS: SOIL-SUPPORTED FLOOR SLABS

It is preferable that any floor slabs (except where the floors are part of a monolithically designed below grade structure) be "floating", that is, fully ground supported and not structurally connected to walls or foundations. This will help to minimize the possibility of cracking and displacement of the slab because of differential movements between the slab and the foundations. Although the movements are estimated to be within the tolerable limits for structural safety, such movements could be detrimental to the slabs if they were physically connected to the foundations or columns.

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

In order to insure that the below-grade floors will not be structurally damaged by hydrostatic uplift pressures, special design measures should be undertaken to control possible high groundwater conditions. Recommendations regarding permanent control of groundwater are provided in Section 6.0.

6.0 DESIGN RECOMMENDATIONS: GROUNDWATER CONSIDERATIONS

6.1 General

It is our understanding that the lowest floor level will be established at 24 ft below existing grade (at the location of the new package treatment structure). Considering that groundwater was noted to exist within isolated, discontinuous sand and gravel strata above this depth, and that the groundwater conditions will change seasonally, special design considerations to resist buoyant uplift forces and hydrostatic pressures must be incorporated into the design of any structures that will not contain water at all times. Recommendations pertaining to the incorporation of design features to resist hydrostatic uplift forces are provided in Section 6.3.

6.2 Design Groundwater Level

Groundwater at the project site will respond to changes in the level of the Stony Run Creek, continuity of the sand seams, the water level at the near-by Lake Holiday as well as with seasonal conditions and other factors. Although a detailed hydrogeologic investigation of the site was beyond the scope of this project, a design groundwater level above the highest observed value in the borings (about 8 ft below the ground surface or EL. 716) or the 100 year flood level for the Stony Run Creek (whichever is higher) is recommended for this site.

6.3 Uplift Control Systems

The buoyant uplift forces resulting from the design high groundwater condition would occur in structures not containing water to at least the design high groundwater elevation. Pressure relief or "popoff" valves could be considered in the design of the new underground tanks to deal with a high groundwater condition if it occurs when they are empty. However, since the base of the new tanks will extend below 8 ft or more below the groundwater level (as it was observed at the time of the field investigation), the use of pressure relief valves in the base of this structure may not be practical. Rather, the pressure relief valves may have to be placed in the walls side at an appropriate elevation. The hydrostatic uplift force resulting from a design high groundwater condition could also be resisted by another method. Among the available techniques is to simply increase the weight of the structure. Another method is to provide a "lip" around the exterior walls so that the weight of the overlying soil contributes to the uplift resistance. A factor of safety of at least 1.2 based upon the equation shown on Figure 4 should be available. Still another means of providing uplift resistance is to use some type of mechanical anchorage (e.g., friction piles).

7.0 DESIGN RECOMMENDATION: BELOW GRADE WALLS

7.1 General

The magnitude of lateral earth pressure against subsurface walls is dependent on the method of backfill placement, the type of backfill soil, drainage provision and whether or not the wall is permitted to yield during and/or after placement of the backfill. When a wall is held rigidly against horizontal movement, the lateral pressure against the wall is greater than the "active" earth pressure that is typically used in the design of free-

standing retaining walls. Therefore rigid walls should be designed for higher, "at-rest" pressures (using an at-rest lateral earth pressure coefficient, K_0), while yielding walls can be designed for active pressures (using an active lateral earth pressure coefficient, K_a).

7.2 Non-Yielding Walls

A design illustration to aid in computing lateral earth pressure for non-yielding below-grade walls is shown in Figure 5 of the Appendix. It should be noted that the pressure distributions for both the backfill, any surcharge loading and the hydrostatic water pressure have been combined in Figure 5.

For use in these computations, a total moist soil unit weight of 130 lbs/cu. ft should be used. For the non-yielding walls, a coefficient of earth pressure at-rest (K_0) of 0.45 is recommended, provided a well-graded granular material with less than 10 percent (by weight) fines is used for backfill.

7.3 Yielding Walls

Where sufficient horizontal wall yielding occurs, a coefficient of active earth pressure of (K_a) 0.33 can be used, presuming well-graded granular soils are used as backfill. Figure 6 of the Appendix shows a procedure for determining the resulting lateral pressure against such walls and includes surcharge and hydrostatic pressure loadings.

Twin Lakes WWTP

December 24, 1996

8.0 GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

It is possible that variations in soil conditions will be encountered during construction. Given the relatively wide spacing of the borings, variations in existing fill depth are likely. It is therefore recommended that a geotechnical engineer or qualified soils technician working under the supervision of a geotechnical engineer be retained to perform continuous inspection and review during construction of the soils-related phases of the work. This will permit correlation between the soil boring data and the actual conditions encountered during construction.

8.1 Excavations

It will be necessary to make mass excavations for the new package treatment, aeration and chlorine tanks. These will produce a maximum excavation depth of approximately 24 ft. Although stiff to very stiff clayey soils were generally disclosed below the 6 to 12 ft depths, some wet, water-bearing granular zones was also be disclosed. Therefore, this may affect the choice of excavation equipment. Moreover, groundwater seepage into the excavations should be anticipated.

It is expected that temporary support systems will be required to retain the surrounding soil. If required, a temporary excavation retention system would probably consist of either tied-back soldier beams and wood lagging walls or sheet piling. The design of this system is beyond the scope of this study; this should be provided by an experienced specialty contractor. It is recommended that the final design of any such system, as prepared by a qualified specialty contractor, be reviewed by ATEC prior to the onset of construction.

Twin Lakes WWTP

December 24, 1996

In areas where an open cut will be possible and bracing is unnecessary, it is recommended that the temporary excavation sideslopes of the main excavation not be made steeper than about 1.5 (horizontal) to 1 (vertical) (provided that there are no structures existing within about 20 ft from the top of the slope). Some sloughing of loose material should be expected with such slopes. All federal, state and local safety requirements should be followed in this regard.

8.2 Site Preparation

The construction site must be suitably prepared. After rough grade has been established and prior to placement of any new grade-raise fill, the exposed subgrade should be carefully inspected by probing and testing as needed. Any organic materials still in place, frozen, wet, soft, or loose soil and other undesirable materials (including existing fill or possible fill) should be removed. The exposed subgrade should furthermore be inspected by proofing with suitable equipment to check for pockets of soft or loose material hidden beneath a thin crust of better soil. A suitable proofing method should be determined by the geotechnical engineer based on the site specific conditions prevailing at the time of construction. Any unsuitable materials thus exposed should be removed and replaced with a well-compacted suitable fill as outlined in Section 9.3.

In addition to proofing in areas to support mats or footings, it will be necessary to inspect 3 to 5 ft zone (minimum) of material below mat or footing grade by probing and testing with a hand auger or hand penetration device. Any unsuitable material disclosed should be removed and replaced with compacted fill as described in Section 8.3.

Any loosened material beneath the mats, footings or slabs should be recompacted. It may be necessary to use a vibratory roller to achieve the desired degree of compaction

Twin Lakes WWTP

December 24, 1996

in the granular material. In order to prevent softening of the excavation bases, groundwater should be directed by gravity flow to sump holes outside of the limits of the excavations.

Individual foundation excavations should be inspected to insure that all loose, soft, wet or otherwise undesirable material (including old fill, possible fill and underlying organic-containing soils) are removed and that the foundation will bear on satisfactory material. At the time of such inspection, it may be necessary to make hand auger borings or use a hand penetration device in the base of the foundation excavation to insure that the soils below the base are satisfactory for foundation support. The necessary depth of penetration will be established during inspection.

Where loose pockets, old fill or otherwise unsuitable materials are encountered in the excavations, the proposed bearing elevation may be re-established by backfilling after the undesirable material has been removed (see Figure 7). This backfilling should be done with either lean concrete or well-graded granular material compacted as described in Section 8.4.

Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in condition such as from disturbance, rain and freezing. Again, surface run-off water should be drained away from the excavation. If possible, all footing concrete should be poured the same day the excavations are made, otherwise, they should be adequately protected.

Twin Lakes WWTP

December 24, 1996

8.3 Construction Dewatering

At the time of the field investigation, the groundwater table was found to be as high as about 8 ft (i.e., in Boring B-7) below the existing surface elevation. As a result, dewatering of any excavations extending below this level will be necessary, depending upon the conditions prevailing at the time of construction. ATEC recommends that dewatering be designed, installed and operated by a specialty contractor with significant dewatering experience.

The groundwater may be at a higher or lower level at the time of construction depending on seasonal conditions. Depending on the rate of flow into the excavations, it will probably be adequate to pump from sumps located just outside of the limits of the main excavation. Water must not be pumped directly from the excavation as this will result in a deterioration of the base of the excavation and a quick condition could be created. Because of various underground structures proposed for this project, it is recommended that at least one test pit be performed at each structure location by the geotechnical engineer. This is to investigate the groundwater conditions and should be performed just prior to the onset of construction. ATEC should be contacted should difficult groundwater conditions arise.

8.4 Compaction

Any engineered fill beneath floor slabs and over footings should be compacted to a dry density of at least 95 percent of the modified Proctor maximum dry density (ASTM D-1557). Filling beneath mat foundations should be done with lean concrete or a well-graded mixture of sand and gravel or crushed stone containing less than 10 percent fines.

Twin Lakes WWTP

December 24, 1996

This material should be compacted in lifts not exceeding 6 in. to at least 95 percent of the modified Proctor maximum density (ASTM-D-1557).

All compaction should be accomplished by placing the fill in about 6 in. loose lifts and mechanically compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to insure that adequate compaction is being achieved.

Compaction of any fill by flooding is not acceptable. This method will generally not achieve the desired compaction.

8.5 Construction Inspection

It is recommended that a geotechnical engineer or a qualified soils technician working under the supervision of a geotechnical engineer be retained full-time to inspect and monitor pertinent construction activities.

9.0 LABORATORY INVESTIGATION

The split-spoon soil samples were inspected and classified in accordance with the Unified Classification System (ASTM D-2487) and the boring logs were edited as necessary. To aid in classifying the soils and to determine the general soil characteristics, natural moisture content, calibrated penetrometer strength and Atterberg Limits tests were performed on selected samples. The moisture content and calibrated penetrometer strength test values are included on the boring logs in the Appendix. Atterberg Limits tests area tabulated in the Appendix.

Twin Lakes WWTP

December 24, 1996

10.0 WARRANTY AND LIMITATIONS OF STUDY

Differing Conditions

Our recommendations for this project were developed utilizing soils information obtained from the test borings that were made at the proposed site. At this time we would like to point out that soil test borings only depict the soil conditions at the specific locations and time at which they were made. The soil conditions at other locations on the site may differ from those occurring at the boring locations. If deviations from the noted subsurface conditions are encountered during construction, they should be brought to the attention of the soils engineer.

Changes in Plans

The conclusions and recommendations herein have been based upon the available soil information and the preliminary design details furnished by a representative of the owner of the proposed project and/or as assumed herein. Any revision in the plans for the proposed construction from those anticipated in this report should be brought to the attention of the soils engineer to determine whether any changes in the foundation or earthwork recommendations are necessary.

Recommendations vs. Final Design

This report and the recommendations included within are not to be considered a final design, but rather as a basis for the final design to be completed by others (architect, civil or structural engineer, etc.). It is the client's responsibility to insure that the recommendations of the geotechnical engineer are properly integrated into the design, and that the geotechnical engineer is provided the opportunity for design input and comment after the submittal of this report, as needed. We recommend that this firm be retained to review the final construction documents to confirm that the proposed project design

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

sufficiently considers our geotechnical recommendations. We also suggest that our firm be represented at pre-bid and/or pre-construction meetings regarding this project to offer any needed clarification of the geotechnical information to all involved.

Construction Issues

Although general constructability issues have been considered in this report, the means, methods, techniques, sequences and operations of construction, safety precautions, and all items incidental thereto and consequences of, are the responsibility of parties to the project other than ATEC. This office should be contacted if additional guidance is needed in these matters.

Report Interpretation

This company is not responsible for the conclusions, opinions, or recommendations made by others based upon the data included herein. It is the client's responsibility to seek any guidance and clarifications from the geotechnical engineer needed for proper interpretation of this report.

Environmental Considerations

The scope of our services does not include any environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report or on the test boring logs regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client. Unless complete environmental information regarding the site is already available, an environmental assessment is recommended prior to the development of this site.

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

Standard of Care

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This statement is made in lieu of all other warranties either express or implied.

ATC Associates Inc. (ATEC)

Twin Lakes WWTP

December 24, 1996

Atterberg Limits Results

BORING NO.	DEPTH, FT	ATTERBERG LIMITS		
		LL	PL	PI
B-1	16-20	25	11.75	13.25
B-3	3.5-6	37.4	25.85	11.55
B-6	6-10	30.9	19.5	11.4
B-11	18.5-20	25.4	17.15	8.25

ATC Associates Inc. (ATEC)

APPENDIX

Figure 1 - Site Vicinity Map

Figure 2 - Boring/Site Plan

Figure 3 - Design Illustration - Placement of Adjacent Footings

Figure 4 - Uplift Considerations for Below-Grade Structures

Figure 5 - Design Illustration - Non-Yielding Below Grade Walls

Figure 6 - Design Illustration - Yielding Below Grade Walls

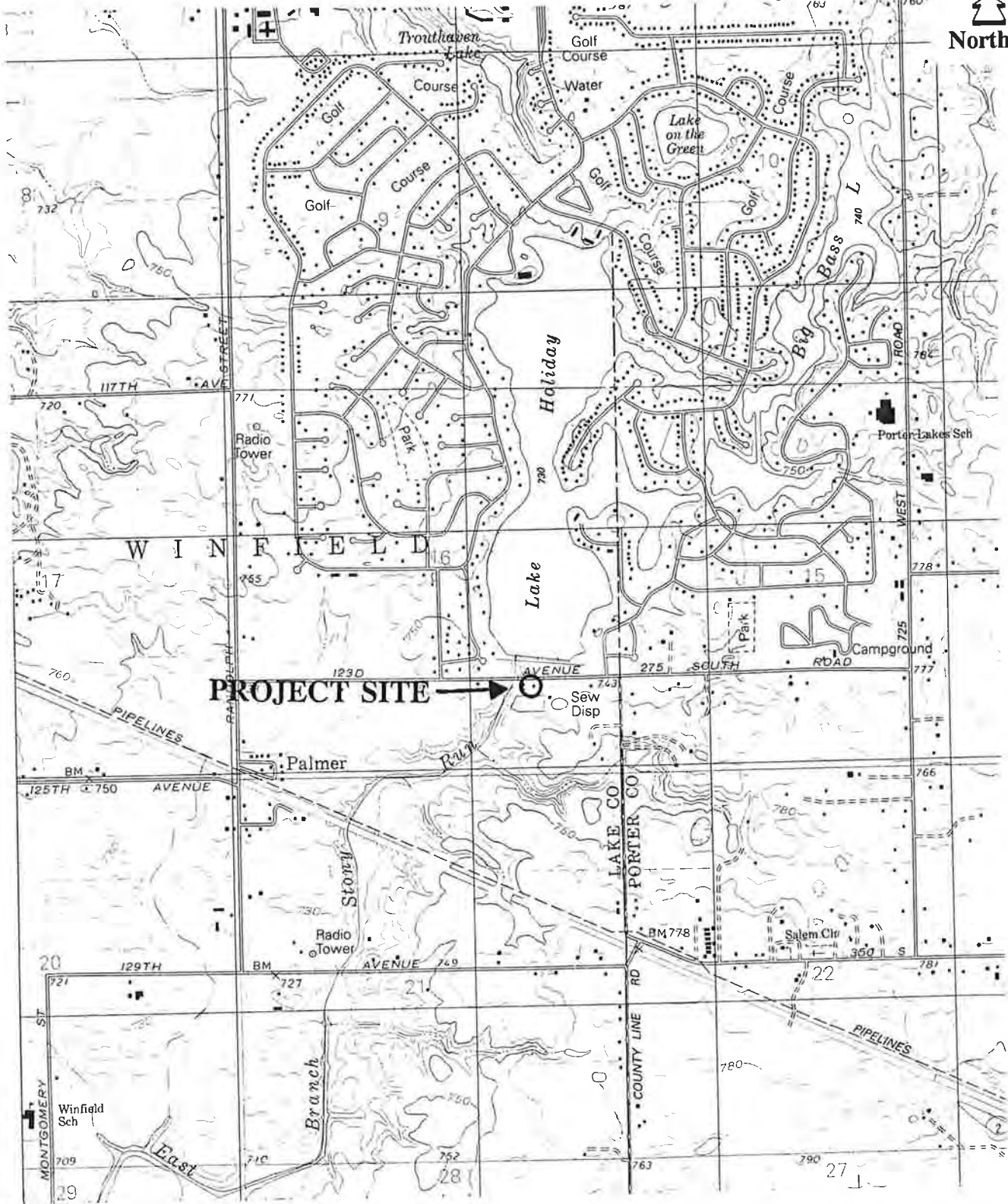
Figure 7 - Design Illustration - Footings in Undercut Areas

Boring Logs

Field Classifications Sheet

Information About Your Geotechnical Report

ATC Associates Inc. (ATEC)



Source: USGS Topographic Quadrangle Map - Palmer, Indiana, Revised 1992

SITE PLAN

Proposed Twin Lakes W.W.T.P.
9201 East 123rd. Ave.
Crown Point In.
ATC\ATEC ASSOC. Project No. 51764.0001

Figure No.:

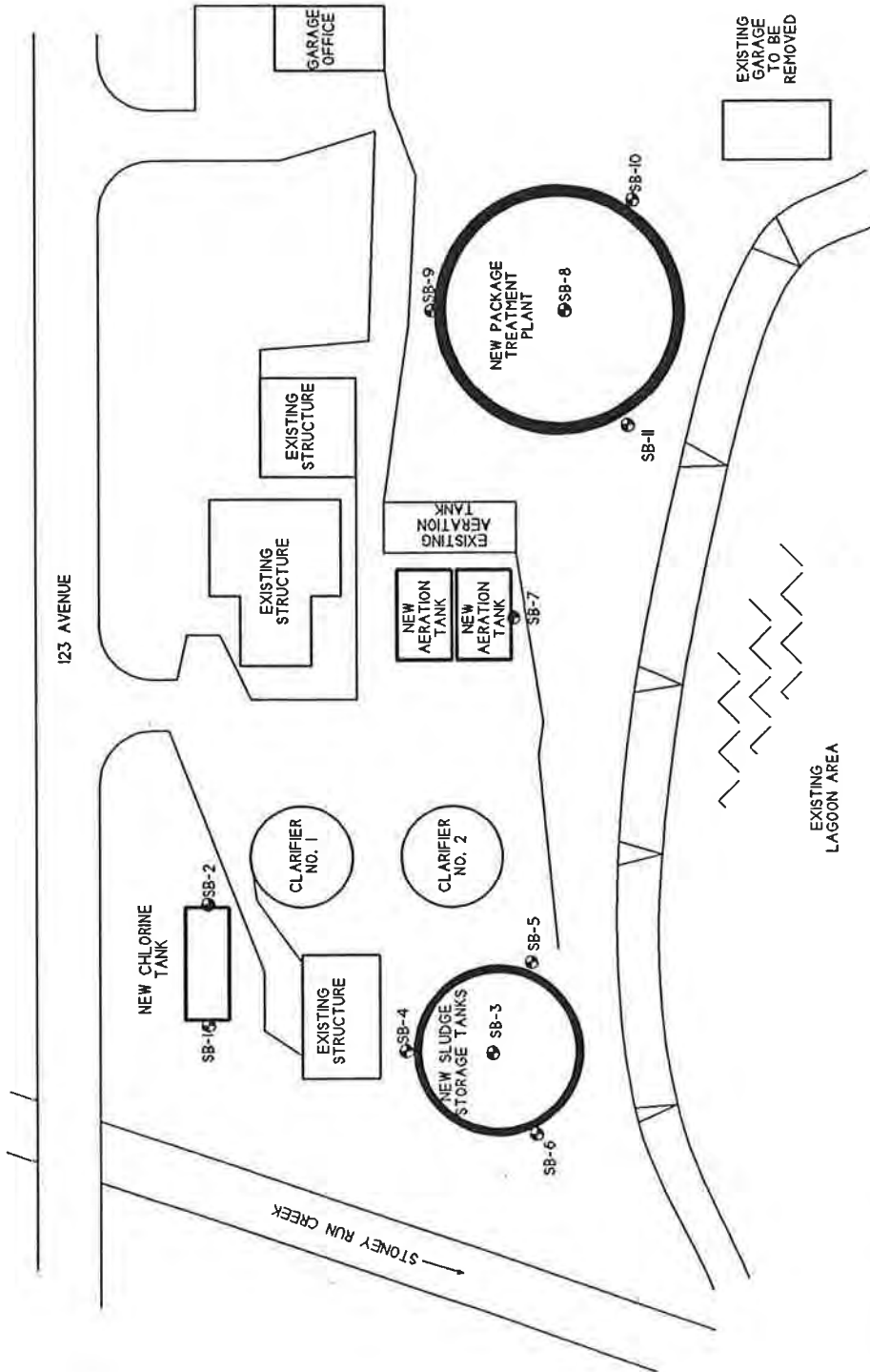
1

Scale:

1" = 2000'



SCALE: 1" = 80'



SITE/BORING PLAN

TWIN LAKE WWTP
TWIN LAKE UTILITIES FACILITY
CROWN POINT, INDIANA

PROJECT NUMBER: 51764.0001

DRAWING FILE: 51764001

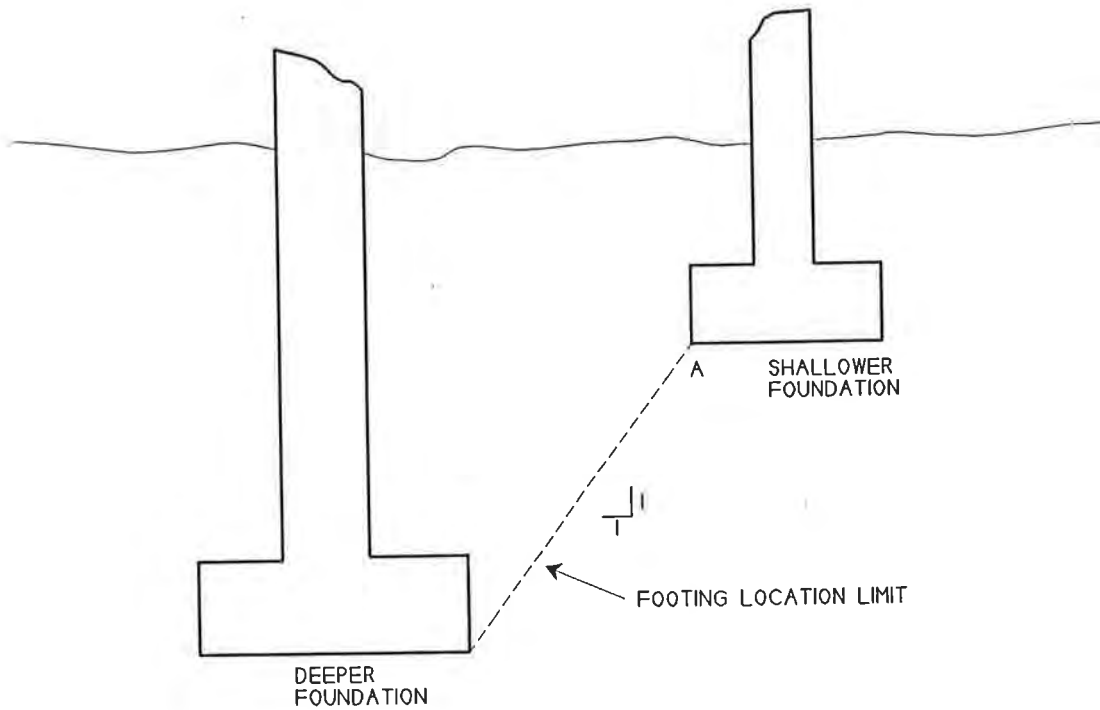
SCALE: 1" = 80'

DATE PREPARED: 12-9-96

DRN. BY:	CKD. BY:	APP'D BY:
CA	RA	RA



FIGURE NUMBER: 2



NOTE: POINT "A" OF SHALLOWER FOOTING MUST BE BELOW THE DASHED LINE SHOWING THE FOOTING LOCATION LIMIT.

PLACEMENT OF ADJACENT FOOTINGS

02200-34

PROJECT NUMBER:
51764.0001

DRAWING FILE:
ADJFOOT1

SCALE:
NO SCALE

DATE PREPARED:
6-4-96

DRN. BY:
CA

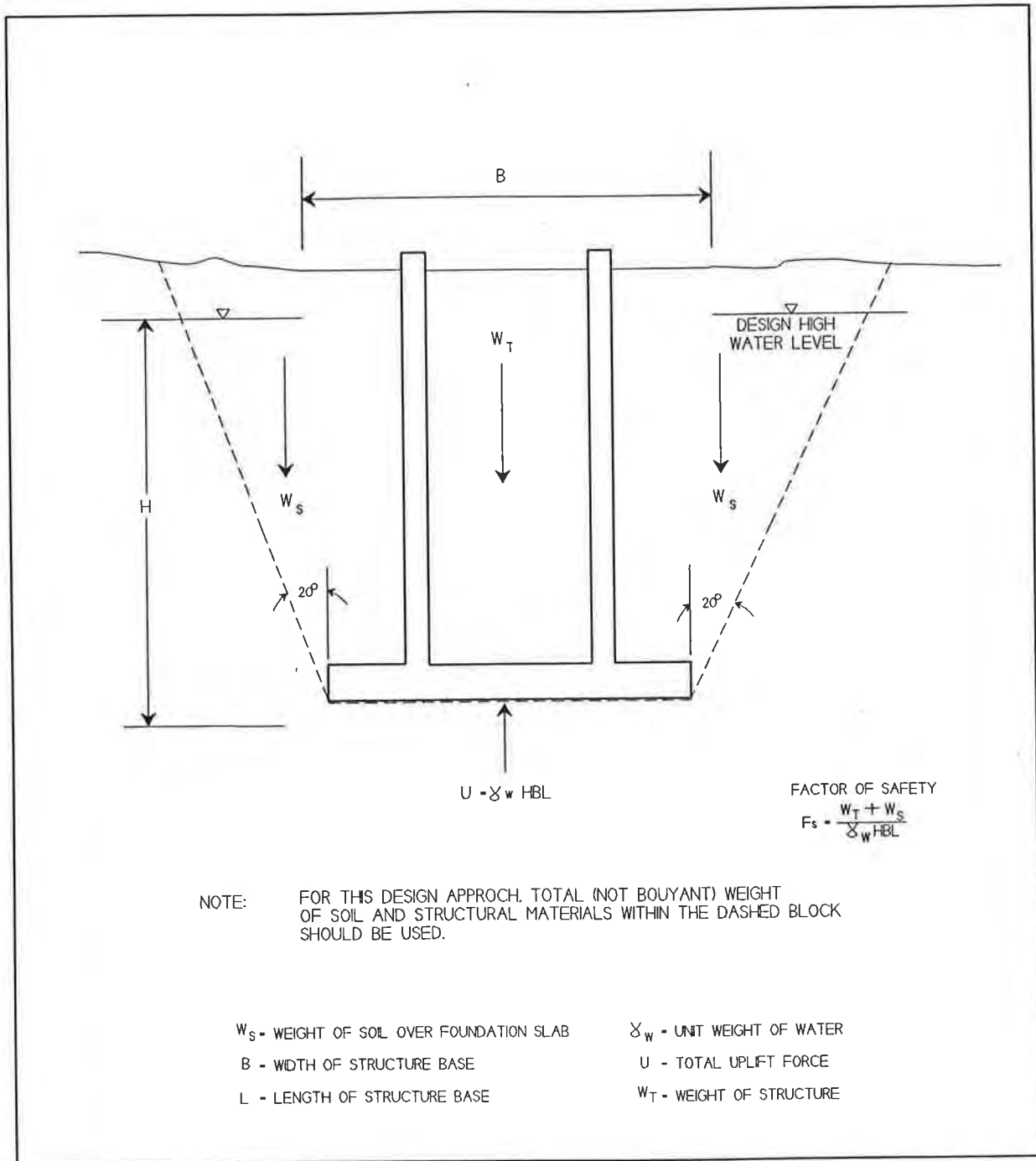
CKD. BY:
RA

APP'D BY:



FIGURE NUMBER:

3



UPLIFT CONSIDERATIONS FOR BELOW-GRADE STRUCTURES

02200-35

PROJECT NO.

51764.0001

SCALE

NONE

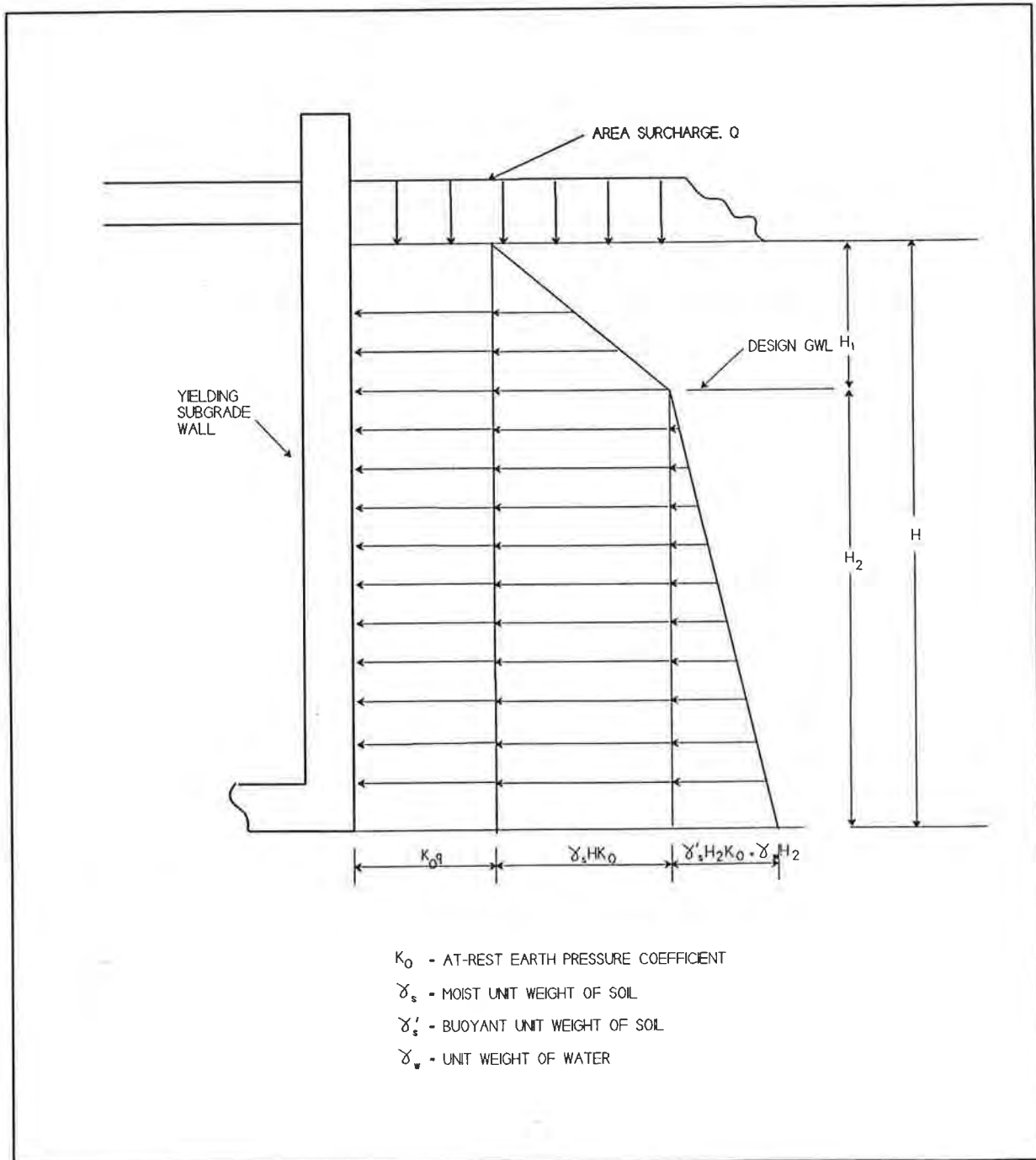
FIGURE NO.

4

DRAWING NO.

UPLIFT





NON-YIELDING BELOW GRADE WALLS

02200-36

PROJECT NO.

51764.0001

SCALE

NONE

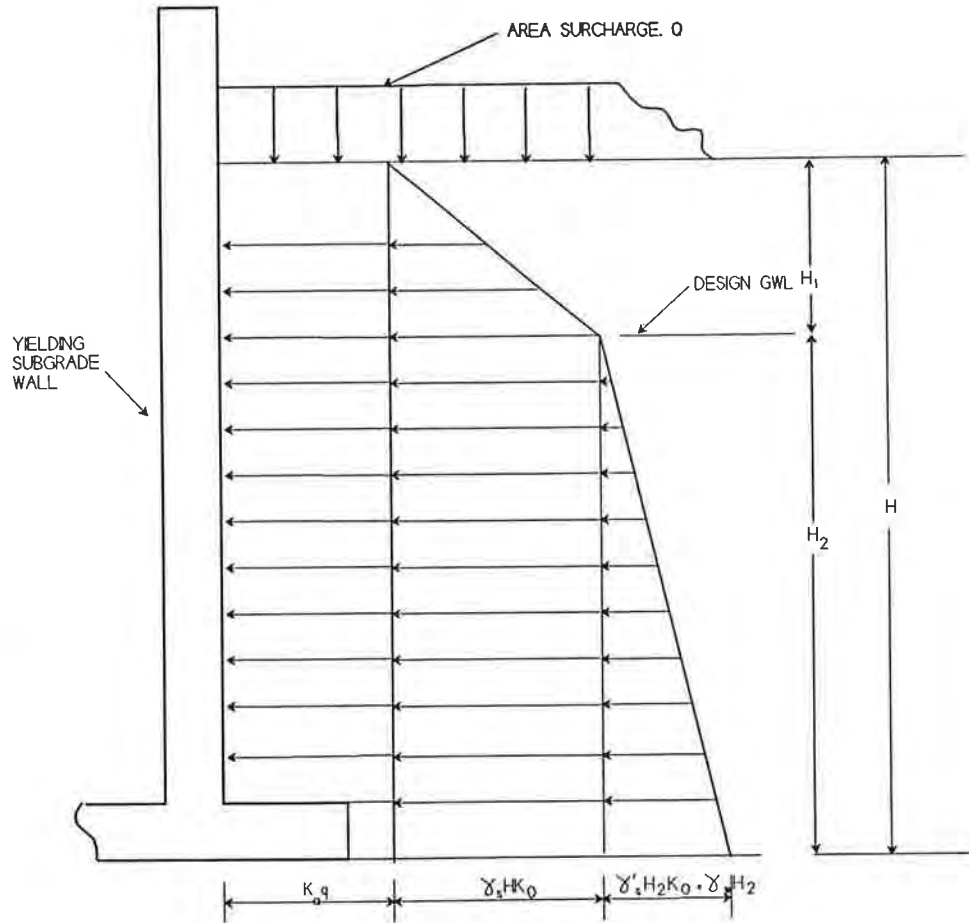
FIGURE NO.

5

DRAWING NO.

NONYIELD





K_a - ACTIVE EARTH PRESSURE COEFFICIENT
 γ_s - MOIST UNIT WEIGHT OF SOIL
 γ'_s - BUOYANT UNIT WEIGHT OF SOIL
 γ_w - UNIT WEIGHT OF WATER

YIELDING BELOW GRADE WALLS

02200-37

PROJECT NO.

51764.0001

SCALE

NONE

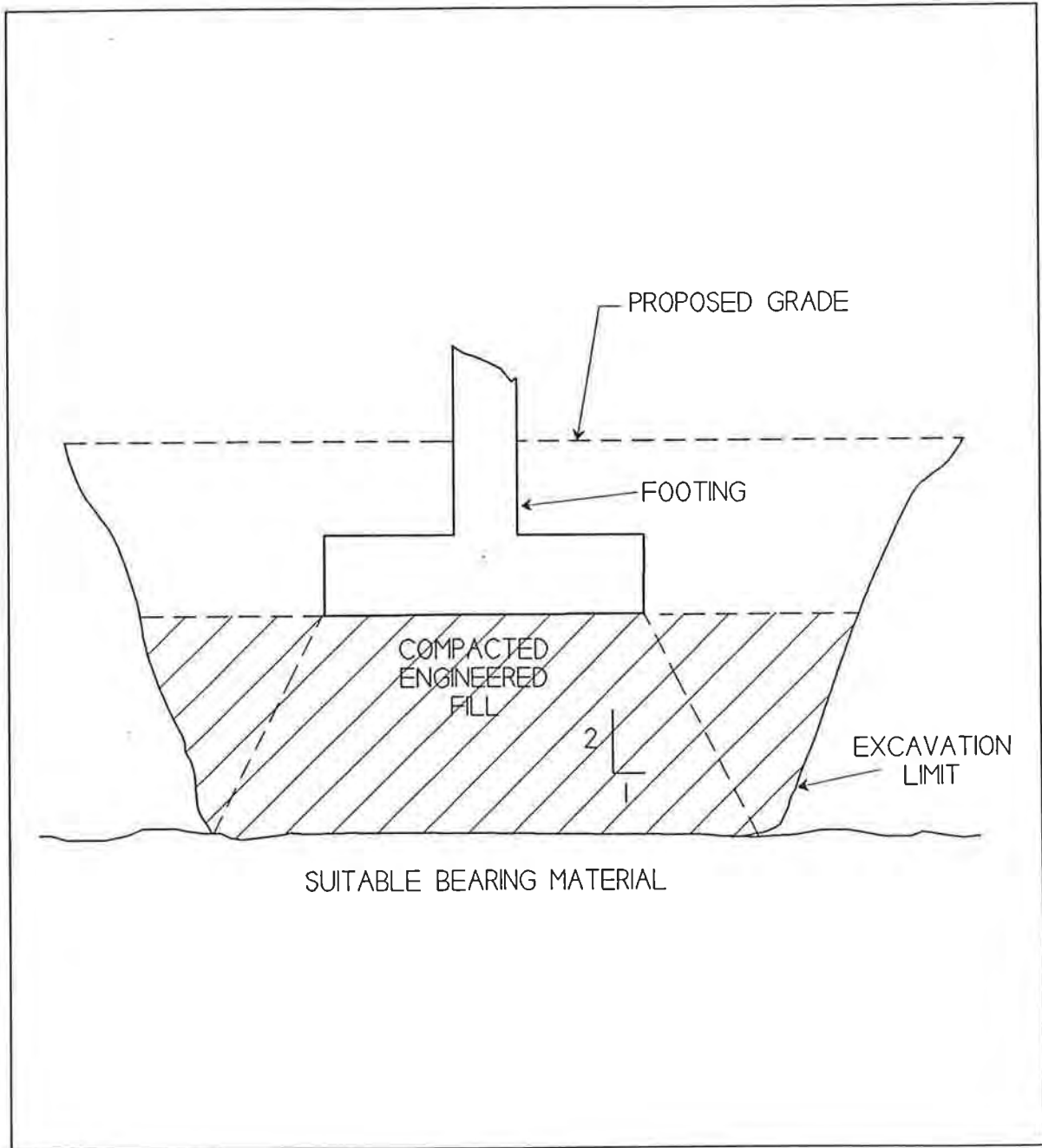
FIGURE NO.

6

DRAWING NO.

YIEL





FOOTINGS IN UNDERCUT AREAS

02200-38

PROJECT NO.
51764.0001

SCALE
NONE

FIGURE NO. 7	DRAWING NO. FOOTING
-----------------	------------------------



ATEC Associates, Inc.



BORING LOG

BORING NO: B-1

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 725'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOKS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
724.5	5 In. of surficial topsoil.	0.50	0.0	1	SS	4-5-8	56	16.9	3.5	Groundwater was encountered at 20.5 feet on drilling rods and at 23.5 feet upon completion.
721.5	FILL: Brown, moist, stiff, SILTY CLAY, trace fine SAND and GRAVEL.	3.50	5.0	2	SS	4-5-6	78	21.5	NA	
719.0	OL: Dark gray and black, clayey topsoil, trace GRAVEL, roots, straw, and organic matter, possible FILL.	6.00		3	SS	9-9-15	100	16.6	6.0+	
	CL: Gray and Brown mottled, moist, very stiff, SILTY CLAY, trace GRAVEL.		10.0	4	SS	3-9-14	100	16.4	6.0+	
				5	SS	4-6-11	100	13.3	6.0+	
711.5	CL-ML: Gray, moist, very stiff, CLAYEY SILT, trace SAND and GRAVEL.	13.50	15.0	6	SS	9-11-16	100	12.3	4.0	
				7	SS	5-7-10	89	13.3	3.8	
			20.0	8	SS	5-8-11	100	14.5	4.0	
702.0	SC: Gray, very moist, medium dense, fine to medium SAND, trace GRAVEL.	23.00	25.0	9	SS	5-10-11	89	16.7	NA	
696.5	SM: Gray, wet, medium dense, SILTY fine to medium SAND, trace CLAY and GRAVEL.	28.50	30.0	10	SS	10-15-15	100	20.3	NA	
691.5	ML-CL: Gray, moist, very stiff, CLAYEY SILT, trace fine SAND, sand seams at 34.5 feet.	33.50	35.0	11	SS	8-11-16	100	17.7	4.0	

ATEC Associates, Inc.



BORING LOG

BORING NO: B-1

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998

DATE FINISHED: Nov 20, 1998

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 725'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
	MATERIAL DESCRIPTION									
686.5	ML-CL: Gray, moist, very stiff, CLAYEY SILT, trace fine SAND, SAND seams at 34.5 feet.	38.50	35.0							
685.0	SM: Gray, moist, dense, SILTY fine to medium coarse SAND, trace GRAVEL.	40.0	40.0	12	SS	18-19-23	100	12.2	NA	
	TERMINATED									
			45.0							
			50.0							
			55.0							
			60.0							
			65.0							
			70.0							



BORING LOG

BORING NO: B-2

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998

DATE FINISHED: Nov 20, 1998

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 725'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
724.5	0.5 in. of surficial topsoil.	0.50	0.0							
	CL: Tan, moist, stiff, SANDY SILTY CLAY, trace GRAVEL			1	SS	6-6-9	100	19.2	2.5	
	very moist and medium stiff at 3.5 feet.			2	SS	4-4-4	78	15.4	1.5	
719.0	CL: Brown, moist, very stiff, SILTY CLAY, trace FINE SAND and GRAVEL.	6.00	5.0							
				3	SS	6-12-15	89	NA	5.5	
				4	SS	7-17-21	100	NA	6.0+	
714.0	CL: Gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	11.00	10.0							
				5	SS	6-9-13	100	12.7	4.8	
	interbedded wet fine SAND seams at 18.5 feet.			6	SS	3-5-6	78	NA	1.8	
703.0	CL-ML: Gray, moist, stiff, FINE CLAYEY SILT, trace FINE SAND.	22.00	20.0							
				7	SS	5-6-9	100	22.9	1.8	
699.0	ML: Gray, moist, medium dense, CLAYEY SANDY SILT some FINE interbedded SAND seams.	26.00	25.0							
				8	SS	6-10-15	89	NA	1.8	
693.0	SM: Gray, wet, medium dense, FINE to medium coarse SAND, some FINE SILT.	32.00	30.0							
				9	SS	5-9-10	78	NA	NA	
			35.0							

Groundwater was encountered at 19.0 feet during drilling operations and at 17.5 feet upon completion.



BORING LOG

BORING NO: B-2

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COKAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 725'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
	MATERIAL DESCRIPTION									
688.0	SM: gray, wet, medium dense, fine to medium coarse SAND, some fine SILT.	37.00	35.0							
685.0	SM: Gray, very moist to wet, medium dense, SILTY SAND and GRAVEL.	40.0	40.0	10	SS	7-10-13	78	NA	NA	
	TERMINATED									
			45.0							
			50.0							
			55.0							
			60.0							
			65.0							
			70.0							

ATEC Associates, Inc.



BORING LOG

BORING NO: B-3

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1996

DATE FINISHED: Nov 20, 1996

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 724'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER C_u , TSF	NOTES
723.5	0.5 feet of surficial topsoil FILL: Brown, moist, stiff, SILTY CLAY, trace SAND and GRAVEL.	0.50	0.0	1	SS	5-6-5	100	14.5	6.0+	Groundwater was encountered on rods at 16.0 feet during drilling operations, and at 14.5 feet upon completion.
720.5	CL: Dark gray medium stiff, SILTY CLAY, trace ORGANIC MATTER, SAND and GRAVEL, POSSIBLE FILL. to stiff at 6.0 feet.	3.50	5.0	2	SS	4-3-4	100	20.6	NA	
				3	SS	3-5-7	100	27.0	2.3	
715.5	ML-CL: Gray and brown mottled, wet, medium stiff, CLAYEY fine SILT, trace SAND and GRAVEL.	8.50	10.0	4	SS	4-4-6	100	23.5	NA	
713.0	SM: Gray, wet, medium dense, fine SILTY SAND, trace GRAVEL.	11.00		5	SS	7-7-5	100	NA	NA	
710.5	SP: Gray, wet, medium dense, GRAVELLY fine to medium coarse SAND, trace fine SILT.	13.50	15.0	6	SS	7-8-10	100	NA	NA	
				7	SS	10-10-11	56	NA	NA	
705.5	SM: gray, wet, medium dense, fine to medium coarse SILTY SAND, trace GRAVEL.	18.50	20.0	8	SS	7-8-11	100	NA	NA	
700.5	SM: Gray, moist, dense, SILTY fine SAND, trace CLAY.	23.50	25.0	9	SS	13-14-17	100	16.9	NA	
695.5	ML: Gray, moist, very stiff, SANDY SILT, trace CLAY, occ. SAND seams.	28.50	30.0	10	SS	13-10-12	100	12.3	3.5	
694.0	TERMINATED	30.0	35.0							



BORING LOG

BORING NO: B-4

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 726'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
725.5	0.5 feet of surficial topsoil. FILL: Brown, with gray mottles, damp, very stiff, SILTY CLAY, trace GRAVEL, ORGANIC MATTER, fine roots.	0.50	0.0	1	SS	4-7-11	100	14.4	3.5	Boring #4 was relocated 20 feet East of staked location.
			5.0	2	SS	6-8-13	89	19.6	2.4	
719.0	FILL: Dark gray to black, moist, medium stiff, SILTY CLAY, trace ORGANIC MATTER.	7.00		3	SS	3-4-3	100	19.3	1.2	
717.5	CL: Brown and gray mottled, moist, stiff, SILTY CLAY, trace SAND and GRAVEL, some SILT lenses at 13.5 feet.	8.50	10.0	4	SS	4-7-8	100	17.7	2.9	
712.5	CL: Brown, moist, very stiff, SILTY CLAY, gray streaks, SILT lenses, trace fine SAND and GRAVEL.	13.50	15.0	5	SS	8-11-16	100	19.9	4.8	Groundwater was encountered at 23.5 feet during drilling operations, and at 10.0 feet after 24.0 hours.
707.5	ML: gray, wet, medium dense very fine SILT.	18.50	20.0	6	SS	5-6-10	100	20.0	NA	
703.0	SP: Gray, wet, medium dense, fine to medium SAND and GRAVEL.	23.00	25.0	7	SS	7-11-15	100	NA	NA	
			30.0	8	SS	8-14-17	100	17.2	NA	
				9	SS	12-13-15	NA	15.9	NA	
			35.0							

PAGE: 1 OF: 1

ATEC Associates, Inc.

BORING LOG

BORING NO: B-5

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 724'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
723.5	0.5 feet of surficial topsoil. CL: Brown, moist, medium stiff, SILTY CLAY, trace SAND and GRAVEL, and fine roots at 1.5 feet.	0.50	0.0	1	SS	4-4-6	67	18.4	2.6	Groundwater was encountered on drilling tools during drilling operations at 13.5 feet.
			5.0	2	SS	3-6-8	100	25.3	2.3	
718.0	ML: Brown, moist, medium dense, SILT, trace fine SAND.	6.00		3	SS	5-8-8	100	20.4	NA	
715.5	SP: Brown to gray, damp, medium dense, fine medium coarse SAND, trace CLAY and GRAVEL.	8.50	10.0	4	SS	6-7-7	78	11.6	NA	
713.0	SC: Gray, damp, stiff, CLAYEY SAND and GRAVEL.	11.00		5	SS	6-7-8	56	15.1	NA	
710.5	SP-SM: Gray, wet, medium dense, SILTY fine to medium coarse SAND and GRAVEL.	13.50	15.0	6	SS	6-10-14	100	NA	NA	
				7	SS	4-6-8	100	NA	NA	
705.5	ML-CL: Gray, moist, very stiff, SILTY CLAY, trace fine SAND and GRAVEL.	18.50	20.0	8	SS	8-10-13	89	22.7	2.1	
				9	SS	11-12-9	100	13.6	2.0	
				10	SS	13-8-7	100	14.9	2.0	
694.0	TERMINATED	30.0	30.0							



BORING LOG

BORING NO: B-6

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1996

DATE FINISHED: Nov 20, 1996

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 724'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q_u , TSF	NOTES
723.5	0.5 feet of surficial topsoil. FILL: Brown, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL, roots	0.50	0.0	1	SS	3-5-11	100	10.8	6.0+	Groundwater was encountered at 19.0 feet during drilling operations.
			5.0	2	SS	5-7-7	100	14.7	3.0	
718.0	CL: Dark gray to black, moist, medium stiff, SANDY, SILTY, CLAY, interbedded with ORGANIC MATTER and fine roots, POSSIBLE FILL.	6.00		3	SS	4-4-5	89	21.7	1.5	
			10.0	4	SS	5-4-6	100	25	1.8	
711.5	ML: Gray, wet, medium dense, fine SILT and trace fine SAND.	12.50		5	SS	6-7-11	67	23.8	1.4	
			15.0							
707.0	SP: Gray, wet, medium dense, very fine SAND, trace fine SILT.	17.00		6	SS	8-9-16	89	NA	NA	
			20.0							
701.0	CL: Gray, moist, hard, SILTY CLAY, trace SAND and GRAVEL.	23.00		7	SS	8-16-26	100	16.0	2.2	
			25.0							
695.5	ML: Gray, wet, very stiff, SANDY SILTY CLAY, trace GRAVEL, occasional SAND seams.	28.50		8	SS	8-9-12	100	17.4	1.6	
694.0	TERMINATED	30.0	30.0							
			35.0							



BORING LOG

BORING NO: B-7
PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P. CLIENT: TWIN LAKES UTILITIES
PROJECT LOCATION: CROWN POINT, IN. DRILLING CONTRACTOR: T.F.
DRILLING METHOD: H.S.A. SAMPLE METHOD: ASTM D-1586
DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 724'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
723.5	0.5 feet of surficial topsoil.	0.50	0.0	1	SS	9-6-8	78	17.1	NA	Groundwater was encountered at 8.0 feet during drilling operations.
	CL: Brown and gray, moist, stiff, SILTY CLAY, trace SAND and GRAVEL, and fine roots.			2	SS	8-8-11	78	16.6	5.8	
718.0	SM: Brown, wet, loose, fine to medium coarse SILTY CLAY, trace CLAY.	6.00	5.0	3	SS	5-2-4	67	NA	NA	
715.5	CL: Gray, moist, medium stiff, SILTY CLAY, trace fine SAND and GRAVEL.	8.50	10.0	4	SS	6-3-4	100	13.4	2.5	
				5	SS	4-3-9	100	13.2	2.8	
			15.0	6	SS	5-6-11	100	13.5	2.5	
				7	SS	8-9-14	100	16.6	2.2	
705.5	SP: Gray, wet, dense fine to medium coarse SAND, trace CLAY.	18.50	20.0	8	SS	9-16-18	100	NA	NA	
700.5	CL-ML: Gray, moist, dense, CLAYEY SANDY SILT.	23.50	25.0	9	SS	12-16-15	89	20.7	1.4	
696.0	CL-ML: Gray, moist, medium dense, CLAYEY SILT, trace fine SAND and GRAVEL.	28.00	30.0	10	SS	7-9-14	100	19.9	1.6	
693.0	SC: Gray, wet, dense, CLAYEY SAND and GRAVEL.	31.00		11	SS	6-16-28	100	13.1	1.2	
			35.0							

ATEC Associates, Inc.



BORING LOG

BORING NO: B-7

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998

DATE FINISHED: Nov 20, 1998

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 724'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
	MATERIAL DESCRIPTION									
687.0	SC: Gray, wet, dense, CLAYEY SAND and GRAVEL.	37.00	35.0							
684.0	CL: Gray, moist, hard SANDY SILTY CLAY, trace GRAVEL.	40.0	40.0	12	SS	9-12-16	100	12.5	2.8	
	TERMINATED									



BORING LOG

BORING NO: B-8

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 726'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
725.5	0.5 feet of surficial topsoil.	0.50	0.0	1	SS	4-4-5	67	14.8	3.0	Groundwater was encountered at 18.5 feet during drilling operations.
	CL: Tan, moist, medium stiff, SILTY CLAY, trace SAND and GRAVEL.			2	SS	4-3-4	78	NA	1.2	
	interbedded, wet, CLAY, SAND, and GRAVEL seams at 3.5 feet.			3	SS	7-17-8	78	13.0	2.5	
721.0	CL: Gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	5.00	5.0	4	SS	8-6-9	100	NA	21.	
				5	SS	10-10-12	100	16.9	2.5	
				6	SS	10-9-14	100	NA	3.2	
711.0	ML: Gray, very moist, medium dense, fine SANDY SILT.	15.00	15.0	7	SS	4-8-11	100	19.4	NA	
				8	SS	5-4-3	100	NA	NA	
708.0	SP: Gray, wet, loose, fine to medium coarse SAND and GRAVEL.	18.00	20.0	9	SS	6-10-21	100	NA	NA	
704.0	SP: Gray, wet, dense, medium coarse to coarse SAND and GRAVEL.	22.00	25.0	10	SS	5-7-8	100	14.6	1.0	
699.0	CL: Gray, very moist, stiff, SILTY CLAY, trace SAND and GRAVEL.	27.00	30.0	11	SS	5-6-8	89	NA	NA	
	interbedded, wet, fine SAND seam at 33.5 feet.		35.0							

ATEC Associates, Inc.



BORING LOG

BORING NO: B-8

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998

DATE FINISHED: Nov 20, 1998

DRILLER: J. C. PAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 726'		STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
	MATERIAL DESCRIPTION										
689.0	(Continued from previous page) CL: Gray, very moist, stiff, SILTY CLAY, trace SAND and GRAVEL.		37.00	35.0							
686.0	interbedded, wet, fine SAND seam at 33.5 feet SM: Gray, very moist to wet, dense, SILTY fine SAND, interbedded CLAY lenses. TERMINATED		40.0	40.0	12	SS	8-17-23	100	15.3	NA	
				45.0							
				50.0							
				55.0							
				60.0							
				65.0							
				70.0							

ATEC Associates, Inc.



BORING LOG

BORING NO: B-9

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 726'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER D ₅₀ , TSF	NOTES
725.5	0.5 feet of surficial topsoil.	0.50	0.0	1	SS	3-8-9	89	12.8	6.0+	Groundwater was encountered at 18.5 feet during drilling operations.
	CL: Brown, damp, very stiff, SILTY CLAY, trace SILT lenses, SAND and GRAVEL.			2	SS	5-11-16	100	16.4	6.0+	
720.0	CL: Gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	6.00	5.0	3	SS	9-12-16	100	12.3	4.8	
				4	SS	5-8-13	100	15.2	5.2	
			10.0							
				5	SS	3-5-12	100	16.3	3.8	
			15.0							
709.0	ML: gray, wet, medium dense, medium coarse to coarse SAND and GRAVEL, trace fine SILT.	17.00	20.0	6	SS	2-5-8	89	NA	NA	
702.5	SC: Gray, wet, medium dense CLAYEY SAND and GRAVEL.	23.50	25.0	7	SS	6-6-10	100	NA	1.2	
697.5	CL: Gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	28.50	30.0	8	SS	5-7-10	100	13.0	1.4	
692.5	SP: Gray, wet, medium dense, fine to medium SAND, trace SILT.	33.50	35.0	9	SS	10-16-13	89	NA	NA	

ATEC Associates, Inc.



BORING LOG

BORING NO: B-9

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998

DATE FINISHED: Nov 20, 1998

DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 726'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
	MATERIAL DESCRIPTION									
686.0	SP: Gray, wet, medium dense, Fine to medium SAND, trace SILT.	40.0	35.0							
	TERMINATED		40.0	10	SS	10-16-13	100	NA	NA	
			45.0							
			50.0							
			55.0							
			60.0							
			65.0							
			70.0							



BORING LOG

BORING NO: B-10

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 733'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
732.5	0.5 feet of surficial topsoil. CL: Brown, moist, stiff, SILTY CLAY, trace SAND and GRAVEL, POSSIBLE FILL.	0.50	0.0	1	SS	8-6-9	78	21.1	2.0	Boring offset 5.0 feet to the west of intended location.
729.5	CL: Brown, moist, stiff, SILTY CLAY, trace fine SAND and GRAVEL. to very stiff at 6.0 feet.	3.50	5.0	2	SS	6-5-8	100	14.1	6.0	
				3	SS	10-11-13	78	16.6	5.5	
			10.0	4	SS	5-7-14	100	12.9	6.0+	
722.0	CL: gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	11.00		5	SS	9-12-12	100	12.8	1.5	Groundwater was encountered at 17.0 feet upon completion of drilling operations.
			15.0	6	SS	4-6-10	100	12.6	3.6	
717.0	CL-ML: gray, moist to wet, very stiff, CLAYEY SILT, trace fine SAND and GRAVEL.	16.00		7	SS	8-11-14	100	16.8	1.5	
714.5	CL: Gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	18.50	20.0	8	SS	10-10-13	89	14.2	3.7	
709.5	SC: Gray and brown, moist, medium dense, CLAYEY SAND and GRAVEL.	23.50	25.0	9	SS	8-9-7	44	16.0	NA	
706.0	SP: Gray, wet, medium dense, fine to medium coarse SAND, trace SILT.	27.00	30.0	10	SS	5-6-8	100	NA	NA	
699.5	ML: Gray, moist, very stiff, CLAYEY SILT, some fine SAND and trace GRAVEL.	33.50	35.0	11	SS	11-12-9	100	11.8	2.7	

PAGE: 1 OF 2

02200-53



BORING LOG

BORING NO: B-10

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 733'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
	MATERIAL DESCRIPTION									
692.0	ML: Gray, moist, very stiff, CLAYEY SILT, some Fine SAND and GRAVEL.	41.00	35.0							
				12	SS	8-12-14	100	13.1	2.0	
			40.0							
				13	SS	11-15-19	100	17.3	NA	
683.0	SP: Gray, moist, dense, fine to medium coarse SAND, trace GRAVEL and SILT.	50.0	45.0							
				14	SS	14-13-17	89	NA	NA	
	TERMINATED		50.0							
			55.0							
			60.0							
			65.0							
			70.0							

ATEC Associates, Inc.

BORING LOG

BORING NO: B-11

PROJECT NO: 51764.0001

PROJECT NAME: TWIN LAKES W.W.T.P.

CLIENT: TWIN LAKES UTILITIES

PROJECT LOCATION: CROWN POINT, IN.

DRILLING CONTRACTOR: T.F.

DRILLING METHOD: H.S.A.

SAMPLE METHOD: ASTM D-1586

DATE STARTED: Nov 20, 1998 DATE FINISHED: Nov 20, 1998 DRILLER: J. COPAK

INSPECTOR: N. MINER

ELEVATION	SURFACE ELEVATION: 732'	STRATUM DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SPT RESULTS BLOWS PER 6" INCREMENT	RECOVERY	WATER CONTENT	PENETROMETER Q _u , TSF	NOTES
731.5	0.5 feet of surficial topsoil. FILL: Tan to gray, moist, very stiff, SILTY CLAY, trace SAND and GRAVEL.	0.50	0.0	1	SS	5-7-9	100	18.0	3.8	Boring location was offset about 10 feet South of intended location.
728.5	CL: Brown, moist, mottled, stiff, SILTY CLAY, trace fine roots and topsoil; POSS. FILL.	3.50	5.0	2	SS	5-8-7	89	NA	2.5	
726.0	CL: Greenish brown, moist, stiff, SILTY CLAY, trace fine SAND and GRAVEL.	6.00		3	SS	3-4-7	100	22.4	1.5	
724.0	CL: Brown, moist, stiff, SANDY SILTY CLAY, trace GRAVEL.	8.00	10.0	4	SS	3-5-9	100	NA	3.8	
	very stiff and trace gray streaks at 13.5 feet.		15.0	5	SS	7-10-11	100	15.8	6.0	Groundwater was at 35.5 feet on drilling rods and at 23.0 feet upon completion.
715.0	CL: Gray, moist, stiff, SILTY SANDY CLAY, trace GRAVEL.	17.00	20.0	6	SS	5-6-9	100	NA	3.2	
			25.0	7	SS	5-9-15	100	NA	3.0	
			30.0	8	SS	6-9-11	100	NA	5.5	
700.0	SM: Gray, wet, dense, interbedded SILT, SILTY SAND, trace GRAVEL.	32.00	35.0	9	SS	8-17-24	100	18.1	NA	

FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

NON COHESIVE SOILS (Silt, Sand, Gravel and Combinations)

<u>Density</u>		<u>Particle Size Identification</u>	
Very Loose	-5 blows/ft. or less	Boulders	-8 inch diameter or more
Loose	-6 to 10 blows/ft.	Cobbles	-3 to 8 inch
Medium Dense	-11 to 30 blows/ft.	Gravel	-Coarse -1 to 3 inch
Dense	-31 to 50 blows/ft.		Medium- $\frac{1}{2}$ to 1 inch
Very Dense	-51 blows/ft. or more		Fine - $\frac{1}{4}$ to $\frac{1}{2}$ inch
		Sand	-Coarse -2.00mm to $\frac{1}{4}$ inch (dia. of a pencil lead)
			Medium-0.42 to 2.00mm (dia. of a broom straw)
			Fine -0.074 to 0.42mm (dia. of a human hair)
		Silt	-0.074 to 0.002mm (Cannot see particles)

COHESIVE SOILS (Clay, Silt and Combinations)

	<u>Estimated Range of Unconfined</u>		
<u>Consistency</u>	<u>Compressive Strength (tsf)</u>	<u>Plasticity</u>	
Very Soft	< 0.25	<i>Degree of Plasticity</i>	<i>Plasticity</i>
Soft	0.25 - 0.50	<i>Plasticity</i>	<i>Index</i>
Medium Stiff	0.50 - 1.00	None to Slight	0 - 4
Stiff	1.00 - 2.00	Slight	5 - 7
Very Stiff	2.00 - 4.00	Medium	8 - 22
Hard	> 4.00	High to Very High	over 22

Classification on logs are made by visual inspection of samples.

Standard Penetration Test -- Driving a 2.0" O.D., $1\frac{1}{3}$ " I.D., sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30.0 inches. It is customary for ATC/ATEC to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The value shown on the log is the "N - value," which is the sum of the blows required to advance the sampler the last two 6.0 inch increments.

Strata Changes -- In the column "Soil Descriptions" on the drill log the horizontal lines represent strata changes. A solid line (____) represents an actually observed change, a dashed line (_ _ _) represents an estimated change.

Ground Water observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

As the client of a consulting geotechnical engineer, you should know that site subsurface conditions cause more construction problems than any other factor. ASFE/The Association of Engineering Firms Practicing in the Geosciences offers the following suggestions and observations to help you manage your risks.

A GEOTECHNICAL ENGINEERING REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

Your geotechnical engineering report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. These factors typically include: the general nature of the structure involved, its size, and configuration; the location of the structure on the site; other improvements, such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask your geotechnical engineer to evaluate how factors that change subsequent to the date of the report may affect the report's recommendations.

Unless your geotechnical engineer indicates otherwise, do not use your geotechnical engineering report:

- when the nature of the proposed structure is changed, for example, if an office building will be erected instead of a parking garage, or a refrigerated warehouse will be built instead of an unrefrigerated one;
- when the size, elevation, or configuration of the proposed structure is altered;
- when the location or orientation of the proposed structure is modified;
- when there is a change of ownership; or
- for application to an adjacent site.

Geotechnical engineers cannot accept responsibility for problems that may occur if they are not consulted after factors considered in their report's development have changed.

SUBSURFACE CONDITIONS CAN CHANGE

A geotechnical engineering report is based on conditions that existed at the time of subsurface exploration. Do not base construction decisions on a geotechnical engineering report whose adequacy may have been affected by time. Speak with your geotechnical consultant to learn if additional tests are advisable before construction starts. Note, too, that additional tests may be required when subsurface conditions are affected by construction operations at or adjacent to the site, or by natural events such as floods, earthquakes, or ground water fluctuations. Keep your geotechnical consultant apprised of any such events.

MOST GEOTECHNICAL FINDINGS ARE PROFESSIONAL JUDGMENTS

Site exploration identifies actual subsurface conditions only at those points where samples are taken. The data were extrapolated by your geotechnical engineer who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your geotechnical engineer can work together to help minimize their impact. Retaining your geotechnical engineer to observe construction can be particularly beneficial in this respect.

A REPORT'S RECOMMENDATIONS CAN ONLY BE PRELIMINARY

The construction recommendations included in your geotechnical engineer's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Because actual subsurface conditions can be discerned only during earthwork, you should retain your geotechnical engineer to observe actual conditions and to finalize recommendations. Only the geotechnical engineer who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations are valid and whether or not the contractor is abiding by applicable recommendations. The geotechnical engineer who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

GEOTECHNICAL SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND PERSONS

Consulting geotechnical engineers prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your geotechnical engineer prepared your report expressly for you and expressly for purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the geotechnical engineer. No party should apply this report for any purpose other than that originally contemplated without first conferring with the geotechnical engineer.

GEOENVIRONMENTAL CONCERNS ARE NOT AT ISSUE

Your geotechnical engineering report is not likely to relate any findings, conclusions, or recommendations

about the potential for hazardous materials existing at the site. The equipment, techniques, and personnel used to perform a geoenvironmental exploration differ substantially from those applied in geotechnical engineering. Contamination can create major risks. If you have no information about the potential for your site being contaminated, you are advised to speak with your geotechnical consultant for information relating to geoenvironmental issues.

A GEOTECHNICAL ENGINEERING REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a geotechnical engineering report. To help avoid misinterpretations, retain your geotechnical engineer to work with other project design professionals who are affected by the geotechnical report. Have your geotechnical engineer explain report implications to design professionals affected by them, and then review those design professionals' plans and specifications to see how they have incorporated geotechnical factors. Although certain other design professionals may be familiar with geotechnical concerns, none knows as much about them as a competent geotechnical engineer.

BORING LOGS SHOULD NOT BE SEPARATED FROM THE REPORT

Geotechnical engineers develop final boring logs based upon their interpretation of the field logs (assembled by site personnel) and laboratory evaluation of field samples. Geotechnical engineers customarily include only final boring logs in their reports. Final boring logs should not under any circumstances be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to minimize the possibility of contractors misinterpreting the logs during bid preparation. When this occurs, delays, disputes, and unanticipated costs are the all-too-frequent result.

To minimize the likelihood of boring log misinterpretation, give contractors ready access to the complete geotechnical engineering report prepared or authorized for their use. (If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared and that developing construction cost esti-

mates was not one of the specific purposes for which it was prepared. In other words, while a contractor may gain important knowledge from a report prepared for another party, the contractor would be well-advised to discuss the report with your geotechnical engineer and to perform the additional or alternative work that the contractor believes may be needed to obtain the data specifically appropriate for construction cost estimating purposes.) Some clients believe that it is unwise or unnecessary to give contractors access to their geotechnical engineering reports because they hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems. It also helps reduce the adversarial attitudes that can aggravate problems to disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY

Because geotechnical engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against geotechnical engineers. To help prevent this problem, geotechnical engineers have developed a number of clauses for use in their contracts, reports, and other documents. Responsibility clauses are not exculpatory clauses designed to transfer geotechnical engineers' liabilities to other parties. Instead, they are definitive clauses that identify where geotechnical engineers' responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your geotechnical engineering report. Read them closely. Your geotechnical engineer will be pleased to give full and frank answers to any questions.

RELY ON THE GEOTECHNICAL ENGINEER FOR ADDITIONAL ASSISTANCE

Most ASFE-member consulting geotechnical engineering firms are familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to a construction project, from design through construction. Speak with your geotechnical engineer not only about geotechnical issues, but others as well, to learn about approaches that may be of genuine benefit. You may also wish to obtain certain ASFE publications. Contact a member of ASFE or ASFE for a complimentary directory of ASFE publications.

ASFE THE ASSOCIATION
OF ENGINEERING FIRMS
PRACTICING IN THE GEOSCIENCES
8811 COLESVILLE ROAD/SUITE G106/SILVER SPRING, MD 20910
TELEPHONE: 301/565-2733 FACSIMILE: 301/589-2017

Copyright 1992 by ASFE, Inc. Unless ASFE grants specific permission to do so, duplication of this document by any means whatsoever is expressly prohibited. Re-use of the wording in this document, in whole or in part, also is expressly prohibited, and may be done only with the express permission of ASFE or for purposes of review or scholarly research.

For more location information
please visit www.strand.com

Office Locations

Brenham, Texas | 979.836.7937

Cincinnati, Ohio | 513.861.5600

Columbus, Indiana | 812.372.9911

Columbus, Ohio | 614.835.0460

Indianapolis, Indiana | 317.423.0935

Joliet, Illinois | 815.744.4200

Lexington, Kentucky | 859.225.8500

Louisville, Kentucky | 502.583.7020

Madison, Wisconsin* | 608.251.4843

Milwaukee, Wisconsin | 414.271.0771

Phoenix, Arizona | 602.437.3733

*Corporate Headquarters





1 - 16 - 17		Kevin Misch	574 - 320 - 1204
Customer	LOFS		
Work to be performed at	1836 Sandy Beach Lakes of the Four Seasons Winfield, Indiana 46307		

#	Required Actions
1.	Dig down estimated 21' LFT with trench boxes
2.	Load all material into trucks
3.	Haul material off of site
4.	Take out existng manhole
5.	Install new manhole and reconnect sewer mains
6.	Install 24" #8's Limestone on pipe and around manhole
7.	Haul all material back to job
8.	Excavator time, install material back in hole
9.	Take out trench boxes and haul off site
10.	Install erosion control fence and silt socks
11.	Includes all road closed signs and traffic control
12.	Total Price: \$26,920

NOTE:

PRICE INCLUDES: Test ball plugs and bypass plumbing

DOES NOT INCLUDE: Landscaping, de-watering if needed and anything out of scope of work is additional charge. Also, not responsible for any roadway repairs or any gas or electric lines that need to be moved

9608 Randolph St.
Crown Point, Indiana
46307



Kevin Misch Excavating

CUSTOMER

Signature

Date

KEVIN MISCH EXCAVATING

Signature

Date



1 - 16 - 17		Kevin Misch	574 - 320 - 1204
Customer	LOFS		
Work to be performed at	3295 Rustic Lane Lakes of the Four Seasons Winfield, Indiana 46307		MH 485

#	Required Actions
1.	Dig down estimated 21' LFT with trench boxes
2.	Load all material into trucks
3.	Haul material off of site
4.	Take out existitng manhole
5.	Install new manhole and reconnect sewer mains
6.	Install 24" #8's Limestone on pipe and around manhole
7.	Haul all material back to job
8.	Excavator time, install material back in hole
9.	Take out trench boxes and haul off site
10.	Install erosion control fence and silt socks
11.	Includes all road closed signs and traffic control
12.	Total Price: \$26,920

NOTE:

PRICE INCLUDES: Test ball plugs and bypass plumbing

DOES NOT INCLUDE: Landscaping, de-watering if needed and anything out of scope of work is additional charge. Also, not responsible for any roadway repairs or any gas or electric lines that need to be moved

9608 Randolph St.
Crown Point, Indiana
46307



Kevin Misch Excavating

CUSTOMER

Signature

Date

KEVIN MISCH EXCAVATING

Signature

Date



1 - 16 - 17		Kevin Misch	574 - 320 - 1204
Customer	LOFS		
Work to be performed at	3607 Kingsway Drive Lakes of the Four Seasons Winfield, Indiana 46307		MH 344

#	Required Actions
1.	Dig down estimated 21' LFT with trench boxes
2.	Load all material into trucks
3.	Haul material off of site
4.	Take out existing manhole
5.	Install new manhole and reconnect sewer mains
6.	Install 24" #8's Limestone on pipe and around manhole
7.	Haul all material back to job
8.	Excavator time, install material back in hole
9.	Take out trench boxes and haul off site
10.	Install erosion control fence and silt socks
11.	Includes all road closed signs and traffic control
12.	Total Price: \$26,920

NOTE:

PRICE INCLUDES: Test ball plugs and bypass plumbing

DOES NOT INCLUDE: Landscaping, de-watering if needed and anything out of scope of work is additional charge. Also, not responsible for any roadway repairs or any gas or electric lines that need to be moved

9608 Randolph St.
Crown Point, Indiana
46307



Kevin Misch Excavating

CUSTOMER

Signature

Date

KEVIN MISCH EXCAVATING

Signature

Date



TWIN LAKES WATER SUPPLY PLAN

FEBRUARY 2008



TABLE OF CONTENTS

	PAGE NUMBERS
Table of Contents	i-ii
List of Appendices	iii
List of Tables	iv
List of Figures	v
 Section 1 – Executive Summary	 1-1
 Section 2 – Introduction	 2-1
2.01 Study Purpose and Scope	2-1
2.02 Planning Area	2-1
 Section 3 – Evaluation of Existing Demand	 3-1
 Section 4 – Capacities of Existing Supply and Treatment Systems	 4-1
4.01 Location of Facilities	4-1
4.02 Facilities Descriptions	4-1
4.02.01 Water Treatment Plant No. 1	4-1
4.02.02 Water Treatment Plant No. 2	4-1
4.02.03 Elevated Storage	4-1
4.03 Treated Water Capacity of Existing System	4-1
 Section 5 – Population and Future Demand Projections	 5-1
5.01 Planning Period	5-1
5.02 Land Use	5-1
5.03 Demographic Projections	5-1
5.03.01 Population Growth Rates	5-1
5.03.02 Lakes of the Four Seasons Population	5-2
5.03.03 Other Service Area Population	5-2
5.03.04 2007 Population	5-2
5.03.05 2018 Population	5-3
5.04 Projected Water System Demands for 2018	5-3
5.04.01 Average Demand	5-3
5.04.02 Maximum Day Demand	5-3
5.04.03 Peak Hour Demand	5-4



	PAGE NUMBERS
Section 6 – Evaluation of Future Supply and Treatment Requirements	6-1
6.01 General	6-1
6.02 Treatment and Supply Facilities	6-1
6.02.01 Vertical Pressure Filter Option	6-1
6.02.02 Horizontal Pressure Filter Option	6-2
6.02.03 Membrane Filtration Option	6-2
6.02.04 Water Supply Wells	6-2
6.03 Storage	6-3
6.04 Location	6-3
Section 7 – Opinion of Probable Cost	7-1
7.01 General	7-1
7.02 Water Supply Wells	7-1
7.03 Water Treatment Plant Options	7-2
7.03.01 Vertical Pressure Filters	7-2
7.03.02 Horizontal Pressure Filters	7-2
7.03.03 Membrane Filtration	7-3
7.04 Elevated Tank – 250,000 gallons	7-3
7.05 Finished Water Pipeline 3600 feet of 12"	7-3
7.06 Water Treatment Plant Recommendation	7-4



LIST OF APPENDICES

Appendix A – Figures

Appendix B – Existing Water Usage Data

**LIST OF TABLES****PAGE NUMBERS**

Table ES-1	1-1
Table ES-2	1-3
Table ES-	1-3
Table 3-1	3-1
Table 6-1	6-4

**LIST OF FIGURES**

	LOCATION
Figure A-1 – Service Area Map	Appendix A
Figure A-2 – Potential WTP #3 Layout Plan – Vertical Pressure Filter Option	Appendix A
Figure A-3 – Vertical Pressure Filter Details	Appendix A
Figure A-4 – Potential WTP #3 Layout Plan – Horizontal Pressure Filter Option	Appendix A
Figure A-5 – Horizontal Pressure Filter Details	Appendix A
Figure A-6 – Potential WTP #3 Layout Plan – Submerged Membrane Filter Option	Appendix A
Figure A-7 – Submerged Membrane Filter Details	Appendix A
Figure A-8 – Potential Future WTP #3 Site	Appendix A



SECTION 1 – EXECUTIVE SUMMARY

Purpose and Scope

McDonough Associates Inc. was retained to prepare a facilities planning report to summarize the existing conditions and evaluate the water supply system needs for the next 10 years. Items included in the report are documentation and analysis of recent demand data, examination of existing facility conditions, estimate of future service area population, identification of existing shortcomings and proposal of facility improvements needed for future water supply requirements. Based on the results of the report, recommendations will be made for improvements to the water supply, treatment and storage facilities that will meet the project 2018 system demands.

The current existing service area primarily consists of the Lakes of The Four Seasons residential community, which encompasses approximately 2.7 square miles of land in Lake and Porter counties in the state of Indiana. In addition to Lakes of the Four Seasons, the Twin Lakes water supply system also serves approximately 0.5 square miles of developed residential land. The Lakes of the Four Seasons community is surrounded by Winfield Township on the Lake County side (west) and Porter Township on the Porter County side (east). Based on information from Twin Lakes personnel the future expansion is likely to occur primarily in the unincorporated area in Porter Township. The existing and potential future service areas are shown graphically on Drawing A-1 of Appendix A.

Existing Water System Demands

Utilities Inc. provided water production information for Water Treatment Plant (WTP) Nos. 1 and 2 for the 2007 calendar year. This data included daily flows for each plant. This information was evaluated and the results are outlined in Table ES-1.

TABLE ES-1

Water Use (2007)	WTP No. 1	WTP No. 2	Total
Average Day (MGD)	0.51	0.21	0.72
Maximum Day (MGD)	0.91	0.45	1.36
Max/Avg Ratio	1.78	2.14	1.89
Peak Hour Demand (MGD)*	1.37	0.92	2.04
Total Flow (MG)	204	75	279



In combining this information with population data, it results in the following:

Average day usage per residential connection	223 gpd
Average day usage per capita	80 gpd
Maximum day usage per residential connection	422 gpd

The average day usage of 80 gpd per capita as indicated above is below typical values for similar systems to Twin Lakes which is normally 100 gpd. The maximum day to average day ratio of 1.89 is typical for this system.

Existing System Capacities

As described in Section 4 of the report, WTP No. 1 has a firm rated capacity of 664 gpm and WTP No. 2 has a firm rated capacity of 300 gpm, which equates to a total rated capacity of the supply system of 964 gpm or 1.388 MGD. Therefore the existing system can meet the current maximum day demand of 1.36 MGD as outlined above. This leaves approximately 28,000 gallons of available capacity above current maximum day demands.

The current storage, from the elevated (200,000 gallons) and ground (500,000 gallons) storage tanks, is sufficiently sized to provide additional water supply to meet peak hour flows on a maximum day. The two water treatment plants have capacity to replenish the water used from the tanks on a maximum day, but with minimal reserves.

Projected Service Population

The 2018 Twin Lakes Service Area Population estimate is obtained using the 2007 base population established in Section 5.03.04 and applying an annual growth rate of 1.75 percent. The 1.75 percent growth rate is applied in lieu of the 1.5 percent growth rate of the surrounding counties to attain a more conservative estimate. An annual 1.75 percent growth rate applied to the 2007 population gives a 2018 population estimate of 10,933 people in the Twin Lakes water system service area. This is an additional 1,900 people more than the estimated 2007 population.

Projected Water System Demands

Projected 2018 water system demands for the Twin Lakes Utility are developed using the water system demands as discussed in Section 3 of the report and applying these demands to the projected population growth for the planning period and are presented in Table ES-2.

**TABLE ES-2**

Water Use for the Year 2018	
Average Day (MGD)	1.093
Maximum Day (MGD)	2.077
Max/Avg Ratio	1.90
Peak Hour Demand (MGD)*	3.116

Proposed System Improvements and Estimates of Probable Costs

As outlined in Section 5.04 of the report, projected future water system average day demand for the planning period is 1.093 MGD (759 gpm). Using the 1.90 maximum day to average day ratio results in a projected maximum day demand of 2.077 MGD (1442 gpm) and the estimated peak hour flow demand is 2164 gpm.

The firm rated capacity of the two existing water treatment plants, as previously described is 1.388 MGD or 964 gpm. With a future projected demand of 1442 gpm there is a deficiency with the existing supply system of approximately 500 gpm of firm rated capacity. In order to meet this new demand, additional facilities will have to be constructed to provide an additional 500 gpm of capacity.

Proposed facilities to meet this projected water system demand will include additional water supply wells, treatment facility, elevated tank and distribution piping to connect the new facilities with the existing system. The proposed new facilities are outlined in the following Table ES-3.

TABLE ES-3

Proposed Improvement	Estimated of Probable Project Cost
Three 250 gpm Water Supply Wells	\$828,000
500 gpm Firm Rated Capacity Water Treatment Plant with Horizontal Pressure Filter	\$1,861,000
Elevated Storage Tank with a Capacity of 250,000 gallons	\$731,000
3,600 Lineal Feet of 12 inch Distribution Main	\$593,000



SECTION 2 – INTRODUCTION

2.01 Study Purpose and Scope

McDonough Associates Inc. was retained to prepare a facilities planning report to summarize the existing conditions and evaluate the water supply system needs for the next 10 years. Items included in the report are documentation and analysis of recent demand data, examination of existing facility conditions, estimate of future service area population, identification of existing shortcomings and proposal of facility improvements needed for future water supply requirements. Based on the results of the report, recommendations will be made for improvements to the water supply, treatment and storage facilities that will meet the project 2018 system demands.

2.02 Planning Area

The current existing service area primarily consists of the Lakes of The Four Seasons residential community, which encompasses approximately 2.7 square miles of land in Lake and Porter counties in the state of Indiana. In addition to Lakes of the Four Seasons, the Twin Lakes water supply system also serves approximately 0.5 square miles of developed residential land. The Lakes of the Four Seasons community is surrounded by Winfield Township on the Lake County side (west) and Porter Township on the Porter County side (east). Based on information from Twin Lakes personnel the future expansion is likely to occur primarily in the unincorporated area in Porter Township. The existing and potential future service areas, are shown graphically on Drawing A-1 of Appendix A.



SECTION 3 – EVALUATION OF EXISTING DEMAND

Utilities Inc. provided water production information for Water Treatment Plant (WTP) Nos. 1 and 2 for the 2007 calendar year. This data included daily flows for each plant. During our evaluation, it was noted the information for August 2007 was identical for both facilities. Based on further review, it was determined the information for WTP No. 2 was incorrect. This incorrect information was removed from the data base and not included in the analysis. The results of this evaluation are outlined in Table 3-1.

TABLE 3-1

Water Use (2007)	WTP No. 1	WTP No. 2	Total
Average Day (MGD)	0.51	0.21	0.72
Maximum Day (MGD)	0.91	0.45	1.36
Max/Avg Ratio	1.78	2.14	1.89
Peak Hour Demand (MGD)*	1.37	0.92	2.04
Total Flow (MG)	204	75	279

In combining this information with population data, it results in the following:

Average day usage per residential connection	223 gpd
Average day usage per capita	80 gpd
Maximum day usage per residential connection	422 gpd

The average day usage of 80 gpd per capita as indicated above is below typical values for similar systems to Twin Lakes which is normally 100 gpd. The maximum day to average day ratio of 1.89 is typical for this system.



SECTION 4 –CAPACITIES OF EXISTING SUPPLY AND TREATMENT SYSTEMS

4.01 Location of Facilities

The Twin Lakes Utilities Inc. operates water supply facilities at three locations in the Twin Lakes area. Water Treatment Plant No.1 is located just east of the waste water treatment plant on East 123rd Avenue on the south side of the road. Water Treatment Plant No. 2 is situated on the east side Randolph Street between 117th Street and 109th Avenue. An elevated storage tank, with a capacity of 200,000 gallons, is located north-northeast of the intersection of Sunnyslope and Lake Shore Drives.

4.02 Facility Descriptions

4.02.01 Water Treatment Plant No. 1

Water Treatment Plant No. 1 (WTP No. 1) utilizes two gravity filters for iron removal. Each filter has a rated capacity of 398 gpm at 3 gpm/ft² of filter area. The original filter has four cells while the new filter has three. With one cell out of service, the rated capacity of the WTP is 664 gpm. Five wells, with a firm rated capacity of 665 gpm, supply the plant with raw water. Once the water has been filtered, three high service pumps deliver finished water to the distribution system. A ground storage tank, with a capacity of 500,000 gallons, is located on the plant site and is filled from the distribution system piping via flow control valve. Two high service pumps deliver water to the distribution system from the ground storage tank.

4.02.02 Water Treatment Plant No. 2

Water Treatment Plant No. 2 (WTP No. 2) utilizes two pressure filters for iron removal. Each filter has a rated capacity of 300 gpm at 3 gpm/ft² of filter area. With one filter out of service, the rated capacity of the WTP is 300 gpm. Two wells, with a combined capacity of 400 gpm, supply the plant with raw water. Once the water has been filtered, two high service pumps deliver finished water to the distribution system.

4.02.03 Elevated Storage

An elevated storage tank, with a capacity of 200,000 gallons, is located in the northern portion of the distribution system. The tank has a base elevation of 792.68 feet NGVD and a height to overflow of 130 feet, resulting in a high water level of approximately 923 feet.

4.03 Treated Water Capacity of Existing System

As described above, WTP No. 1 has a firm rated capacity of 664 gpm and WTP No. 2 has a firm rated capacity of 300 gpm, which equates to a total rated capacity of the supply system of 964 gpm or 1.388 MGD. Therefore the existing system can meet the current maximum day demand



of 1.36 MGD as outlined in Section 3. This leaves approximately 28,000 gallons of available capacity above current maximum day demands.

The available storage, from the elevated and ground storage tanks, is sufficiently sized to provide additional water supply to meet peak hour flows on a maximum day. The two water treatment plants have capacity to replenish the water used from the tanks on a maximum day, but with minimal reserves.



SECTION 5 –POPULATION AND FUTURE DEMAND PROJECTIONS

5.01 Planning Period

As requested by Utilities Inc., a 10-year planning period for the Twin Lakes water system improvements is used for preparation of this report, making 2018 the design year for improvements.

5.02 Land Use

The current existing service area primarily consists of the Lakes of The Four Seasons residential community, which encompasses approximately 2.7 square miles of land in Lake and Porter counties in the state of Indiana. In addition to Lakes of the Four Seasons an approximate 0.5 square miles of additional developed residential land is also currently served by the Twin Lakes WWTP. The current planning area is outlined graphically on Drawing A-1 of Appendix A.

The Lakes of the Four Seasons is a well built-out established community, having experienced modest growth occurring in the last decade with similar expected growth over the next decade. Additional growth to the area will be limited to the already developed residential community and any additional residential housing developments that could potentially be added to the surrounding area. Given the current growth rate it is unlikely that any major development will have a large impact on the population growth of the service area beyond the most recent growth trends. Twin Lakes Utilities has provided an expected 10 square mile area of future expansion as show by Drawing A-1 of Appendix A. This area is representative of long-term growth of the service area and is not indicative of expected growth over the upcoming decade.

5.03 Demographic Projections

Demographic projections have been prepared using the most recent US Census Bureau data and growth rates as provided by Northeast Indian Regional Planning Commission. Recently built residences in newer developments were also used to estimate population.

5.03.01 Population Growth Rates

Growth rates used for population projections can be ascertained using the census population data from surrounding Winfield and Porter Townships.

Census estimates show that Porter Township experienced a growth rate of 9.2 percent from the year 2000 to the year 2006. This is equivalent of an average approximate growth rate of 1.5 percent annually.

Census estimates for Winfield Township show a population growth rate of 28.5 percent from the year 2000 to the year 2006. However, this data is skewed because of a high growth rate in the Town of Winfield that is not reflective of growth in the Twin Lakes Service area. Subtracting the population of the Town of Winfield from Winfield Township will provide an appropriate growth rate that can be used.



Winfield Township 2000 Population	6,878
Town of Winfield 2000 Population	<u>-2,298</u>
Difference	4,580
Winfield Township 2006 Population	8,836
Town of Winfield 2006 Population	<u>-3,809</u>
Difference	5,027

Using the difference in population we can calculate that the area of Winfield Township outside the Town of Winfield had a growth rate of 9.7 percent from the year 2000 to the year 2006. This is equivalent of an average approximate growth rate of 1.5 percent annually, the same as Porter Township.

5.03.02 Lakes of the Four Seasons Population

As of the 2000 census the Lakes of the Four Seasons Census Designated Place had a population of 7,291 people with 2,590 residences. This is the most current available data for the Lakes of the Four Seasons community. Based on this data the average residential density in the area is 2.8 people per household.

5.03.03 Other Service Area Population

In addition to the Lakes of the Four Seasons community there are other smaller residential developments that must be taken into consideration when estimating the Twin Lakes service area population. These developed areas include the Stony Run Estates and the Point, both of which are in Lake County. As of the year 2007 these communities have a combined 336 residential lots, which account for an estimated population of 941 people when applying the typical residential density for the area of 2.8 people per household.

Other developable land in the Twin Lakes service area will be accounted for using growth rates established in Section 5.03.01. This land was sparsely populated as of the 2006 census estimates and will be considered an undeveloped area of future growth potential.

5.03.04 2007 Population

The 2007 Population of Lakes of the Four Seasons is calculated using the 2000 census data with established growth rates of the surrounding townships. An annual 1.5 percent growth rate applied to the year 2000 population gives a 2007 population of 8,092 people in Lakes of the Four Seasons.

The 2007 Lakes of the Four Seasons population combined with the other service area population established in Section 5.03.03 will give us a total 2007 Twin Lakes water system service area population estimate of 9,033.



5.03.05 2018 Population

The 2018 Twin Lakes Service Area Population estimate is obtained using the 2007 base population established in Section 5.03.04 and applying an annual growth rate of 1.75 percent. The 1.75 percent growth rate is applied in lieu of the 1.5 percent growth rate of the surrounding counties to attain a more conservative estimate. An annual 1.75 percent growth rate applied to the 2007 population gives a 2018 population estimate of 10,933 people in the Twin Lakes water system service area. This is an additional 1,900 people more than the estimated 2007 population.

Population figures cited above rely on current growth rates calculated from recent census data and the current understanding that no major development will occur over the next decade. Apparently there are no plans for any major housing additions to area shown on Drawing A-1 of Appendix A. Should a major development occur within the 10-year planning period the population projections will have to be adjusted to accommodate the impact on existing population growth trends.

5.04 Projected Water System Demands for 2018

Projected water system demands for the Twin Lakes Utility are developed using the water system demands as discussed in Section 3 and applying these demands to the projected population growth for the planning period.

5.04.01 Average Day Demand

Future anticipated average day demand for the Twin Lakes water system for the year 2018 is calculated by combining existing daily average flow received by the WWTP with additional flow generated by future population.

Average day demand represents the total water produced during the year and equally dividing it by the number of days in the year. As outlined in Table 3-1, the average day demand for the year 2007 was 0.72 MGD or 500 gpm for 24 hours. Using an equivalent population density of 2.8 persons per household this equates to 80 gallons per capita day (gpcd). A value of 80 gpcd is below the normally acceptable regulatory value of 100 gpcg. For the purposes of this report for future planning, our recommendations will be based on 100 gpcd.

For the planning period of 2018 with a projected population of 10,933 and 100 gpcd the estimated average day demand is 1.093 MGD or 759 gpm for 24 hours.

5.04.02 Maximum Day Demand

Maximum day demand can be defined as the ratio between the maximum day production of treated water and the yearly average day usage. These values vary significantly, from a low of 1.4 to a high of 2.5, between water systems dependant on system size and customer base. This ratio is also impacted by climate conditions, higher in dry hot weather and lower during wet years when rainfall is plentiful.



As noted in Table 3-1, WTP No.1 ratio was 1.78 and WTP No. 2 was 2.14, with the combined being 1.89. A value of 1.90 is consistent with systems similar to Twin Lakes and will be used for the projections and planning of future improvements. With a projected Average day demand of 1.093 MGD (759 gpm) and a Maximum/Average Day ratio of 1.90, the maximum day demand is 2.077 MGD or 1442 gpm for 24 hours.

5.04.03 Peak Hour Demand

The provided data did not include information on peak hour flows. However, peak hour flows are usually supplied from storage. The present system has sufficient storage to meet current peak hour demands. For this report, a peak hour to maximum day demand ratio of 1.5 will be used. This will give a peak hour demand of 3.116 MGD or 2164 gpm for the duration of the peak.



SECTION 6 – EVALUATION OF FUTURE SUPPLY AND TREATMENT REQUIREMENTS

6.01 General

As outlined in Section 5.04, the projected future water system average day demands for the planning period is 1.093 MGD (759 gpm). Using the 1.90 maximum day to average day ratio results in a projected maximum day demand of 2.077 MGD (1442 gpm) and the estimated peak hour flow demand is 2164 gpm.

The firm rated capacity of the two existing water treatment plants, as described in Section 4, is 1.388 MGD or 964 gpm. With a future projected demand of 1442 gpm there is a deficiency with the existing supply system of approximately 500 gpm of firm rated capacity. In order to meet this new demand, additional facilities will have to be constructed to provide an additional 500 gpm of capacity.

6.02 Treatment and Supply Facilities

Three treatment system options were evaluated for this report. Two options are similar in scope to the current systems using filtration for iron removal. The third option evaluated the use of membrane technology for iron removal.

Each of these options included common elements such as firm rated capacity of the process units, functional building layout and expansion potential.

6.02.01 Vertical Pressure Filter Option

This option uses the same technology that is currently used at WTP No. 2. The proposed plant layout is shown on Drawing A-2, Appendix A. This layout incorporated four vertical pressure filters each with a diameter of 8' 6" and a filter area of 56.7 square feet. At a filtration rate of 3 gpm/ft², the treatment capacity of each filter will equal approximately 170 gpm. With one filter out of service, the firm rated capacity of this treatment plant will be 510 gpm. Room has been allotted for future expansion of one filter of the same capacity, which would bring the total rated capacity of this option to 680 gpm. Drawing A-3, Appendix A, outlines an example of the treatment plant as proposed with general design parameters.

The building housing these unit processes includes the typical facilities for treatment plants of this type and size and contains approximately 3784 square feet. It is anticipated clear ceiling height of 15 feet would be required.

Note, this is a typical layout for purposes of this report and may be modified to meet the client desires, either larger or smaller. This same basic floor plan is used for each of the options for comparison purposes.



6.02.02 Horizontal Pressure Filter Option

The horizontal pressure filter option, as shown in Drawing A-4, Appendix A, is similar to the previous option from a treatment process perspective. However the filter can be contained in one pressure vessel with a diameter of 10 feet and length of 23 feet. This vessel has four separate filter cells. This unit has a total filter area of 237 square feet divided into four cells of 59.4 square feet per cell. With one cell out of service, this unit process has a rated capacity of 534.6 gpm, at a filtration rated of 3 gpm/ft². Drawing A-5, Appendix A, outlines an example of the plant as proposed with general design parameters. Additional room was not allotted in this building floor plan for expansion, but future expansion can be accomplished with a building expansion, practically doubling the treatment capacity. The building proposed for this horizontal pressure filter option has approximately 3206 square feet with a clear ceiling height of 15 feet. For future expansion of an identical filter would require approximately 670 square feet of additional building space.

6.02.03 Membrane Filtration Option

Membrane filtration is a process that has been used in water works treatment many decades, mostly for desalination of salt waters. This type of process, most commonly know as reverse osmosis, utilizes special technologies and high pressures to literally remove contaminants by physical filtration down to the ionic level. However in the past ten years this unit process has been modified and improved with more modern manufacturing technology and is now being applied to all aspects of water treatment. Today there are four basic classifications of membrane technology being used in the water treatment field. These are microfiltration, ultrafiltration, nanofiltration and reverse osmosis. In general, each of these processes use the same technology of contaminate removal, but each differs in the size of contaminate removed and the trans-membrane pressure at which it is accomplished.

For iron removal, as would be required for this proposed water treatment, microfiltration or ultrafiltration technology would be utilized. The treatment process train would include: aeration, reaction tank with a 30 minute detention time, vacuum pumps, the membrane filters, finished water storage tank and high service pumping. A plan of this process is shown in Drawing A-6, Appendix A. Additionally, space will have to be provided for the cleaning systems to maintain the membranes and deal with the waste stream generated from these cleanings. Drawing A-7, Appendix A, outlines an example of the plant as proposed with general design parameters. Additional room was not allotted in this optional floor plan for expansion. The building proposed for this membrane filtration option has approximately 4180 square feet with a clear ceiling height of 15 feet.

6.02.04 Water Supply Wells

Regardless of the treatment option selected, supply wells with a firm rated capacity of 500 gpm will have to be provided. Firm rated capacity is defined as the capacity of the supply wells with the largest unit out of service. Obviously, an infinite number of options of well capacity and numbers of wells would meet this objective. However, for the



purposes of this study, it is assumed that each well will have a capacity of 250 gpm and therefore three wells will be required to meet the firm rated capacity requirement.

6.03 Storage

As discussed in Section 4, the system currently has two finished water storage tanks, one elevated with a capacity of 200,000 gallons and one ground tank with a capacity of 500,000 gallons. Once additional facilities are constructed to meet the projected maximum day demands, these two tanks will be used to provide water to meet the project peak hour demand.

Using a peak hour demand duration of three hours at a flow of 2164 gpm, approximately 130,000 gallons would be required to meet each of the peak demand periods. During the maximum day usage period, 130,000 gallons would be required from storage during the morning peak and again during the evening peak. Since the system would have sufficient capacity to replenish the tanks after each peak flow period, no additional storage is required for meeting water supply peak hour demands.

Currently, the average day demand is about 720,000 gallons. The current available storage does not provide sufficient volume for one day of average demand. As the average day demand increases, additional storage should be provided. Further, when the existing elevated tank requires maintenance, an additional elevated storage tank would provide the reliability needed for consistent system operation. The capacity of this new tank should be between 200,000 and 300,000 gallons. For purposes of this study, a new elevated tank with a capacity of 250,000 gallons is recommended.

6.04 Location

For purposes of this report, a proposed water treatment and storage facility location was selected east of the existing area to provide a central location in which to service the potential growth area. This location, as shown on Drawing A-8, in Appendix A, encompasses the requirements for meeting the future needs from a location perspective, but also provides a compatible elevation, 780 feet NGVD, for a future storage tank. It is proposed to connect these new facilities to the existing distribution system near WTP No. 1 with approximately 3600 feet of 12 inch water main.

Final site selection for the supply wells will have to take into account availability of adequate water supply. The wells should be located as close as practical to the treatment facilities to minimize operation expenses, but can be located separately to minimize capital expenditures for property. The same also applies to the elevated tank site. In order to minimize elevated tank costs, the ground elevation should be at a minimum of 780 feet NGVD. Sites at higher elevations will reduce costs while ones at lower elevations will increase costs.



For planning purposes, the following table outlines the property requirements:

TABLE 6-1

Facility Description	Area Required for Construction	Permanent Area
Water Treatment Plant	200 ft x 200 ft (0.92 Acres)	150 ft x 100 ft (0.35 Acres)
Water Supply Wells (each)	100 ft x 100 ft (0.23 Acres)	75 ft x 75 ft (0.13 Acres)
Elevated Storage Tank	200 ft x 200 ft (0.92 Acres)	100 ft x 100 ft (0.23 Acres)



SECTION 7 – OPINION OF PROBABLE COST

7.01 General

Since the Engineer has no control over the cost of labor, materials, or equipment, or over the Contractor's method of determining prices, or over competitive bidding, or market conditions, his opinion of Probable Project Cost or Construction Cost that are provided herein are made on the basis of his experience and qualifications and represent his best judgment as a design professional familiar with the construction industry, but the Engineer cannot and does not guarantee that the proposals, bids or the construction cost will vary from the opinion of probable cost prepared by him. If the client wishes greater assurance as to the construction cost, he shall employ an independent cost estimator.

The following opinions of probable costs are presented for comparison purposes of the various options as outlined in the preceding sections of this report. The cost estimations are based on current cost of similar projects, budgetary estimates as provided by equipment suppliers and industry standards. These costs are referenced to the current ENR index of 8094 for February 2008.

7.02 Water Supply Wells

250 gpm Capacity Well, 150 feet depth	\$175,000
Property	\$25,000
Total Construction Cost per Well	\$200,000
Total Construction Cost for Three Wells	\$600,000
Construction Contingency	\$120,000
Design Engineering Cost	\$108,000
Total Project Cost for Supply Wells	\$828,000



7.03 Water Treatment Plant Options

7.03.01 Vertical Pressure Filters

Equipment	\$360,000
Property	\$50,000
Building	\$1,135,000
Total Construction Cost	\$1,545,000
Construction Contingency	\$309,000
Design Engineering Cost	\$222,000
Total Project Cost	2,075,000

7.03.02 Horizontal Pressure Filters

Equipment	\$372,000
Property	\$50,000
Building	\$963,000
Total Construction Cost	\$1,385,000
Construction Contingency	\$277,000
Design Engineering Cost	\$199,000
Total Project Cost	\$1,861,000



7.03.03	<u>Membrane Filtration</u>	
	Equipment	\$1,000,000
	Property	\$50,000
	Building	\$1,254,000
	Total Construction Cost	\$2,304,000
	Construction Contingency	\$461,000
	Design Engineering Cost	\$332,000
	Total Project Cost	\$3,097,000
7.04	<u>Elevated Tank – 250,000 gallons</u>	
	Elevated Tank with Foundation & Piping	\$500,000
	Property \$30,000	
	Total Construction Cost	\$530,000
	Construction Contingency	\$106,000
	Design Engineering Cost	\$95,000
	Total Project Cost	\$731,000
7.05	<u>Finished Water Pipeline 3600 feet of 12"</u>	
	Total Construction Cost	\$432,000
	Construction Contingency	\$86,000
	Design Engineering Cost	\$75,000
	Total Project Cost	\$593,000
	(12" Pipe unit cost \$120 per foot)	



7.06 Water Treatment Plant Recommendation

All of the three proposed unit process options for the water treatment will produce a finished water quality equal to or better than the current systems. From a technical perspective, there is not any compelling reason to recommend any one of the proposed systems over another. However from a cost stand point, it is recommended the horizontal pressure filter alternative be considered for the new Water Treatment Plant No. 3.



APPENDIX A

FIGURES



LEGEND

EXISTING TWIN LAKES WATER
SUPPLY SERVICE AREA

POTENTIAL EXPANSION AREA

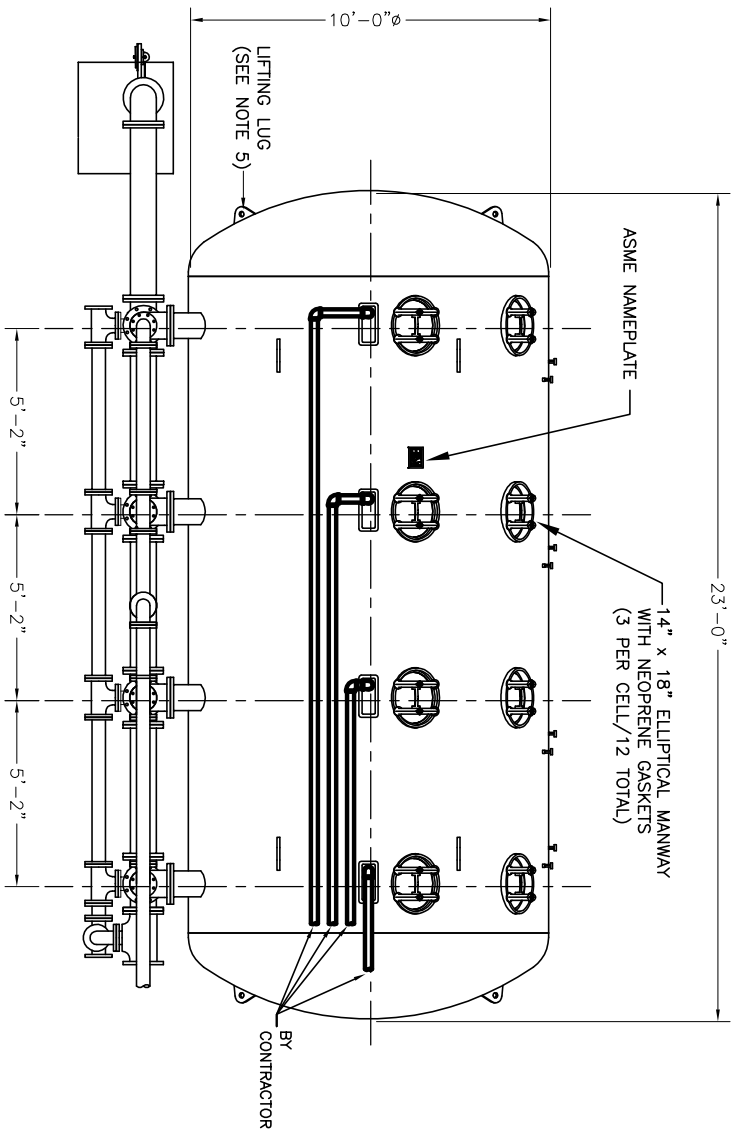
POTENTIAL FUTURE WTP #3
AND ELEVATED WATER
TOWER LOCATION

[illegible]



MAI JOB NO.
2007-0004

[illegible]



SPECIFICATIONS:

NUMBER OF FILTERS
(1) ONE

NUMBER OF CELLS:
(4) FOUR CELLS

FILTRATION AREA:
237 SQ. FT. (59.4 SQ. FT./CELL)

FILTRATION RATE:
850 GPM (3.6 GPM/SQ. FT.)

BACKWASH RATE (WATER ONLY):
65.4 GPM/CELL (8-10 GPM/SQ. FT./CELL)
(APPROXIMATE - ACTUAL GPM TO BE DETERMINED
IN THE FIELD DURING START-UP)

SIMULWASH RATE:
WATER - 297GPM (5 GPM/SQ.FT./CELL)
AIR - 179CFM/CELL @ 5PSI (3 CFM/SQ. FT.)

ESTIMATED SHIPPING WEIGHT (TANK ONLY):
30,000 LBS

MEDIA AND GRAVELS SPECIFICATIONS:

SUPPORT GRAVELS:	GRADED GRAVEL
4-2" X 3/4" X 1/2"	GRADED GRAVEL
4-1 1/2" X 1 1/4" X 3/8"	GRADED GRAVEL
4-1 1/4" X 1 1/8" X 3/16"	GRADED GRAVEL
3- 0.8 - 1.2 MM TORPEDO SAND	

FILTER MEDIA:
50" TONKA IMAR

CONSTRUCTION:
10'-0" DIA. x 23'-0" OVERALL LENGTH
WORKING PRESSURE - 65 PSIG
HYDROSTATIC TEST - 845 PSIG
BUILT TO ASME CODE AND STAMPED ACCORDINGLY

UNDERDRAIN:
TONKA STANDARD 3/8" STEEL FALSE BOTTOM UNDERDRAIN WITH TONKA UNDERDRAIN NOZZLES ON 12 CENTERS

AIRWASH:
HEADER/LATERAL AIRWASH DISTRIBUTOR, SCH 80 PVC WITH ORIFICES ON 6" CENTERS, STRUCTURALLY SUPPORTED FROM SIDEWALL OF FILTER

SIMUL-WASH TROUGHS:
TYPE 304 STAINLESS STEEL

PIPING:
EXTERIOR FACE PIPING CLASS 53 DUCTILE IRON CEMENT LINED AND PRIME PAINTED. PROVIDED WITH GRADE 5 ZINC PLATED FASTENERS

AIR WASHPIPING CLASS 53 DUCTILE IRON UNLIMITED AND PRIME PAINTED
PROVIDED WITH GRADE 5 ZINC PLATED FASTENERS

FACEPIPING:
SCHEDULE 40 STEEL, CLASS 53 DUCTILE IRON

FLANGES:
150 LBS. SLIP ON FLANGE - BOLT HOLES WELDED ON SLIP CENTERS

COUPLINGS:
3000 LB. NPT STEEL

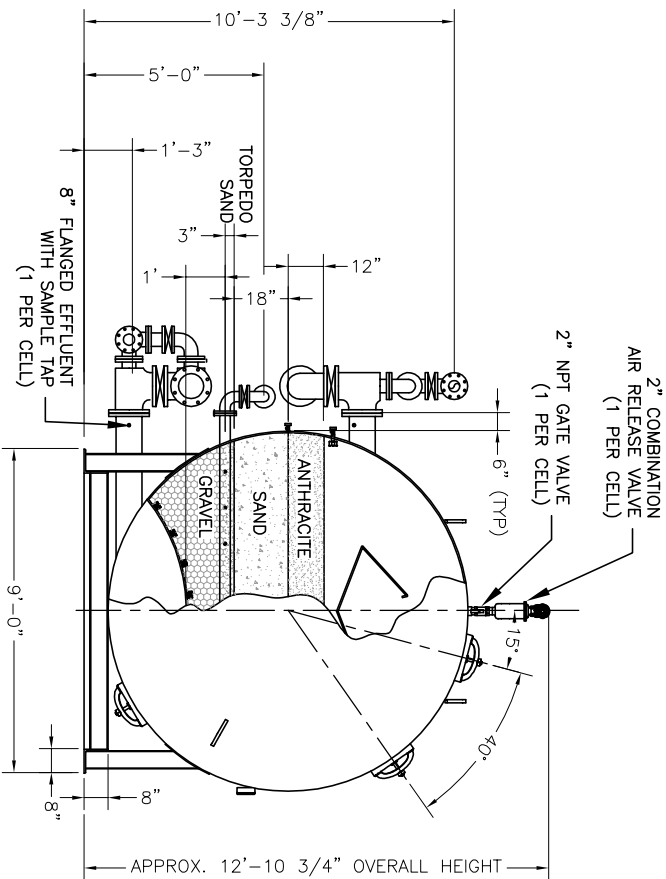
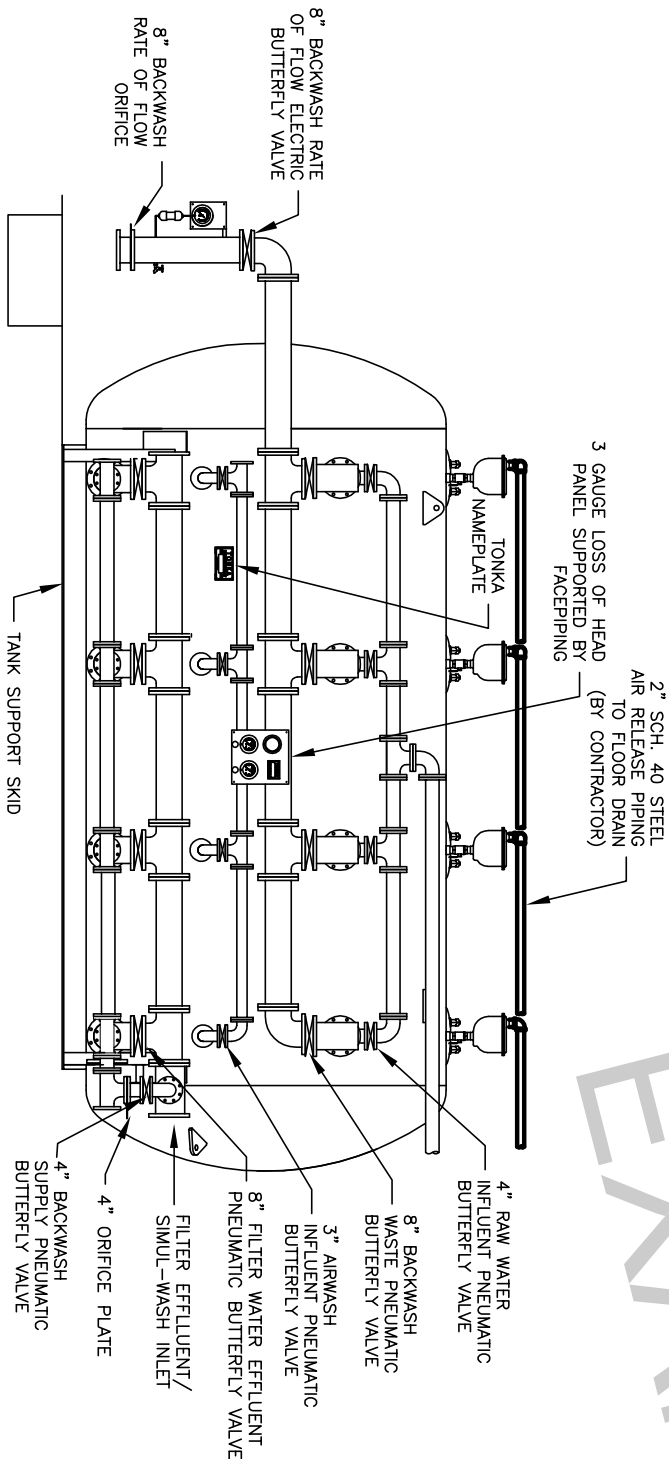
INTERNAL FASTENERS:
STAINLESS STEEL

CELL PARTITION:
ISOLATED CELL DESIGN CAPABLE OF WITHSTANDING SYSTEM PRESSURE ON ONE SIDE AND ATMOSPHERIC ON THE OPPOSITE

NOTES:

- (1) ALL DIMENSIONS ARE SUBJECT TO NORMAL CONSTRUCTION TOLERANCES.
- (2) PIPING MUST BE PROVIDED WITH ADEQUATE SUPPORTS TO PREVENT UNDESIRABLE STRESSES AND DAMAGE TO VESSEL. PIPE SUPPORTS BY OTHERS.
- (3) TONKA EQUIPMENT COMPANY IS PROVIDING THE HEREIN DESCRIBED EQUIPMENT WITH SOME SURFACES RECEIVING SURFACE PREPARATION AND PRIME PAINT COAT ONLY BEFORE APPLICATION OF THE FINISH COAT. THE FINISHED SURFACE MUST BE PROPERLY CLEANED AND PREPARED. THE FINISH COAT MUST BE APPLIED WITHIN SIXTY (60) DAYS OF APPLICATION OF THE PRIMER COAT OR SPECIAL SURFACE PREPARATION PROCEDURES MUST BE FOLLOWED. TONKA EQUIPMENT COMPANY WILL NOT WARRANT THE SURFACE PREPARATION OR THE PRIME COAT IF PRODUCTS OF ANY MANUFACTURER OTHER THAN THAT OF THE PRIME COAT ARE USED OR IF THE ABOVE NAMED PAINT MANUFACTURER'S RECOMMENDATIONS ARE NOT FOLLOWED DURING THE APPLICATION OF THE FINISH COATS.
- (4) 2" AIR RELEASE PIPING IS BY OTHERS.
- (5) SUITABLE LIFTING LUGS WILL BE SUPPLIED.
- (6) CONTRACTOR TO SUPPLY FIELD DIMENSIONS FOR SPOOL. PIECES SUPPLIED BY TONKA. ALLOW APPROX. THREE (3) WEEKS TO FABRICATE AND SHIP SPOOLS.
- (7) INSTALLATION, GROUT, AND CONCRETE ARE BY OTHERS.
- (8) FACEPIPING SHOWN IS BY TONKA.

EXTERIOR - COATED WITH TNEMEC #66-1255 PRIMER TO A DRY FILM THICKNESS OF 3.0-5.0 MILS, BEFORE ANY RUST CAN FORM, FINISH COAT BY OTHERS



HORIZONTAL PRESSURE FILTER PLAN VIEW

SCALE: NOT TO SCALE

FRONT ELEVATION

SCALE: NOT TO SCALE

3 RIGHT SIDE ELEVATION

SCALE: NOT TO SCALE

[illegible]

[illegible]

Technical drawing of a mechanical assembly, likely a pump or engine, showing a side view. The drawing includes the following dimensions and callouts:

- Overall width: 94.0
- Overall height: 91.9
- Top flange diameter: 1.1
- Mounting holes: (6X) Ø0.9 FLOOR MOUNTING HOLES
- Connector: 480V IN. LB CONNECTOR & ORIENTATION BY OTHERS
- Bottom flange diameter: 32.7
- SEE NOTE #
- Bottom flange thickness: 40.8


Technical drawing of a Siemens 3000 series gas engine generator set. The drawing includes a side view with dimensions and a cutaway view of the engine and generator components.

Dimensions shown:

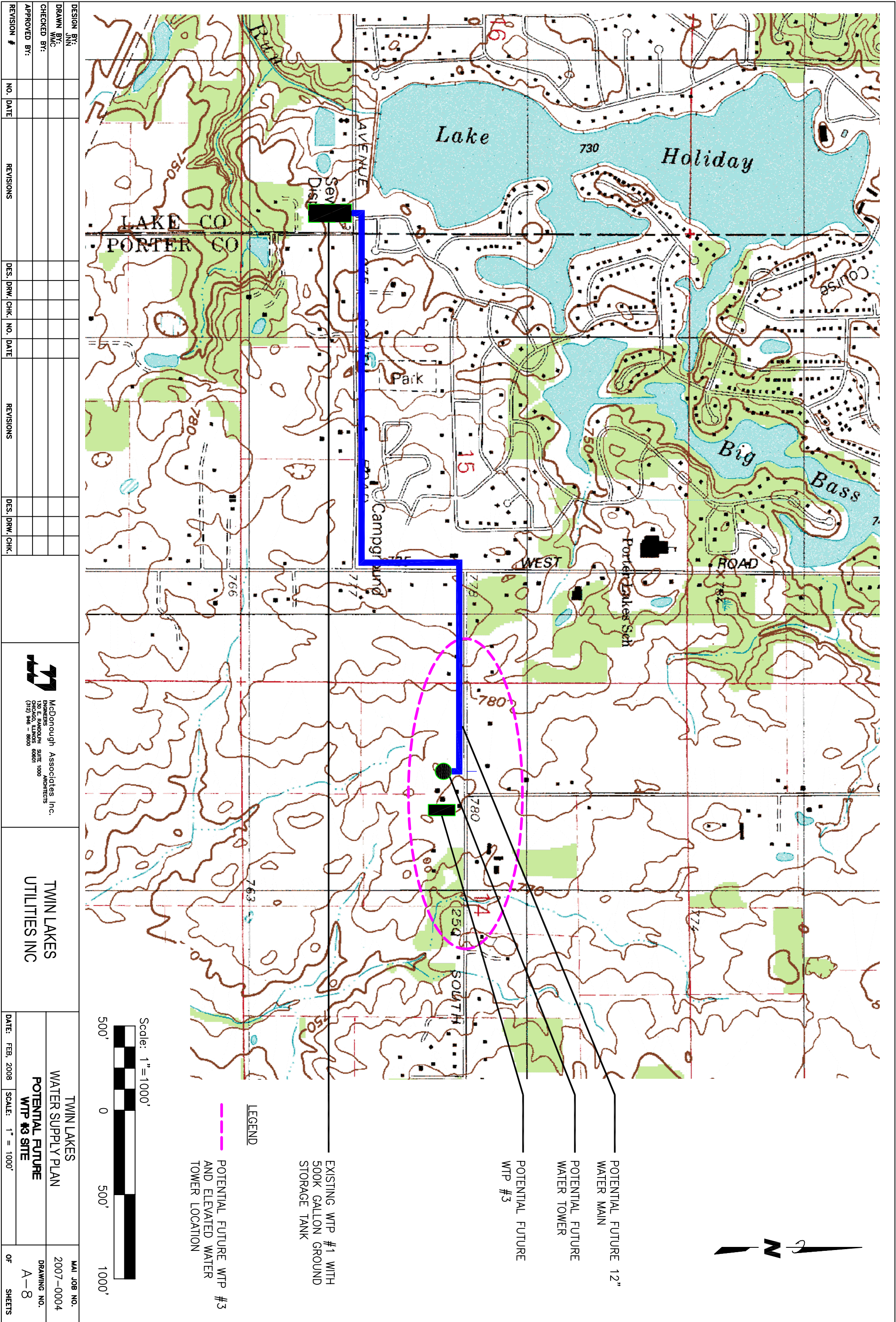
- Overall width: 100.0
- Overall height: 40.4

Labels and components:

- SEE NOTE #1
- Siemens logo and text: "SIEMENS", "3000 series", "Generator set", "Model 3000-1000", "1000 kVA", "1000 kW", "1000 kVA", "1000 kW", "1000 kVA", "1000 kW"
- Generator set components: alternator, exciter, control panel, and cooling system.
- Engine components: cylinder block, crankshaft, and cooling system.



McDonough Associates Inc.
ENGINEERS ARCHITECTS
130 E. RANDOLPH SUITE 1000
CHICAGO, ILLINOIS 60601
(312) 946 - 9800





APPENDIX B

EXISTING WATER USAGE DATA

WTP NO. 1 DAILY FLOW DATA		Month											
No.	Dec-06 MGD	Jan-07 MGD	Feb-07 MGD	Mar-07 MGD	Apr-07 MGD	May-07 MGD	Jun-07 MGD	Jul-07 MGD	Aug-07 MGD	Sep-07 MGD	Oct-07 MGD	Nov-07 MGD	Dec-07 MGD
1	0.58	0.55	0.48	0.50	0.57	0.48	0.51	0.85	0.91	0.76	0.42	0.46	0.42
2	0.54	0.51	0.43	0.48	0.45	0.31	0.74	0.52	0.72	0.36	0.47	0.44	0.55
3	0.62	0.54	0.51	0.50	0.42	0.49	0.81	0.60	0.43	0.76	0.44	0.47	0.42
4	0.47	0.49	0.71	0.57	0.40	0.31	0.47	0.67	0.53	0.61	0.47	0.38	0.45
5	0.50	0.42	0.54	0.50	0.39	0.54	0.46	0.67	0.54	0.47	0.47	0.40	0.31
6	0.61	0.50	0.56	0.44	0.40	0.67	0.43	0.54	0.35	0.57	0.50	0.43	0.35
7	0.57	0.68	0.56	0.40	0.52	0.62	0.54	0.78	0.37	0.28	0.74	0.43	0.28
8	0.38	0.43	0.59	0.36	0.46	0.58	0.49	0.87	0.39	0.50	0.56	0.35	0.41
9	0.60	0.51	0.48	0.61	0.45	0.48	0.66	0.71	0.34	0.65	0.42	0.40	0.50
10	0.74	0.45	0.65	0.61	0.46	0.58	0.84	0.66	0.38	0.44	0.50	0.50	0.31
11	0.54	0.41	0.71	0.27	0.47	0.39	0.74	0.57	0.55	0.59	0.40	0.62	0.40
12	0.64	0.38	0.58	0.49	0.42	0.46	0.76	0.56	0.50	0.57	0.55	0.44	0.32
13	0.66	0.50	0.67	0.49	0.33	0.68	0.68	0.71	0.39	0.53	0.51	0.41	0.35
14	0.65	0.72	0.57	0.41	0.43	0.51	0.82	0.85	0.42	0.35	0.64	0.45	0.30
15	0.61	0.47	0.58	0.59	0.61	0.41	0.74	0.84	0.40	0.60	0.49	0.43	0.57
16	0.68	0.46	0.58	0.38	0.69	0.48	0.57	0.57	0.62	0.58	0.34	0.40	0.33
17	0.91	0.45	0.58	0.47	0.40	0.26	0.63	0.45	0.24	0.49	0.48	0.42	0.40
18	0.65	0.45	0.66	0.64	0.49	0.53	0.44	0.49	0.48	0.62	0.55	0.60	0.32
19	0.68	0.45	0.66	0.45	0.46	0.51	0.57	0.31	0.67	0.64	0.08	0.44	0.39
20	0.77	0.54	0.57	0.29	0.30	0.51	0.50	0.34	0.39	0.59	0.86	0.48	0.34
21	0.78	0.57	0.58	0.30	0.45	0.68	0.57	0.43	0.43	0.62	0.61	0.36	0.33
22	0.60	0.49	0.58	0.75	0.67	0.73	0.50	0.77	0.43	0.71	0.41	0.58	0.49
23	0.84	0.48	0.58	0.47	0.42	0.55	0.40	0.58	0.45	0.93	0.43	0.50	0.45
24	0.53	0.41	0.58	0.44	0.38	0.66	0.51	0.55	0.38	0.51	0.47	0.52	0.44
25	0.52	0.47	0.58	0.65	0.29	0.33	0.44	0.39	0.57	0.63	0.39	0.63	0.53
26	0.63	0.43	0.57	0.45	0.57	0.61	0.66	0.39	0.49	0.38	0.41	0.46	0.42
27	0.52	0.50	0.53	0.54	0.29	0.50	0.47	0.33	0.46	0.52	0.53	0.45	0.48
28	0.59	0.71	0.48	0.39	0.42	0.57	0.53	0.48	0.45	0.46	0.56	0.44	0.48
29	0.43	0.45		0.44	0.56	0.60	0.53	0.60	0.45	0.67	0.39	0.45	0.39
30	0.53	0.50		0.39	0.49	0.64	0.50	0.63	0.39	0.77	0.46	0.44	0.61
31	0.51	0.44		0.37		0.50		0.51	0.43		0.33		0.51
Days	31	31	28	31	30	31	30	31	31	30	31	30	31
Total Flow, MG	18.9	15.3	16.2	14.6	13.7	16.1	17.5	18.2	14.5	17.2	14.9	13.8	12.8
Monthly Ave Flow, MGD	0.61	0.50	0.58	0.47	0.46	0.52	0.58	0.59	0.47	0.57	0.48	0.46	0.41
Daily Max Flow, MGD	0.91	0.72	0.71	0.75	0.69	0.73	0.82	0.87	0.91	0.77	0.86	0.63	0.61
Daily Min Flow, MGD	0.38	0.38	0.43	0.27	0.29	0.26	0.40	0.31	0.24	0.28	0.08	0.35	0.28
TOTALS													
Flow, MG	204												
Daily Average Flow, MGD	0.51												
Max Day Flow, MGD	0.91												
Min Day Flow, MGD	0.08												



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

CUII Response to IURC DE #4

Attachment to IURC 4-27

Page 37 of 98 INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities PTE# 1 PWSID Number 5245046

For the Month of December, 2006 IDEM Field Rep. P. Mahoney

Signed Chh R. Chahal Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									3.11	0.00				1.11
2									2.71	0.02				0.94
3									2.66	0.04				0.87
4									2.65	0.04				0.80
5									2.64	0.04				0.86
6									2.67	0.03				0.96
7									2.72	0.01				0.93
8									2.74	0.02				0.97
9									2.76	0.06				0.96
10									2.71	0.06				1.09
11									2.60	0.03				0.99
12									2.68	0.03				1.10
13									2.63	0.00				0.88
14									2.71	0.00				0.85
15									2.55	0.02				0.87
16									2.66	0.00				0.82
17									2.66	0.00				0.95
18									2.76	0.04				0.84
19									2.59	0.04				0.88
20									2.82	0.01				0.91
21									2.79	0.04				0.84
22									2.61	0.00				0.87
23									2.81	0.05				0.89
24									2.78	0.05				0.89
25									2.70	0.14				1.10
26									2.78	0.01				1.00
27									2.80	0.01				0.99
28									2.83	0.09				0.90
29									2.80	0.00				0.95
30									2.73	0.01				1.07
31									2.73	0.04				1.06

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap	D. S.		
												Free	Total	Free	Total
1	578						7	4.3		21	19.8	1.12	1.21	0.65	0.70
2	543						8	4.0		19		0.76	0.82	0.57	0.77
3	623						4	4.5		21		0.95	0.95	0.58	0.85
4	471						8	3.7		17	19.8	1.34	1.36	0.66	0.74
5	499						8	3.5		17	18.2	0.76	0.80	0.62	0.84
6	614						8	4.0		20		0.96	1.02	0.77	0.89
7	572						10	4.0		15	14.9	0.87	0.93	0.80	0.92
8	383						9	2.5		14	14.9	0.74	0.85	1.02	1.14
9	600						6	4.3		20		1.16	1.23	0.91	0.96
10	736						8	5.0		24		1.12	1.22	0.84	0.92
11	540						6	4.0		19	14.9	1.04	1.08	0.70	0.82
12	639						7	4.8		21	14.9	1.00	1.13	0.64	0.73
13	664						7	4.3		24		0.70	0.75	0.74	0.83
14	650						7	4.3		19	29.7	0.76	0.85	1.07	1.12
15	609						7	3.7		20	16.5	0.87	0.97	0.78	0.90
16	681						8	4.3		20		0.80	0.77	0.57	1.44
17	911						6	5.5		24		1.05	1.13	0.64	0.94
18	650						6	4.0		19	16.5	0.81	0.83	0.53	0.63
19	683						5	3.5		19	21.5	0.77	0.81	0.58	0.79
20	769						5	4.5		22	23.1	1.07	1.19	0.65	0.64
21	780						6	4.8		23	16.5	0.97	1.01	0.77	0.72
22	599						4	3.5		18		1.05	1.15	0.85	0.91
23	838						6	4.8		24		1.05	1.15	0.53	0.61
24	531						4	3.3		16		0.97	1.13	0.41	0.62
25	523						4	3.5		17	39.6	1.11	1.13	0.44	0.61
26	634						5	4.0		20	21.4	1.09	1.12	0.74	0.82
27	522						4	3.8		17		0.93	1.22	0.55	0.70
28	594						5	3.8		20	24.7	1.16	1.22	0.47	0.75
29	434						3	2.8		14	13.2	1.26	1.29	0.60	0.63
30	525						4	3.8		18		0.89	1.05	0.45	1.13
31	509						4	3.3		16		1.06	1.10	0.25	1.05

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015

Call Response to IURC DE #4
Machine to IURC 4-27
Page 38 of 92

18,915,000
911,000
383,000
610,500

Quil Residuals to IURC DE #4
 Attached to IURC 4-27
 18,925,000
 911,000
 383,000
 610,500

Mail To:
 Department of Environmental Management
 Drinking Water Branch 66-34
 160 N. Senate Ave.
 P. O. Box 6015
 Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WPI PWSID Number 5245046

For the Month of January 2007 IDEM Field Rep. Paul Mahoney

Signed Chad L. Clift Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.70	0.00				0.89	
2									2.82	0.02				0.92	
3									2.93	0.02				1.07	
4									2.90	0.03				1.10	
5									2.82	0.02				1.04	
6									2.75	0.00				1.00	
7									2.73	0.00				0.93	
8									2.13	0.00				1.13	
9									2.80	0.02				1.10	
10									2.75	0.00				1.16	
11									2.60	0.01				1.27	
12									2.72	0.01				1.01	
13									2.79	0.05				1.11	
14									2.79	0.03				1.03	
15									2.71	0.01				0.92	
16									2.77	0.01				0.92	
17									2.80	0.00				0.98	
18									2.75	0.01				0.89	
19									2.78	0.05				0.86	
20									2.75	0.05				0.90	
21									2.75	0.05				0.95	
22									2.60	0.07				1.15	
23									2.48	0.00				1.22	
24									2.79	0.01				1.18	
25									2.77	0.01				1.07	
26									2.92	0.01				0.98	
27									2.77	0.05				0.89	
28									2.90	0.03				0.83	
29									2.79	0.00				1.02	
30									2.83	0.04				0.96	
31									2.99	0.03				0.91	

* All parameters are to be expressed in mg/l except pH and turbidity

DEL BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds							Filters			Chlorine Residual				Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D.S.		
												Free	Total	Free	Total	
1	552						3.6	3.5		18	36.3	0.96	0.99	0.49	0.54	Total BW Gal = 408,700 2.7%
2	510						3.8	3.5		17	21.8	0.72	0.76	0.34	0.52	
3	537						4.0	4.0		20		0.97	1.01	0.40	0.55	
4	490						3.9	3.5		17	23.1	0.96	1.07	0.74	0.86	
5	421						3.0	2.3		15	24.8	0.99	1.09	0.42	0.52	
6	503						4.2	3.5		17		1.01	1.06	0.83	0.93	
7	678						5.0	4.5		23		0.93	1.01	0.89	0.96	
8	433						3.3	3.3		15	23.8	0.55	0.99	0.55	0.72	
9	512						4.2	3.5		18	24.8	0.78	0.79	0.89	1.15	
10	447						3.5	3.3		17		0.84	1.03	0.49	0.60	
11	413						3.3	2.8		14	26.4	1.01	1.10	0.46	0.61	
12	381						2.9	2.5		13	19.8	1.18	1.19	0.84	0.96	
13	501						5.5	3.8		18		1.06	1.11	0.57	0.64	
14	722						7.0	5.0		23		1.03	1.09	0.64	0.73	
15	474						4.2	3.3		17	24.7	1.08	1.15	0.79	0.89	
16	459						3.9	3.5		16	19.8	1.13	1.19	0.77	0.95	
17	449						3.8	3.5		16		1.19	1.21	0.79	0.91	
18	447						3.9	3.0		16		1.01	1.04	0.75	0.94	
19	453						3.7	3.5		16	34.7	1.18	1.19	0.62	0.68	
20	538						5.4	3.8		19	14.8	1.01	1.07	0.65	0.74	
21	567						5.8	3.0		19		1.32	1.35	0.71	0.98	
22	486						4.6	3.8		17		1.14	1.19	0.77	0.85	
23	476						4.3	3.3		17	23.1	1.33	1.39	0.67	0.78	
24	405						3.7	2.8		14	23.1	1.33	1.41	0.76	0.88	
25	472						4.5	4.8		17	14.9	1.21	1.37	0.62	0.70	
26	432						4.7	3.3		15	9.9	1.16	1.23	0.66	0.77	
27	496						4.7	3.5		19		1.43	1.52	0.77	0.84	
28	708						7.9	5.0		23		1.38	1.45	0.79	0.87	
29	450						4.7	3.3		16	24.7	1.31	1.33	0.58	0.71	
30	497						5.2	3.5		17	18.2	1.39	1.41	0.73	0.81	
31	437						4.5	3.3		16		1.23	1.26	0.93	1.13	

CUIL Response to IURC DE #4

Attachment to IURC 4-27

Page 28 of 38

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P.O. Box 6015
Indianapolis, IN 46206-6015

Total BW Gal
= 408,700
2.7%

Monthly Water Treatment

Total Gallons 15,349,05
Max. Day 722,80
Min. Day 381,00
Avg. Daily 495,137

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015

Date	Water Treated	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Free	Total	Free		Total
1	479						4.9	3.5		17	23.1	1.27	1.32	0.72	0.82	
2	434						4.4	3.0		15	19.8	1.53	1.87	0.97	1.17	
3	512						5.2	3.5		18		1.36	1.44	0.60	0.84	
4	710						7.5	5.0		23		1.25	1.36	0.83	1.08	Total Backwash Gal.
5	536						5.5	3.5		19	23.1	1.31	1.36	0.72	0.93	=362,900
6	559						6.0	4.0		18	24.8	1.19	1.24	1.02	1.12	2.2%
7	555						5.9	3.75		19		1.32	1.40	0.45	0.68	
8	591						5.6	3.75		19	23.1	1.29	1.36	0.45	0.68	*Daily Average
9	483						5.9	3.5		16	19.8	1.36	1.45	0.74	1.24	
10	650						6.7	4.25		21		1.20	1.28	0.92	1.05	
11	710						7.3	4.75		23		0.99	1.10	1.21	1.41	
12	584						6.3	4.0		20	26.4	1.42	1.52	1.19	1.60	
13	674						6.6	4.5		22	19.8	1.28	1.40	1.08	1.17	
14	565						6.4	4.0		19		1.32	1.37	0.92	1.07	
15	*580						7.0	4.75		23	24.7	1.47	1.50	0.96	1.04	
16	*580						3.4	3.25		17	19.8	0.75	0.78	1.13	1.27	
17	580						4.5	4.0		19		0.74	0.83	0.50	0.60	
18	664						5.6	4.5		21		0.88	0.96	0.52	0.63	
19	664						5.3	4.5		22	21.4	0.94	0.97	0.83	0.91	
20	572						4.1	4.0		18	14.9	1.00	1.24	0.64	0.80	
21	581						4.0	4.0		21		0.84	0.92	0.99	1.29	Monthly Water Treatment
22	551						4.0	3.75		19	23.1	0.65	0.73	0.61	1.08	Total Gallons 16,237,180
23	*580						*5.3	*3.91		*19	19.8	0.93	0.95	1.15	1.27	Max. Day 710,000
24	*580						*5.3	*3.91		*19		1.34		0.57	1.27	Min. Day 434,000
25	*580						*5.3	*3.91		*19		1.38		1.03	1.10	Avg. Daily 580,000
26	571						5.5	3.5		19	21.4	1.11	1.32	1.10	1.33	
27	532						4.9	3.75		18	37.9	0.93	1.20	0.62	0.74	
28	484						4.5	3.25		17		1.24	1.30	0.50	0.79	
29																Mail to: Indiana Department of Environmental Management
30																Drinking Water Branch, MC 66-34
31																100 North Senate Avenue Indianapolis, IN 46204-2251

Monthly Water Treatment
Total Gallons 16,237,180
Max. Day 710,000
Min. Day 434,000
Avg. Daily 580,000

Mail to:
Indiana Department of
Environmental Management
Drinking Water Branch, MC 66-34
100 North Senate Avenue
Indianapolis, IN 46204-2251



MONTHLY REPORT OF OPERATION OF WATER TREATMENT PLANT

State Form 34609 (R7 / 9-06)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities Water Plant #1 5245046 PWSID Number 5245046

For the Month of March 2007 IDEM Field Rep Paul Mahoney

Signed _____ Title Operator

I certify, *under penalty of law*, by this signature that this document was prepared by me, or under my direction, and the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.80	0.02				1.18	
2									2.80	0.02				0.97	
3									2.76	0.03				0.80	
4									2.87	0.05				0.93	
5									2.80	0.02				1.18	
6									2.76	0.02				1.15	
7									2.79	0.01				1.20	
8									2.78	0.02				1.14	
9									2.77	0.03				1.04	
10															
11									2.71	0.04				1.15	
12									2.78	0.02				1.11	
13									2.77	0.02				1.10	
14									2.75	0.04				1.15	
15									2.77	0.03				1.16	
16									2.80	0.09				1.03	
17									2.75	0.07				1.03	
18									2.56	0.05					
19									2.79	0.02				1.17	
20									2.47	0.03				1.19	
21									2.62	0.02				1.15	
22									2.56	0.01				1.20	
23									2.66	0.02				0.94	
24									2.75	0.00				0.94	
25									2.73	0.05				0.86	
26									2.81	0.04				1.06	
27									2.90	0.07				1.11	
28									2.67	0.00				1.12	
29									2.80	0.03				0.89	
30									2.73	0.01				1.03	
31									2.82	0.04				0.86	

* All parameters are to be expressed in mg/l except pH and turbidity
DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Free	Total	Free		Total
1	501						4.2	3.3		17	19.8	0.97	1.21	0.84	1.03	
2	479						4.0	3.3		16	19.8	0.81	0.86	0.90	1.15	
3	500						4.5	3.8		17		1.14	1.22	0.59	0.84	
4	570						5.4	4.0		17		1.28	1.31	1.06	1.26	
5	501						4.2	3.8		19	24.8	0.90	0.98	1.08	1.32	Total Backwash Gallons = 412,300
6	449						3.9	3.5		17	24.8	1.06	1.13	0.81	0.82	
7	396						3.3	3.0		15	21.5	0.82	0.85	0.86	1.06	2.8%
8	359						3.7	2.8		14	23.1	0.89	0.94	0.60	1.14	
9	611						5.9	4.6				1.11	1.16	0.66	0.76	
10	610						5.9	4.6				1.10		0.60	0.72	
11	269						2.8	1.8		9		1.24	1.29	0.65	0.70	
12	497						4.7	4.0		18	21.4	1.17	1.20	0.69	1.09	
13	492						4.4	3.8		17	24.7	1.00	1.05	0.90	1.11	
14	409						3.6	3.0		14		0.99	1.08	0.86	1.00	
15	592						3.9	3.3		15	23.1	0.96	1.13	0.69	0.72	
16	376						3.3	3.0		13	19.8	1.06	1.14	0.79	1.07	
17	465						4.2	3.5		17		1.01	1.11	0.95	1.23	
18	644						3.9	4.8		22		1.08	1.15	1.20	1.35	
19	449						4.1	3.5		16	24.7	1.10	1.18	1.06	1.25	
20	286						2.5	2.3		10	16.5	0.88	0.94	0.90	1.17	
21	300						2.6	2.5		10	24.7	1.15	1.20	1.04	1.12	Monthly Water Treatment Total Gallons 14,479,720 Max. Day 750,000 Min. Day 269,000 Avg. Daily 467,087
22	750						7.0	5.0		24	14.8	0.89	1.03	0.84	1.04	
23	472						4.3	3.3		17	23.1	1.17	1.26	1.02	1.06	
24	442						4.0	3.3		14		1.03	1.09	1.05	1.06	
25	646						5.6	4.8		22		0.85	1.14	1.01	1.07	
26	454						3.6	3.5		15	19.8	1.08	1.11	0.81	1.00	
27	536						4.3	3.8		18	31.3	0.85	0.98	0.81	1.00	
28	388						3.2	3.3		15		0.81	0.83	0.70	0.90	Mail to: Indiana Department of Environmental Management Drinking Water Branch, MC 66-34 100 North Senate Avenue Indianapolis, IN 46204-2251
29	440						3.8	3.0		15	14.8	0.84	0.94	0.60	0.82	
30	388						3.3	2.3		14	19.8	0.90	0.99	0.83	0.94	
31	374						2.9	2.5		13		0.86	0.97	0.41	0.94	



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name TWIN LAKES UTILITIES PLANT # 1 PWSID Number 5245046

For the Month of APRIL 2007 IDEM Field Rep. PAUL MAHONEY

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.70	0.01				1.07
2									2.87	0.03				1.05
3									2.74	0.02				1.07
4									2.73	0.02				1.07
5									2.82	0.01				1.04
6									2.72	0.07				1.07
7									2.90	0.02				0.97
8									2.67	0.02				0.95
9									2.86	0.00				1.11
10									2.72	0.03				0.96
11									2.82	0.04				0.99
12									2.73	0.02				1.05
13									2.45	0.01				0.98
14									2.42	0.04				1.01
15									2.63	0.07				1.03
16									1.41	0.01				1.08
17									2.53	0.02				1.05
18									2.69	0.02				0.97
19									2.61	0.02				1.04
20									2.63	0.00				0.98
21									2.75	0.01				0.99
22									2.70	0.07				1.08
23									2.65	0.02				1.16
24									2.70	0.04				1.02
25									2.56	0.00				0.88
26									2.60	0.03				0.90
27									2.58	0.00				1.02
28									2.78	0.00				0.84
29									2.90	0.07				0.90
30									1.93	0.00				1.12
31														

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds							Filters			Chlorine Residual			Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos-phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap	Free	Total	
1	571						5.2	3.8		19		0.87	0.95	0.77	0.97
2	452						4.1	2.8		15	19.8	0.87	0.95	0.59	0.64
3	424						3.7	3.0		16	19.8	0.98	1.01	0.90	1.10
4	396						3.3	3.0		15		1.00	1.04	0.61	0.76
5	385						3.7	2.8		14	18.2	1.05	1.13	0.83	0.98
6	403						3.7	2.5		14	19.8	0.89	1.16	0.55	0.62
7	520						5.0	3.5		18		1.05	1.12	0.93	0.99
8	463						5.6	3.5		15		0.98	1.06	0.38	1.01
9	448						4.0	3.0		16	23.1	1.02	1.10	0.54	0.89
10	463						4.1	3.3		18	18.2	0.97	1.02	0.20	0.90
11	474						4.1	3.3		17	18.2	0.90	1.08	0.92	1.03
12	419						3.7	3.0		16		0.95	1.04	0.40	0.97
13	326						2.9	2.3		13	18.2	1.07	1.12	0.79	1.07
14	433						3.8	3.3		15		0.91	1.17	0.66	0.71
15	613						5.3	3.8		22	19.8	1.25	1.33	0.36	0.52
16	688						5.9	5.0		26	14.8	0.93	0.98	0.49	0.51
17	398						3.4	3.0		15		0.82	0.98	0.44	0.58
18	488						5.3	3.3		18	18.2	0.73	1.00	0.51	0.83
19	463						4.0	3.3		17		0.68	0.76	0.49	0.61
20	303						3.4	2.0		13	19.8	0.84	0.94	0.54	0.60
21	446						2.3	3.3		15		0.95	0.99	0.55	0.60
22	665						5.0	4.5		24	24.7	0.79	0.80	0.65	0.77
23	420						3.3	3.3		16	18.2	0.64	0.75	0.82	0.87
24	381						3.0	2.8		14		0.93	1.02	0.94	0.98
25	286						2.4	1.8		11	13.2	0.71	0.56	0.80	0.98
26	566						4.9	2.0		22	19.8	0.80	0.87	0.88	1.07
27	291						2.4	2.0		11		0.84	0.91	0.75	0.89
28	416						3.7	3.0		24		0.90	0.94	0.85	0.90
29	563						4.3	4.3		20	16.5	0.60	0.67	0.57	0.64
30	488						3.9	3.3		19		0.81	0.94	0.71	0.77
31															
												Monthly Water Treatment			
												Total Gallons			13,702,480
												Max. Day			688,000
												Min. Day			291,000
												Avg. Daily			457,000

Mail To
Department of Environmental Management
Drinking Water Branch 66-38
100 N. Senate Ave
P.O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities PWT # 1 PWSID Number 5245046

For the Month of May 2007

IDEM Field Rep. Paul Mahoney

Signed Chl R. O'Neil

Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.62	0.05				0.99
2									2.65	0.05				0.98
3									2.62	0.08				0.99
4									2.61	0.05				0.95
5									2.78	0.03				0.97
6									3.30	0.02				1.03
7									2.84	0.02				0.82
8									2.73	0.08				1.08
9									2.43	0.02				1.10
10									2.77	0.00				1.14
11									2.81	0.01				1.06
12									2.82	0.08				1.07
13									2.29	0.07				1.12
14									2.69	0.02				1.16
15									2.73	0.06				1.14
16									2.81	0.06				1.06
17									2.85	0.06				1.02
18									2.82	0.07				1.00
19									2.79	0.05				1.01
20									2.80	0.08				1.15
21									2.67	0.00				1.05
22									2.66	0.00				1.28
23									2.85	0.04				1.16
24									2.74	0.02				1.13
25									2.77	0.07				1.07
26									2.69	0.00				1.09
27									2.77	0.06				1.12
28									2.78	0.02				0.96
29									2.68	0.00				1.12
30									2.79	0.04				1.20
31									2.34	0.00				1.14

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD.

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Chlorine Residual			Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride				Plant Tap		D. S.		
												Free	Total			Free
1	479						3.7	3.5		18		0.32	0.95	0.40	0.70	Total Backwash Cal = 521,300 3.25%
2	310						2.5	1.8		12	19.8	0.38	0.97	0.82	0.98	
3	491						3.7	3.8		18	18.1	0.78	0.86	0.79	0.92	
4	311						2.6	2.3		12	16.5	0.68	0.78	0.81	0.83	
5	542						4.5	3.8		20		0.57	0.69	0.71	0.82	
6	667						5.5	4.5		23	24.7	0.61	0.70	0.41	0.61	
7	617						5.0	4.5		23	19.8	0.97	1.04	0.63	0.66	
8	581						4.5	4.0		22		0.81	0.93	0.72	0.85	
9	483						5.3	3.8		17		0.93	1.01	0.65	0.86	
10	578						5.3	4.0		21	19.8	0.74	0.78	0.64	0.75	
11	389						4.0	2.8		14		0.80	0.89	0.74	0.79	
12	457						4.9	3.3		17	26.4	1.01	1.09	0.70	0.86	
13	677						7.5	6.6		24	19.8	1.09	1.21	0.87	0.93	
14	508						4.8	3.8		18	19.8	1.01	1.04	0.72	0.84	
15	407						3.8	3.0		15	19.8	0.82	0.90	0.67	0.88	
16	478						4.8	3.3		18	19.8	1.01	1.07	0.64	0.82	
17	261						2.7	2.0		10		0.97	1.07	0.63	0.81	
18	533						5.5	4.0		21	19.8	0.96	1.05	0.68	0.84	
19	512						5.0	3.8		18		0.88	1.11	0.71	0.81	
20	510						5.0	3.5		19	19.8	0.90	1.00	0.63	0.80	
21	675						5.9	4.8		24	29.7	1.02	1.08	0.70	0.85	
22	725						5.9	4.8		24		0.70	0.85	0.60	0.78	
23	546						4.5	4.8		20	19.8	0.87	0.96	0.60	0.70	
24	659						5.9	4.0		23	14.9	0.81	0.95	0.65	0.74	
25	325						5.6	2.8		12	24.7	0.42	1.39	0.74	0.78	
26	608						5.1	3.0		17	34.6	0.93	0.94	0.43	0.52	
27	500						5.9	3.5		18	29.7	0.77	0.79	0.50	0.67	
28	565						5.1	4.0		20	21.5	0.76	0.79	0.56	0.79	
29	600						5.9	4.3		22	39.6	0.72	0.87	0.76	0.89	
30	637						5.9	4.8		23	19.8	0.92	1.03	0.61	0.69	
31	502						7.1	3.5		17	23.1	0.96	1.05	0.63	0.84	

Attachment to IURC 4-27
Page 4 of 8

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015

State Form 31679 (R67-3-04)



MONTHLY REPORT OF OPERATION OF WATER TREATMENT PLANT

State Form 34609 (R7 / 9-06)

CUII Response to IURC DE #4

Attachment to IURC 4-27

Page 49 of 93

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WTP # 1

PWSID Number 5245046

For the Month of June 2007

IDEM Field Rep Paul Mahoney

Signed _____

Title Operator

I certify, under penalty of law, by this signature that this document was prepared by me, or under my direction, and the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.91	0.01				1.09	
2									2.90	0.00				1.03	
3									2.92	0.02				1.05	
4									2.85	0.01				1.08	
5									2.82	0.00				1.09	
6									2.83	0.01				1.03	
7									2.70	0.02				1.07	
8									2.78	0.02				0.95	
9									2.80	0.00				0.82	
10									2.71	0.00				1.18	
11									2.75	0.00				1.20	
12									2.75	0.00				1.19	
13									2.66	0.07				1.02	
14									2.70	0.04				0.99	
15									2.83	0.02				1.01	
16									3.25	0.00				1.07	
17									3.04	0.02				0.81	
18									2.90	0.02				0.93	
19									2.85	0.00				0.80	
20									2.88	0.01				0.95	
21									2.80	0.00				0.85	
22									2.77	0.01				0.90	
23									2.78	0.03				0.90	
24									2.85	0.06				0.93	
25									2.80	0.03				1.09	
26									2.62	0.02				0.91	
27									2.71	0.06				1.20	
28									2.61	0.04				1.10	
29									2.71	0.02				1.11	
30									2.84	0.02				0.90	
31															

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S.		
												Free	Total	Free		Total
1	511						10.4	2.5		15	11.6	0.72	1.11	0.67	0.84	
2	741						14.1	4.0		22		0.71	1.27	0.66	0.86	
3	781						15.6	4.3		24	19.8	1.03	1.17	0.61	0.79	
4	465						10.2	2.8		15	26.4	1.09	1.40	0.64	0.82	
5	456						8.2	3.0		15		0.98	1.29	0.70	0.82	Total BW Gallons
6	434						8.2	3.0		16		0.85	1.32	0.82	0.86	= 524,100
7	541						10.9	3.3		19	19.8	0.77	1.28	0.59	0.85	3.0%
8	491						9.5	3.0		17	19.8	1.20	1.40	0.55	0.99	
9	661						17.2	3.5		19		0.76	1.31	0.56	0.72	
10	840						22.2	4.5		24		0.91	0.95	0.81	0.98	
11	741						17.5	3.5		21	19.8	1.01	1.35	0.80	0.97	
12	758						16.8	4.0		23		1.11	1.35	0.61	0.84	
13	679						15.2	3.8		20	29.7	1.14	1.40	0.67	0.78	
14	815						18.6	3.8		22	29.7	1.14	2.06	0.73	0.96	
15	741						15.3	3.8		20	44.7	2.00	2.20	0.67	0.73	
16	565						11.4	3.0		17		1.00	1.14	0.66	0.71	
17	625						14.7	3.5		20	46.3	0.68	0.73	0.71	0.82	
18	443						9.4	2.8		16	19.8	0.77	1.48	0.68	0.79	
19	570						15.8	3.8		19	29.9	1.21	1.81	0.73	0.85	
20	496						14.3	3.0		16	29.7	0.77	1.00	0.53	0.66	
21	572						13.7	3.8		18	23.1	1.15	2.08	0.89	0.95	Monthly Water Treatment
22	501						14.0	3.5		16	19.9	1.18	1.99	0.65	0.83	Total Gallons 17,477,510
23	396						11.2	3.0		15		0.92	1.10	0.68	0.78	Max. Day 815,000
24	512						14.8	4.0		17		1.04	1.31	0.70	0.95	Min. Day 396,000
25	440						13.0	3.5		15	19.8	0.91	1.25	0.67	0.72	Avg. Daily 582,213
26	662						18.6	4.5		20	34.7	0.95	1.26	1.05	1.17	
27	468						13.3	3.8		17	19.9	1.10	1.50	0.90	1.13	
28	531						16.4	4.0		17	19.9	0.84	1.52	0.52	0.72	Mail to:
29	525						15.7	3.5		17	19.9	1.00	1.44	0.64	0.78	Indiana Department of
30	495						14.6	3.5		15	19.9	0.90	1.55	0.42	0.61	Environmental Management
31																Drinking Water Branch, MC 66-34
																100 North Senate Avenue
																Indianapolis, IN 46204-2251



MONTHLY REPORT OF OPERATION OF WATER TREATMENT PLANT

State Form 34609 (R7 / 9-06)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities PWSID Number 5245046

For the Month of July 2007 IDEM Field Rep. Paul Mahoney

Signed _____ Title Operator

I certify, *under penalty of law*, by this signature that this document was prepared by me, or under my direction, and the information submitted is to the best of my knowledge and belief, true, accurate and complete. *I am also aware that there are significant penalties for submitting false information.*

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.78	0.01				0.91	
2									2.80	0.02				1.10	
3									2.66	0.00				1.07	
4									2.78	0.00				1.08	
5									2.71	0.02				1.08	
6									2.72	0.00				0.95	
7									2.65	0.00				1.05	
8									2.62	0.00				1.03	
9									2.70	0.01				1.02	
10									2.68	0.01				1.09	
11									2.77	0.00				1.04	
12									2.86	0.00				1.01	
13									2.85	0.04				1.04	
14									2.80	0.02				1.00	
15									2.86	0.03				1.03	
16									2.70	0.02				1.00	
17									2.68	0.01				0.92	
18									2.66	0.01				1.06	
19									2.80	0.01				1.05	
20									2.78	0.01				1.09	
21									2.84	0.03				0.82	
22									2.74	0.02				0.83	
23									2.90	0.17				0.82	
24									2.83	0.03				1.14	
25									2.80	0.03				0.85	
26									2.75	0.01				0.90	
27									2.77	0.03				0.90	
28									2.71	0.02				0.80	
29									2.78	0.01				0.96	
30									2.78	0.01				0.82	
31									2.80	0.00				1.05	

* All parameters are to be expressed in mg/l except pH and turbidity
DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Filters			Chlorine Residual				Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phosphate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap	Free	Total	D. S.	
												Free	Total	Free	Total	
1	847						26.1	5.5		24	34.6	0.68	1.23	0.34	0.48	
2	519						16.1	3.3		16	34.6	1.26	1.56	0.33	0.60	
3	602						18.3	4.0		17		1.04	1.91	0.58	0.74	
4	672						18.7	5.0		23	39.6	0.81	1.14	0.57	0.76	
5	670						16.8	4.0		18	13.2	0.87	1.50	0.39	0.43	
6	544						15.1	4.0		16	36.3	0.72	1.46	0.52	0.68	Total Backwash Gallons
7	784						23.0	5.0		24	16.5	0.67	1.58	0.76	0.82	= 853,000
8	865						25.0	6.0		24	19.8	1.08	1.55	0.64	0.72	4.7%
9	706						20.0	6.0		21	39.6	1.38	1.99	0.40	1.42	
10	660						19.5	4.5		20	19.8	1.40	1.97	0.55	0.62	
11	571						16.9	4.0		18	39.6	0.75	1.70	0.51	0.65	
12	562						16.0	3.5		18	18.2	0.86	1.74	0.55	0.68	
13	712						19.7	4.8		21	39.6	0.81	1.48	0.52	0.68	
14	848						23.0	5.3		24	19.8	0.88	1.48	0.58	0.68	
15	841						23.2	4.8		21	18.2	1.32	1.86	0.60	0.70	
16	569						18.1	3.5		17	39.6	1.24	1.60	0.79	0.94	
17	450						13.6	3.5		15	19.8	1.51	1.98	0.58	0.66	
18	494						14.7	3.8		17	39.6	0.96	1.76	0.75	0.80	
19	307						9.5	2.3		11	39.6	0.95	1.50	0.45	0.64	
20	339						10.6	2.5		10	19.8	1.78	2.01	0.70	0.80	
21	434						13.6	3.3		14	19.8	1.05	1.57	0.84	1.13	Monthly Water Treatment
22	773						24.7	4.8		17	39.6	1.16	1.68	0.77	0.85	Total Gallons 18,167,830
23	581						17.6	3.8		16	39.6	1.36	2.03	0.63	0.75	Max. Day 865,000
24	554						14.1	3.3		18	19.8	0.60	1.70	0.66	0.88	Min. Day 307,000
25	392						13.0	2.8		13	39.6	0.99	1.55	0.91	1.02	Avg. Daily 586,059
26	389						13.3	3.0		14	19.8	0.82	1.79	0.64	0.82	
27	333						12.1	2.0		10	39.6	0.40	0.55	0.63	0.77	
28	479						18.3	3.3		13	14.8	1.42	2.02	0.57	0.77	
29	596						19.9	3.8		17	33.0	1.65	2.11	0.59	0.78	
30	630						18.8	4.0		19	19.8	1.45	2.31	0.72	0.91	
31	510						15.3	3.3		14	19.8	1.03	2.18	0.86	1.12	

Mail to:
**Indiana Department of
Environmental Management
Drinking Water Branch, MC 66-34
100 North Senate Avenue
Indianapolis, IN 46204-2251**

PWS ID# 5245046

Date	Water Treated	Chemicals Used - Pounds							Filters	Chlorine Residual			Remarks			
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride		Phosphate	Plant Tap			D.S.		
											Free	Total		Free	Total	
1	908						26.4	5.8		24	19.8	1.43	1.31	0.77	0.97	Total BW Gals = 613,800 4.3%
2	718						21.9	4.3		19	19.8	1.27	2.10	0.70	0.88	
3	426						13.2	2.5		12		1.10	2.10	0.63	0.83	
4	533						15.7	3.5		15	39.6	0.74	1.65	0.59	0.80	
5	535						15.4	3.8		18	19.8	1.03	1.61	0.53	0.67	
6	348						9.8	2.8		12	19.8	1.11	2.20	0.60	0.74	
7	368						9.8	2.5		12	19.8	0.97	1.98	0.32	1.28	
8	393						10.3	3.0		13	19.8	0.72	1.97	0.56	0.73	
9	337						8.2	2.5		12	19.8	0.96	1.60	0.68	0.85	
10	383						11.7	4.0		13	19.8	0.99	1.71	0.58	0.72	
11	547						14.8	3.5		18	19.8	1.25	1.95	0.66	0.76	
12	502						13.4	3.0		16	19.8	0.88	1.10	0.60	0.80	
13	388						10.8	3.0		13	19.8	1.79	2.20	0.69	0.95	
14	417						11.6	3.3		15	19.8	0.92	1.70	0.20	0.80	
15	401						12.1	4.0		14	19.8	1.36	2.16	0.63	0.95	
16	615						15.5	3.3		19	19.8	0.82	1.78	1.15	1.39	
17	243						6.6	2.0		8	19.8	1.40	1.85	1.14	1.38	
18	476						12.6	3.5		15	19.8	0.74	1.40	1.17	1.36	
19	673						11.4	3.3		14	19.8	1.56	2.10	0.94	1.22	
20	394						11.5	3.5		15	19.8	0.99	1.97	0.92	1.22	
21	428						11.3	3.5		14	19.8	1.10	1.85	1.11	1.34	
22	429						11.6	3.5		14	19.8	1.00	1.75	1.42	1.60	
23	446						11.5	3.5		15	19.8	1.15	1.81	1.09	1.37	
24	377						9.7	3.3		13	19.8	0.18	2.11	0.37	1.00	
25	571						15.3	4.5		18	19.8	1.18	2.19	0.82	1.03	
26	492						12.3	3.8		16	19.8	0.96	2.01	0.63	0.91	
27	460						11.3	3.8		15	19.8	1.05	1.95	0.26	1.12	
28	448						10.9	3.8		14	19.8	0.68	1.67	0.64	0.77	
29	453						11.0	5.0		16	19.8	1.09	1.85	0.77	0.92	
30	387						9.6	3.3		13	19.8	1.00	1.96	0.21	0.85	
31	432						11.0	3.8		14	19.8	1.10	1.97	0.65	0.77	
											Monthly Water Treatment					
											Total Gallons				14,288,236	
											Max. Day				908,000	
											Min. Day				243,000	
											Avg. Daily				460,911	
Mail To Department of Environmental Management Drinking Water Branch 66-34 100-N. Senate Ave P. O. Box 6015 Indianapolis, IN 46206-6015																

Total BW Gals
= 613,800
4.3%

Mail To
Department of Environmental Management
Drinking Water Branch, 66-34
100 N. Senate Ave
P.O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities Water #1 PWSID Number 5245046

For the Month of August, 2007 IDEM Field Rep. Paul Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.81	0.02				1.02	
2									2.78	0.02				0.87	
3									2.77	0.02				0.88	
4									2.83	0.01				1.02	
5									2.84	0.03				1.00	
6									2.80	0.02				0.90	
7									2.77	0.02				1.09	
8									2.68	0.03				0.90	
9									2.71	0.02				0.90	
10									2.70	0.03				0.92	
11									2.68	0.02				0.95	
12									2.70	0.03				0.88	
13									2.88	0.08				1.02	
14									2.80	0.02				0.78	
15									2.76	0.02				0.94	
16									2.64	0.01				1.14	
17									2.77	0.04				1.07	
18									2.71	0.01				0.86	
19									2.81	0.03				1.04	
20									2.72	0.02				0.92	
21									2.75	0.02				0.92	
22									2.60	0.01				1.05	
23									2.69	0.02				1.00	
24									2.86	0.04				1.05	
25									2.71	0.04				0.86	
26									2.69	0.00				1.01	
27									2.69	0.01				1.00	
28									2.73	0.00				0.90	
29									2.75	0.02				0.89	
30									2.76	0.02				0.99	
31									2.71	0.00				1.02	

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WTP # 1 PWSID Number 5245046

For the Month of Sept. 2007 IDEM Field Rep. P. Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/04016

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.67	0.07				0.95
2									2.71	0.06				0.92
3									2.72	0.03				1.04
4									2.74	0.00				1.04
5									2.80	0.00				1.00
6									2.77	0.01				1.02
7									2.80	0.00				1.00
8									2.75	0.00				1.06
9									2.64	0.04				1.00
10									2.69	0.02				1.06
11									2.70	0.00				1.15
12									2.77	0.01				1.14
13									2.80	0.00				1.09
14									2.80	0.01				1.14
15									2.75	0.00				1.10
16									2.89	0.00				0.85
17									2.75	0.01				0.96
18									2.85	0.00				1.00
19									2.75	0.02				1.11
20									2.90	0.00				1.06
21									2.85	0.00				1.05
22									2.86	0.01				0.80
23									2.73	0.05				0.74
24									2.59	0.09				1.26
25									2.57	0.01				1.23
26									2.69	0.01				1.24
27									2.50	0.00				1.13
28									2.60	0.00				1.12
29									2.53	0.02				1.18
30									2.86	0.02				0.85
31														

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Phos- phate	Filters		Chlorine Residual			Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride		Filter Run (hours)	Gallons per wash x 1000	Free	Total	Free		Total
1	767						19.8	1.3		21	19.8	1.01	2.12	0.92	1.21	Total 134 Gal = 594,000 3.5%
2	357						8.6	1.8		11		1.13	1.58	1.00	1.32	
3	764						19.4	5.3		20		0.83	1.67	0.66	0.80	
4	609						15.5	4.8		18		1.17	1.99	0.69	0.82	
5	469						11.5	3.8		14		0.90	1.85	0.64	0.80	
6	573						14.5	5.0		19		0.90	1.80	0.60	0.92	
7	276						6.7	2.5		9		0.85	1.79	0.63	0.92	
8	503						12.1	4.0		15		0.99	1.45	1.08	1.17	
9	650						15.5	5.0		19		0.95	1.50	0.80	0.96	
10	440						11.1	4.0		15		0.85	1.87	0.91	1.12	
11	529						13.4	4.5		16		0.81	2.08	0.82	1.01	
12	365						12.2	4.5		17		0.79	1.95	0.75	0.92	
13	532						13.6	4.3		16		0.78	1.79	0.87	0.99	
14	352						8.8	3.3		12		0.91	2.11	1.02	1.14	
15	598						15.0	4.8		18		0.75	1.98	1.02	1.20	
16	580						13.4	5.3		17		0.99	1.88	1.00	1.25	
17	487						13.2	4.3		15		0.66	1.46	0.74	0.86	
18	621						15.7	5.0		18		1.05	1.95	0.62	0.80	
19	642						16.1	5.3		19		0.60	1.80	0.70	0.84	
20	588						14.7	4.8		16		1.26	1.70	0.73	0.85	
21	617						15.3	4.8		18		0.68	1.87	0.62	0.79	
22	709						17.7	5.0		19		1.01	1.49	0.68	0.84	
23	930						22.2	6.5		23		0.98	1.32	0.73	0.94	
24	512						13.0	4.0		15		0.56	1.27	0.93	1.25	
25	633						17.9	5.8		20		0.82	1.73	1.25	1.36	
26	383						11.0	3.5		14		1.48	1.63	1.12	1.35	
27	520						16.8	4.8		17		0.90	1.86	1.12	1.32	
28	464						15.0	4.3		16		1.38	1.95	1.05	1.35	
29	666						20.5	5.0		20		0.72	1.65	0.86	1.06	
30	768						24.5	5.8		24	19.8	1.24	2.17	0.33	0.38	
31																

Attachment to IURC 4-27
Page 566 of 998

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-0015

Total 134 Gal
= 594,000
3.5%

Monthly Water Treatment

Total Gallons 17,101,430
Max. Day 767,000
Min. Day 276,000
Avg. Daily 570,048

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 3-1609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin LAKES WTA #1 PWSID Number 5245046

For the Month of OCT 07 IDEM Field Rep. P. Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/04016

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.21	0.00				1.06
2									2.95	0.00				1.16
3									2.87	0.01				1.21
4									2.97	0.00				1.11
5									2.85	0.01				1.08
6									2.78	0.03				1.02
7									2.98	0.00				1.04
8									2.74	0.06				0.92
9									3.30	0.00				1.02
10									2.88	0.00				1.00
11									2.57	0.08				0.99
12									3.20	0.05				1.12
13									2.76	0.05				0.96
14									2.95	0.03				1.07
15									2.88	0.01				1.02
16									2.37	0.00				0.98
17									2.91	0.02				0.82
18									2.45	0.00				0.90
19									2.46	0.00				1.06
20									2.52	0.01				1.21
21									2.66	0.01				0.89
22									2.80	0.00				0.88
23									2.33	0.00				1.08
24									2.60	0.00				1.10
25									2.30	0.07				1.03
26									2.95	0.02				1.00
27									2.47	0.07				0.86
28									3.30	0.02				0.86
29									3.10	0.00				1.01
30									2.36	0.01				0.96
31									2.59	0.04				1.03

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

1-W3 2D 2450046

Date	Water Treated (669 gallons)	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phosphate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S.		
												Free	Total	Free		Total
1	412						13.3	3.8		15	19.8	0.82	1.39	1.03	1.24	Total BW Gal = 613,000 = 4.1%
2	471						15.3	4.5		17		1.59	1.99	1.11	1.30	
3	444						13.9	3.8		14		0.79	1.63	0.98	1.18	
4	466						15.0	3.3		16		1.15	1.74	1.02	1.20	
5	474						12.4	4.3		15		1.47	2.30	0.90	1.06	
6	500						12.8	4.3		17		1.42	1.88	0.66	0.78	
7	744						15.2	5.0		19		0.92	1.96	0.57	0.64	
8	561						14.7	5.5		20		1.54	1.77	0.75	0.87	
9	424						10.2	3.8		14		0.81	1.39	0.65	0.81	
10	496						11.9	4.5		12		1.62	1.88	0.67	0.84	
11	397						9.7	3.5		15		1.00	1.66	0.72	0.85	
12	548						13.4	4.5		16		1.26	1.51	0.69	0.82	
13	514						12.1	4.5		17		0.92	1.60	0.64	0.79	
14	635						15.1	5.0		20		1.16	1.94	0.88	1.04	
15	487						11.7	4.8		16		0.88	1.49	0.97	1.09	
16	337						8.0	4.3		12		1.32	1.60	1.10	1.22	
17	482						9.6	5.3		15		0.99	1.95	1.10	1.17	
18	551						13.3	5.3		19		1.50	1.90	1.07	1.26	
19	84						2.2	0.8		4		1.10	1.94	1.10	1.28	
20	862						21.0	7.3		24		1.57	1.71	1.10	1.25	
21	614						14.9	5.0		18		1.40	1.81	1.07	1.19	
22	412						10.1	3.8		15		1.83	1.83	0.98	1.08	
23	430						10.2	4.0		16		0.99	1.38	0.94	1.12	
24	472						12.4	4.3		15		1.30	1.60	0.90	1.10	
25	389						10.0	3.5		14		1.33	1.80	1.00	1.12	
26	413						10.2	3.5		13		1.75	1.95	0.93	1.07	
27	534						13.1	4.5		17		0.51	1.18	0.69	0.61	
28	559						13.9	5.0		18		1.26	1.57	0.83	1.08	
29	391						9.2	3.5		14		0.99	1.63	0.87	1.04	
30	460						11.4	4.3		16		1.89	1.52	0.93	1.07	
31	330						18.0	2.8		11	19.8	0.79	0.93	1.19	1.46	

Attachment to IORC DL #4

Page 38 of 38

14,908,716
862,000
84,000
480,922

Monthly Water Treatment

Total Gallons
Max. Day
Min. Day
Avg. Daily

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015

State Form 3469 (Rev. 3/04)

Mail To
Department of Environmental Management
Drinking Water Branch 66-14
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION OF WATER TREATMENT PLANT

State Form 34609 (R7 / 9-06)

CUII Response to IURC DE #4

Attachment to IURC 4-27

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WTP # 1 PWSID Number 5245046

For the Month of November 2007 IDEM Field Rep. Paul Mahoney

Signed _____ Title Operator

I certify, under penalty of law, by this signature that this document was prepared by me, or under my direction, and the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									3.43	0.00				1.09	
2									2.99	0.01				1.10	
3									2.91	0.09				0.80	
4									2.80	0.02				0.91	
5									3.09	0.02				1.20	
6									2.46	0.03				1.01	
7									2.91	0.00				1.10	
8									2.58	0.01				1.05	
9									2.32	0.01				1.08	
10									2.69	0.02				0.96	
11									2.63	0.05				1.07	
12									2.57	0.01				1.15	
13									2.55	0.01				1.10	
14									3.20	0.00				0.88	
15									2.38	0.02				0.91	
16									2.77	0.03				0.90	
17									2.64	0.01				0.92	
18									2.85	0.02				1.14	
19									2.86	0.03				1.09	
20									2.17	0.00				1.05	
21									2.46	0.01				0.99	
22									3.30	0.00				0.96	
23									2.78	0.01				0.81	
24									2.68	0.05				0.97	
25									2.72	0.00				0.97	
26									2.37	0.02				0.92	
27									1.86	0.00				0.97	
28									2.55	0.04				1.03	
29									3.30	0.02				0.91	
30									2.54	0.01				0.93	
31															

* All parameters are to be expressed in mg/l except pH and turbidity
DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated	Chemicals Used -- Pounds								Filters			Chlorine Residual				Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S.			
												Free	Total	Free	Total		
1	459						13.9	4.5		16	19.8	1.60	1.79	1.06	1.24		
2	439						12.8	3.8		13	19.8	1.43	1.88	0.98	1.16		
3	469						13.5	3.8		16	19.8	1.53	1.93	1.10	1.24		
4	381						18.5	5.5		19	19.8	0.77	1.23	1.02	1.22	Total BW Gallons	
5	399						11.5	3.5		13	19.8	1.78	2.16	0.99	1.13	= 594,000 Gallons	
6	428						12.9	3.8		15	19.8	1.22	1.68	0.94	1.10	= 4.2%	
7	429						13.0	3.8		14	19.8	1.46	2.03	0.84	1.05		
8	346						10.1	3.0		12	19.8	1.11	1.76	0.80	1.09		
9	402						11.4	3.3		12	19.8	1.05	1.47	0.72	0.90		
10	504						14.1	4.3		16	19.8	1.08	1.64	0.64	0.74		
11	623						17.7	5.3		18	19.8	1.16	1.91	0.89	1.05		
12	442						11.8	4.0		15	19.8	1.16	1.60	0.87	1.04		
13	414						11.1	3.8		13	19.8	1.20	1.60	0.84	0.98		
14	445						11.9	3.8		15	19.8	0.72	1.41	0.82	0.94		
15	427						11.2	3.8		13	19.8	1.05	1.32	0.64	0.89		
16	403						10.9	3.8		14	19.8	0.90	1.65	0.62	0.84		
17	420						11.6	3.5		13	19.8	0.50	1.20	0.72	0.92		
18	595						18.0	5.0		17	19.8	0.63	1.09	0.71	0.92		
19	435						11.3	4.3		15	19.8	1.47	1.94	0.77	0.96		
20	480						10.3	4.0		15	19.8	1.01	1.27	0.76	0.88		
21	361						7.7	3.5		12	19.8	1.30	1.58	0.82	0.97	Monthly Water Treatment	
22	581						12.3	4.5		17	19.8	0.70	1.41	0.86	1.07	Total Gallons	
23	501						10.7	4.3		16	19.8	0.85	1.26	1.02	1.28	Max. Day	
24	516						11.0	4.5		15	19.8	0.86	1.68	1.01	1.24	Min. Day	
25	628						13.2	5.0		19	19.8	1.31	2.27	1.14	1.40	Avg. Daily	
26	464						10.0	4.0		15	19.8	0.95	1.16	0.77	1.03		
27	453						9.5	4.0		14	19.8	1.12	1.51	0.84	0.98		
28	435						9.2	3.8		15	19.8	0.79	1.42	1.00	1.14		
29	447						9.3	4.0		14	19.8	1.26	1.58	0.57	1.40		
30	443						9.3	3.5		14	19.8	0.81	1.51	1.17	1.40		
31																	

CUI Response to IURC DE #4

Attached to IURC 4-27

628,000

346,000

467,624

Mail to:
Indiana Department of
Environmental Management
Drinking Water Branch, MC 66-34
100 North Senate Avenue
Indianapolis, IN 46204-2251

CUI Response to IURC DE #4

Attachment to IURC 4-27

628,624

346,993

467,624

Mail to:

Indiana Department of Environmental Management

Drinking Water Branch, MC 66-34

100 North Senate Avenue

Indianapolis, IN 46204-2251



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name TWIN LAKES UTILITIES WTP# 1 PWSID Number 5245046

For the Month of DECEMBER 2007 IDEM Field Rep. PAUL MAHONEY

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									3.04	0.05				0.75	
2									2.88	0.00				0.94	
3									2.67	0.03				1.14	
4									3.16	0.00				0.97	
5									3.07	0.03				1.08	
6									2.46	0.06				0.97	
7									2.59	0.05				1.06	
8									3.30	0.06				0.95	
9									2.71	0.02				0.99	
10									3.06	0.09				0.96	
11									3.50	0.07				0.94	
12									2.87	0.02				0.92	
13									2.00	0.03				0.89	
14									2.96	0.02				0.91	
15									3.02	0.04				0.88	
16									3.20	0.04				1.05	
17									2.80	0.05				1.03	
18									2.94	0.14				0.85	
19									2.95	0.09				0.88	
20									2.49	0.01				0.91	
21									2.93	0.04				1.07	
22									2.74	0.01				1.01	
23									2.70	0.00				0.72	
24									3.28	0.09				1.06	
25									2.69	0.02				1.02	
26									3.30	0.03				1.23	
27									2.90	0.02				1.06	
28									3.12	0.01				0.96	
29									2.75	0.02				0.83	
30									3.29	0.02				0.89	
31									2.50	0.04				0.95	

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Filters		Chlorine Residual			Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap	D.S.	
												Free	Total	
1	418						9.0	4.5		13	19.8	1.36	2.00	1.00 1.18
2	551						11.6	3.8		18		0.84	1.54	0.90 1.06
3	424						9.0	3.8		13		1.25	1.69	0.75 0.93
4	448						10.2	4.5		13		0.89	1.32	0.80 1.10
5	313						7.1	2.8		11		0.92	1.42	0.74 1.09
6	351						8.3	3.3		12		0.90	1.20	1.12 1.26
7	278						6.5	2.5		10		1.24	1.84	0.90 1.10
8	406						8.9	3.5		13		0.50	1.11	0.62 1.04
9	502						10.5	4.5		16	19.8	1.33	1.92	0.92 1.29
10	306						5.7	2.5		13		1.20	1.48	0.80 1.18
11	395						8.2	3.3		13	19.8	1.18	1.95	0.90 1.14
12	321						7.0	2.3		11		0.89	1.68	0.80 1.00
13	351						7.2	2.8		13		1.32	1.78	1.10 1.26
14	295						6.0	3.8		10		0.94	1.47	1.00 1.20
15	570						11.7	3.5		19		1.20	1.93	1.31 1.51
16	329						6.8	3.3		11		0.98	1.70	0.91 1.14
17	403						3.6	4.3		16		0.95	1.07	1.10 1.32
18	315						6.1	3.0		14		1.47	1.70	0.88 0.88
19	389						7.3	3.8		11		1.26	1.80	0.71 0.80
20	337						7.0	3.5		13		0.63	1.36	0.74 0.90
21	326						7.1	2.8		12		1.18	1.77	0.80 0.92
22	491						10.4	4.3		15		0.87	1.42	0.80 1.10
23	452						9.6	4.3		15		1.15	1.71	0.80 1.00
24	438						9.1	3.5		13		0.88	1.44	0.85 0.88
25	528						11.3	4.8		17		1.07	1.56	0.78 0.97
26	418						8.9	3.8		15		0.92	1.17	0.67 0.99
27	482						10.1	3.8		17		1.30	1.78	0.69 0.87
28	475						9.9	3.0		15		0.80	1.53	0.72 0.88
29	390						8.3	2.8		14		1.48	1.97	0.64 0.85
30	603						12.5	4.3		19		0.73	1.09	0.61 0.84
31	511						11.5	4.0		19	19.8	1.43	1.85	0.68 0.84

Total 13W Gallons
= 594,000
= 4.79%

Monthly Water Treatment

Total Gallons	12,404,718
Max. Day	608,000
Min. Day	278,000
Avg. Daily	400,152

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015

Registration Information

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
WATER WITHDRAWAL REGISTRATION AND REPORTING SYSTEM

Regno: 45-00130-PS
County: Lake
Topographic Map: Palmer
Standard Industrial Classification (SIC): 4941

Basin: Kankakee
Township: 34N
Range: 7W
Section: 16

Water Use Purpose(s):
Public Water Supply-GW
Drinking Water/Sanitary Facilities-GW

Sources(s):
Ground Water
Ground Water

Facility Information:
Total Capacity: 1.498 MGD

Number of Wells: 5
Number of Intakes: None
Withdrawal Capability: 1040 GPM
Withdrawal Capability: None

Ground Water Source Information:

Number	Capacity, GPM	Depth, FT	Diameter, IN	Aquifer Utilized
11	200	102	14	SG
3	120	87	12	SG
4	375	104	30	SG
6	75	58	8	SG
7	270	112	12	LS

Surface Water Source Information:
No Surface Water Sources

NOTE: If a well or intake has been added to your facility, please include the following information in addition to the water use amounts.

- | | |
|---------------------|----------------|
| WELL | INTAKE |
| 1) Capacity | 1) Capacity |
| 2) Depth | 2) Source Name |
| 3) Diameter | 3) Location |
| 4) Aquifer Utilized | |
| 5) Location | |

(Include a map for the locations)

ANNUAL WATER USE REPORT FORM FOR A
SIGNIFICANT WATER WITHDRAWAL FACILITY
FORM # : 21915R

Please complete items (1) through (7)

Facility Registration Number : 45-00130-PS

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
402 WEST WASHINGTON ST., ROOM W264
INDIANAPOLIS, INDIANA 46204
TELEPHONE (317) 232-4160

Water Withdrawal Report for Year Ending December 31, 2007

OWNER OF WATER WITHDRAWAL FACILITY

Twin Lakes Utilities, Inc
9201 East 123rd Avenue

Contact : Charles Alexander

9201 East 123rd Avenue
10996 Four Seasons Pl Ste 100G
Crown Point IN 46307

Crown Point IN 46307

Phone no.: (219) 988-3018

Phone no.: (219) 988-3018 219-226-1630 Ext. 101

WATER WITHDRAWAL RECORD

Thousand Gallons _____ Million Gallons ☒

(1) Units Used in Reporting Amounts Withdrawn (Check One): _____

(2) Monthly Report for Ground Water Sources

WELL#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
11	3.8	4.0	3.5	3.8	4.3	4.3	4.5	3.6	4.5	4.6	3.8	3.3	41.5
3	1.9	1.9	1.8	1.7	1.7	2.0	2.0	1.8	1.7	1.8	1.8	1.6	21.7
4	4.4	4.7	4.1	4.5	4.9	4.9	5.2	4.2	4.8	4.8	4.5	3.9	54.9
6	1.7	1.2	1.4	1.2	1.5	1.9	2.5	2.1	2.4	2.4	2.0	1.8	22.1
7	6.0	6.3	5.4	5.5	6.5	6.4	7.3	5.5	5.3	5.6	5.0	4.6	69.4

TOTAL 17.8 18.1 16.2 16.7 18.8 19.5 21.5 17.2 18.7 18.8 17.1 15.2 415.6

(3) Monthly Report for Surface Water Sources

INTAKE#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
---------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-------

TOTAL

METHOD OF MEASUREMENT

(4) Are withdrawal amounts based on flow meter readings? Check one ==> Yes ☒ No ☐

If 'No', please check and complete one of the lines:

Hours operated: Hour meter _____ Manual record _____

Acre inches: # of acres _____ # inches _____

NPDES data: Consumptive use _____ %

Other _____

TOTAL YEARLY OPERATION TIME

(5) Complete ONLY one:

No. of Hours _____

-OR- No. of Days 365

STATEMENT OF AFFIRMATION

(6) Is your registration information still correct? Check one ==> Yes ☒ No ☐ If 'No', please correct where appropriate.

(7) I hereby affirm under the penalties of perjury, that the information submitted herewith is to the best of my knowledge and belief, true, accurate, and complete.

Owner or Agent

Printed Name Charles Alexander

Signature [Signature] Date 2/13/08

WTP NO. 2 DAILY FLOW DATA		Month											
No.	Dec-06 MGD	Jan-07 MGD	Feb-07 MGD	Mar-07 MGD	Apr-07 MGD	May-07 MGD	Jun-07 MGD	Jul-07 MGD	Aug-07 MGD	Sep-07 MGD	Oct-07 MGD	Nov-07 MGD	Dec-07 MGD
1	0.18	0.19	0.18	0.16	0.22	0.25	0.07	0.44	No Data	0.09	0.17	0.16	0.14
2	0.19	0.15	0.18	0.14	0.19	0.24	0.22	0.38	No Data	0.28	0.18	0.16	0.16
3	0.14	0.18	0.17	0.22	0.20	0.28	0.19	0.26	No Data	0.29	0.17	0.18	0.15
4	0.17	0.19	0.19	0.21	0.19	0.25	0.21	0.42	No Data	0.18	0.18	0.13	0.15
5	0.17	0.17	0.08	0.19	0.21	0.28	0.25	0.36	No Data	0.31	0.17	0.16	0.24
6	0.17	0.17	0.13	0.19	0.20	0.22	0.28	0.26	No Data	0.17	0.17	0.16	0.26
7	0.16	0.19	0.09	0.20	0.21	0.25	0.20	0.38	No Data	0.28	0.17	0.15	0.26
8	0.16	0.28	0.09	0.24	0.22	0.25	0.26	0.45	No Data	0.29	0.16	0.17	0.25
9	0.18	0.08	0.08	0.20	0.25	0.26	0.21	0.36	No Data	0.33	0.18	0.15	0.24
10	0.19	0.16	0.09	0.20	0.20	0.25	0.30	0.32	No Data	0.24	0.16	0.16	0.24
11	0.19	0.19	0.10	0.19	0.22	0.24	0.21	0.24	No Data	0.27	0.17	0.16	0.26
12	0.06	0.16	0.08	0.21	0.20	0.24	0.36	0.23	No Data	0.26	0.13	0.15	0.25
13	No Data	0.18	0.08	0.22	0.17	0.36	0.32	0.33	No Data	0.30	0.17	0.17	0.24
14	No Data	0.18	0.08	0.19	0.22	0.36	0.24	0.34	No Data	0.32	0.16	0.16	0.24
15	No Data	0.17	0.09	0.22	0.16	0.42	0.34	0.28	No Data	0.20	0.18	0.15	0.30
16	No Data	0.19	0.09	0.20	0.11	0.24	0.34	0.31	No Data	0.26	0.15	0.17	0.21
17	No Data	0.19	0.08	0.21	0.16	0.25	0.33	0.36	No Data	0.22	0.17	0.14	0.22
18	No Data	0.18	0.09	0.22	0.15	0.27	0.24	0.24	No Data	0.20	0.16	0.17	0.25
19	No Data	0.20	0.09	0.19	0.19	0.30	0.27	0.32	No Data	0.16	0.20	0.14	0.24
20	No Data	0.21	0.09	0.21	0.28	0.34	0.26	0.27	No Data	0.17	0.18	0.17	0.28
21	No Data	0.14	0.13	0.18	0.29	0.30	0.37	0.38	No Data	0.20	0.13	0.15	0.23
22	No Data	0.17	0.16	0.21	0.26	0.28	0.35	0.38	No Data	0.18	0.16	0.16	0.23
23	No Data	0.18	No Data	0.21	0.26	0.27	0.24	0.29	No Data	0.17	0.16	0.15	0.24
24	0.25	0.18	No Data	0.19	0.28	0.28	0.25	0.31	No Data	0.17	0.16	0.17	0.23
25	0.30	0.19	No Data	0.21	0.27	0.19	0.33	0.29	No Data	0.17	0.17	0.16	0.25
26	0.17	0.20	0.14	0.21	0.27	0.32	0.23	0.24	No Data	0.18	0.16	0.14	0.25
27	0.18	0.18	0.15	0.20	0.27	0.28	0.27	0.37	No Data	0.18	0.16	0.15	0.10
28	0.17	0.23	0.14	0.20	0.24	0.34	0.23	0.38	No Data	0.19	0.14	0.17	0.11
29	0.19	0.13		0.20	0.25	0.29	0.32	0.34	No Data	0.16	0.16	0.14	0.24
30	0.20	0.17		0.20	0.25	0.32	0.34	0.30	No Data	0.18	0.16	0.16	0.15
31	0.17	0.18		0.22		0.31		0.24	No Data		0.17		0.05
Days	20	31	25	31	30	31	30	31	31	30	31	30	31
Total Flow, MG	3.6	5.5	2.9	6.2	6.6	8.7	8.0	10.1	N/A	6.6	5.1	4.7	6.6
Monthly Ave Flow, MGD	0.18	0.18	0.11	0.20	0.22	0.28	0.27	0.33	N/A	0.22	0.16	0.16	0.21
Daily Max Flow, MGD	0.30	0.28	0.19	0.24	0.29	0.42	0.37	0.45	N/A	0.33	0.20	0.18	0.30
Daily Min Flow, MGD	0.06	0.08	0.08	0.16	0.11	0.19	0.07	0.26	N/A	0.09	0.13	0.13	0.05
TOTALS													
Flow, MG	75												
Daily Average Flow, MGD	0.21												
Max Day Flow, MGD	0.45												
Min Day Flow, MGD	0.06												



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes WP# 2 PWSID Number 5245046

For the Month of December, 2006 IDEM Field Rep. P. Mahoney

Signed Chl P. Chl Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.


Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.26	0.00				1.11
2									1.38	0.01				0.86
3									2.66	0.01				0.99
4									3.05	0.01				1.10
5									2.68	0.00				0.90
6									1.88	0.03				1.14
7									3.13	0.00				1.04
8									3.02	0.01				0.92
9									3.20	0.03				0.90
10									3.24	0.00				1.22
11									3.29	0.01				0.87
12									3.28	0.03				1.02
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24									2.53	0.00				0.88
25									2.05	0.18				1.03
26									2.20	0.11				0.94
27									2.39	0.05				0.98
28									2.00	0.15				0.91
29									2.00	0.00				0.89
30									1.93	0.02				1.05
31									1.99	0.08				0.89

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds							Filters			Chlorine Residual			Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S.		
												Free	Total	Free		Total
1	184						6.5	1.75		21.7	8.4	0.61	1.67	0.65	0.70	Plant out of service from 12.13.06 to 12.23.06
2	192						7.5	1.75		22.5		0.91	1.13	0.57	0.77	
3	142						5.0	1.5		17.2		0.75	1.58	0.58	0.85	
4	172						7.0	1.5		20.3		0.50	1.46	0.66	0.74	
5	171						5.5	1.25		20.4		0.58	1.39	0.62	0.84	
6	187						7.0	1.5		21.8		0.91	1.22	0.77	0.89	
7	164						7.0	1.5		19.5		0.84	1.40	0.80	0.92	Total RW Gallons = 134,400 3.73%
8	162						6.0	1.5		19.2	0.70	1.27	1.02	1.14		
9	182						5.5	1.75		21.5	0.75	1.50	0.91	0.96		
10	194						7.5	1.75		22.9	0.84	1.47	0.84	0.92		
11	190						6.0	1.5		22.2	8.4	1.19	1.37	0.70	0.82	
12	56						3.0	1.5		7.7	1.29	1.49	0.64	0.73		
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																Monthly Water Treatment Total Gallons 3,600,000 Max. Day 296,000 Min. Day 56,000 Avg. Daily 180,000
23																
24	249						9.5	1.75		24	8.4	0.42	0.49	0.41	0.62	
25	296						11.0	1.75		24	8.4	0.93	1.51	0.44	0.61	
26	172						7.0	1.5		20.7	8.4	1.09	1.45	0.75	0.81	
27	181						6.0	1.75		20.4		1.39	1.57	0.55	0.70	
28	167						7.0	1.75		20	8.4	1.25	1.56	0.47	0.75	
29	194						6.5	1.5		22.8	8.4	0.45	1.18	0.60	0.63	
30	195						6.5	1.75		21.9		1.50	1.16	0.95	1.13	
31	170						6.0	1.75		20.3	8.4	1.10	1.39	0.85	1.05	

Attachment to URC 4-27
Page 68 of 99
Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015

State Form 34603 (R6 / 3-04)

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WP# WP2 PWSID Number 5245046
For the Month of January 2007 IDEM Field Rep. Paul Mahoney
Signed Chel R. Chel Title Operator
Certification Number 031702/040169

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.10	0.00				1.00
2									2.20	0.00				0.89
3									2.00	0.01				0.85
4									2.10	0.00				0.85
5									2.21	0.00				0.80
6									2.55	0.01				0.84
7									2.33	0.03				0.98
8									2.06	0.00				0.80
9									2.34	0.00				0.86
10									2.30	0.04				1.07
11									2.25	0.05				0.80
12									2.15	0.03				1.08
13									2.28	0.03				0.81
14									2.59	0.17				0.97
15									2.07	0.00				0.85
16									2.25	0.00				0.84
17									2.17	0.00				1.12
18									2.35	0.12				0.86
19									2.18	0.00				0.88
20									2.00	0.00				0.90
21									2.12	0.17				1.30
22									2.05	0.09				0.82
23									2.24	0.00				0.89
24									2.69	0.00				0.86
25									2.15	0.00				1.03
26									2.09	0.02				1.08
27									2.25	0.03				0.82
28									2.17	0.01				1.07
29									2.40	0.16				1.20
30									2.10	0.05				1.19
31									2.10	0.00				0.92

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D.S.		
												Free	Total	Free		Total
1	186						6.0	1.0		21.1		1.26	1.31	0.49	0.56	Total BW Gal = 159,600 2.9%
2	151						6.0	2.0		18.3	8.4	0.87	1.13	0.39	0.52	
3	180						6.5	1.0		21.5	8.4	0.80	1.00	0.40	0.55	
4	187						6.0	1.3		21.1		0.91	1.10	0.74	0.86	
5	166						7.5	1.5		20.0	8.4	0.95	1.18	0.42	0.52	
6	174						7.5	1.5		20.6	8.4	0.54	1.15	0.83	0.93	
7	186						7.5	1.8		22.0	8.4	0.93	1.30	0.89	0.96	
8	283						9.0	1.3		24.0	8.4	0.93	1.00	0.55	0.72	
9	84						5.0	1.5		9.2	8.4	1.07	1.38	0.89	1.15	
10	160						4.0	1.3		19.5	8.4	0.91	1.10	0.49	0.60	
11	186						6.5	1.3		22.0	8.4	0.65	0.98	0.46	0.61	
12	164						6.5	2.5		19.6	8.4	0.54	1.07	0.84	0.96	
13	184						5.5	0.8		21.0		0.92	1.16	0.57	0.64	
14	176						6.0	2.0		21.1	8.4	1.18	1.60	0.64	0.73	
15	171						6.0	1.5		20.4	8.4	0.96	1.20	0.79	0.89	
16	186						7.0	2.0		21.3		0.95	1.18	0.77	0.95	
17	191						6.5	2.3		21.5		1.12	1.22	0.79	0.91	
18	177						6.0	2.3		21.0	8.4	0.89	1.23	0.75	0.94	
19	198						7.0	2.3		23.3	8.4	1.01	1.24	0.62	0.68	
20	206						7.0	2.0		23.3		1.40	1.55	0.65	0.94	
21	143						5.5	1.3		16.4		0.83	1.27	0.71	0.68	
22	167						6.0	1.8		20.1	8.4	1.20	1.36	0.77	0.85	
23	180						6.0	1.8		20.6		0.99	1.18	0.67	0.78	
24	182						6.0	1.8		21.4	8.4	0.51	0.94	0.76	0.88	
25	186						7.0	1.5		21.2		1.11	1.36	0.62	0.70	
26	199						5.0	2.0		23.2	8.4	1.13	1.28	0.66	0.77	
27	178						6.5	1.5		20.3		0.94	1.08	0.71	0.84	
28	227						7.5	2.5		24.0		1.14	1.21	0.79	0.89	
29	132						4.0	1.8		16.1	8.4	0.94	1.12	0.58	0.71	
30	174						7.0	1.5		20.1		0.92	1.19	0.73	0.81	
31	177						5.5	1.8		2	8.4	0.76	1.01	0.93	1.13	
												Monthly Water Treatment				
												Total Gallons			5,541,000	
												Max. Day			283,000	
												Min. Day			84,000	
												Avg. Daily			178,742	
Mail To: Department of Environmental Management Drinking Water Branch 66-34 100 N. Senate Ave P. O. Box 8015 Indianapolis, IN 46206-8015																

Mail To
Department of Environmental Management
Drinking Water Branch 60-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION OF WATER TREATMENT PLANT

State Form 34609 (R7 / 9-06)

System Name Twin Lakes Utilities Water Plant #2 PWSID Number 5245046For the Month of February IDEM Field Rep Paul MahoneySigned _____ Title Operator

I certify, *under penalty of law*, by this signature that this document was prepared by me, or under my direction, and the information submitted is to the best of my knowledge and belief, true, accurate and complete. *I am also aware that there are significant penalties for submitting false information.*

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.18	0.05				1.08	
2									2.20	0.03				1.11	
3									2.13	0.01				0.96	
4									3.00	0.02				0.88	
5									2.28	0.19				1.09	
6									2.64	0.02				0.95	
7									2.55	0.01				0.96	
8									2.03	0.01				0.88	
9									3.30	0.02				0.91	
10									2.16	0.01				0.85	
11									2.61	0.10				1.01	
12									3.28	0.01				0.86	
13									2.63	0.00				1.14	
14									3.30	0.01				1.19	
15									1.79	0.01				1.03	
16									3.30	0.01				1.07	
17									3.18	0.00				0.86	
18									3.23	0.03				0.85	
19									1.79	0.02				1.12	
20									2.49	0.00				0.95	
21									2.98	0.00				0.83	
22									2.00	0.00				0.90	
23									2.32	0.00				1.04	
24															
25															
26									2.14	0.00				0.83	
27									2.08	0.00				1.07	
28									2.04	0.00				1.15	
29															
30															
31															

* All parameters are to be expressed in mg/l except pH and turbidity
DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated	Chemicals Used -- Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos-phate	Filter Run (hours)	Gallons per wash x 1000	Free	Total	Free		Total
1	183						6.0	2.0		20.9		0.88	1.04	0.72	0.82	
2	176						6.5	1.5		21.0	8.4	0.83	1.32	0.97	1.17	
3	172						6.5	1.5		19.8		1.30	1.50	0.60	0.84	
4	193						6.0	1.8		21.9	8.4	0.33	1.28	0.72	0.93	Total Backwash Gallons
5	78						3.5	0.8		10.5	8.4	1.06	1.25	0.83	1.08	= 109,200
6	127						5.0	1.8		15.8		0.27	1.77	1.02	1.12	3.3%
7	87						4.0	0.8		11.9	8.4	1.41	1.71	0.64	0.81	
8	87						4.5	1.0		11.0		1.17	1.44	0.45	0.68	
9	82						4.0	0.8		11.0	8.4	0.88	1.09	0.74	1.24	
10	92						3.5	0.8		11.1		1.12	1.23	0.92	1.05	
11	102						5.0	1.0		12.7		1.29	1.38	1.21	1.41	
12	84						3.0	1.0		11.7	8.4	1.17	1.33	1.19	1.60	
13	80						3.5	1.3		9.8		0.82	1.45	1.08	1.17	
14	77						3.5	0.8		10.5	8.4	0.64	1.13	0.92	1.07	
15	91						3.0	0.5		11.3		0.92	1.22	0.96	1.04	
16	86						4.5	0.8		11.7	8.4	1.27	1.51	1.13	1.27	
17	82						3.5	1.0		10.3		1.28	1.50	0.50	0.60	
18	90						3.5	0.5		10.9		0.58	0.66	0.52	0.63	
19	86						3.5	0.8		11.6	8.4	1.04	1.24	0.83	0.91	
20	88						3.5	1.0		11.0		0.79	0.81	0.64	0.80	
21	129						4.5	1.0		19.1	8.4	1.44	1.65	0.99	1.29	Monthly Water Treatment
22	161						6.5	1.0		22.3		1.84	1.89	0.61	1.08	Total Gallons 3,302,000
23											8.4	1.45	1.68	1.15	1.27	Max. Day 193,000
24												1.34		0.57	1.27	Min. Day 77,000
25												1.38		1.03	1.10	Avg. Daily 118,000
26	141						5.5	1.5		21.3	8.4	1.31	1.40	1.10	1.33	
27	152						6.0	2.0		21.4		1.44	1.55	0.62	0.74	
28	136						4.5	1.3		20.2	8.4	1.56	1.63	0.50	0.79	
29																Mail to:
30																Indiana Department of
31																Environmental Management
																Drinking Water Branch, MC 66-34
																100 North Senate Avenue
																Indianapolis, IN 46204-2251



MONTHLY REPORT OF OPERATION OF WATER TREATMENT PLANT

State Form 34609 (R7 / 9-06)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities Water Plant #2 PWSID Number 5245046

For the Month of March 2007 IDEM Field Rep Paul Mahoney

Signed _____ Title Operator

I certify, under penalty of law, by this signature that this document was prepared by me, or under my direction, and the information submitted is to the best of my knowledge and belief, true, accurate and complete. *I am also aware that there are significant penalties for submitting false information.*

Certification Number 031702 / 040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride	
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished	
1									2.05	0.00				1.11	
2									1.78	0.00				1.00	
3									2.02	0.05				1.26	
4									2.20	0.01				0.98	
5									2.39	0.04				1.04	
6									3.06	0.01				1.06	
7									2.41	0.00				0.89	
8									2.25	0.01				1.03	
9									2.50	0.01				1.15	
10															
11															
12									2.78	0.12				1.19	
13									2.73	0.00				0.99	
14									2.42	0.00				1.38	
15									2.46	0.00				0.84	
16									2.46	0.02				1.07	
17									2.48	0.00				0.98	
18									2.39	0.00				0.84	
19									2.48	0.02				1.16	
20									2.54	0.00				0.73	
21									2.51	0.04				1.04	
22									2.48	0.00				1.00	
23									3.05	0.00				0.93	
24									3.07	0.00				0.97	
25									2.58	0.00				1.07	
26									2.32	0.02				1.10	
27									2.79	0.00				0.96	
28									2.51	0.00				1.18	
29									2.54	0.00				1.08	
30									2.36	0.03				1.14	
31									2.30	0.01				1.16	

* All parameters are to be expressed in mg/l except pH and turbidity
DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated	Chemicals Used -- Pounds							Filters			Chlorine Residual				Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S.		
	1000 gallons											Free	Total	Free	Total	
1	155						5.5	1.5		21.9		0.76	0.88	0.84	1.03	
2	139						4.0	1.8		21.0	8.4	0.67	0.83	0.90	1.15	
3	215						7.5	2.0		24.0		0.97	1.36	0.59	0.84	
4	210						7.5	1.8		24.0		1.35	1.46	1.06	1.26	
5	186						8.5	2.3		24.0	8.4	1.67	1.67	1.08	1.32	Total Backwash Gallons
6	187						6.0	1.8		24.0		1.68	1.74	0.81	0.82	= 117,600
7	195						9.5	2.0		24.0	8.4	1.18	1.24	0.86	1.06	1.89%
8	235						9.0	2.3		24.0		1.36	1.39	0.60	1.14	
9	195						7.1	1.8		24.0	8.4	1.04	1.31	0.66	0.76	
10	200						8.0	2.0		24.0		1.13		0.60	0.72	
11	185						7.2	1.7		24.0		1.06		0.65	0.70	
12	206						7.5	2.3		24.0	8.4	1.27	1.54	0.69	1.09	
13	215						8.5	2.0		24.0		1.12	1.26	0.90	1.11	
14	193						7.5	1.8		24.0	8.4	1.12	1.17	0.86	1.00	
15	216						7.0	1.8		24.0		1.03	1.18	0.69	0.72	
16	200						8.5	1.8		24.0	8.4	1.24	1.33	0.79	1.07	
17	211						8.5	2.3		24.0		1.21	1.32	0.95	1.23	
18	215						7.5	2.3		24.0		1.12	1.46	1.20	1.35	
19	194						7.0	2.3		24.0	8.4	1.33	1.47	1.06	1.25	
20	209						8.0	2.3		24.0		1.55	1.56	0.90	1.17	
21	177						6.5	1.8		24.0		1.31	1.35	1.04	1.12	Monthly Water Treatment
22	214						8.0	1.8		24.0	8.4	1.06	1.14	0.84	1.04	Total Gallons 6,213,000
23	214						8.0	2.3		24.0		1.22	1.33	1.02	1.06	Max. Day 235,000
24	194						6.0	1.8		24.0	8.4	1.22	1.41	1.05	1.06	Min. Day 155,000
25	214						8.0	2.5		24.0		0.96	1.01	1.01	1.07	Avg. Daily 200,419
26	211						8.0	2.0		24.0	8.4	1.03	1.09	0.81	1.00	
27	200						7.0	2.0		24.0		1.15	1.23	0.81	1.00	
28	204						7.5	2.0		24.0	8.4	1.07	1.27	0.70	0.90	Mail to:
29	201						8.0	2.0		24.0		1.18	1.26	0.60	0.82	Indiana Department of Environmental Management
30	200						7.0	2.3		24.0	8.4	1.09	1.24	0.83	0.94	Drinking Water Branch, MC 66-34 100 North Senate Avenue Indianapolis, IN 46204-2251
31	215						7.5	2.0		24.0		0.80	1.00	0.41	0.94	

Mail to:
**Indiana Department of
Environmental Management**
Drinking Water Branch, MC 66-34
100 North Senate Avenue
Indianapolis, IN 46204-2251



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name TWIN LAKES UTILITIES PLANT #2 PWSID Number 5245046

For the Month of APRIL 2007 IDEM Field Rep. PAUL MAHONEY

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031070 / 040209

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.22	0.01				0.94
2									2.27	0.09				0.87
3									2.27	0.04				0.90
4									1.82	0.01				1.26
5									2.00	0.02				1.11
6									2.12	0.02				0.92
7									2.09	0.00				0.98
8									2.03	0.02				0.86
9									1.82	0.05				1.20
10									2.00	0.05				1.28
11									1.94	0.00				0.97
12									2.55	0.01				1.08
13									1.77	0.00				1.03
14									2.60	0.02				1.00
15									2.60	0.00				1.02
16									2.66	0.02				0.99
17									2.71	0.08				0.95
18									2.66	0.05				1.14
19									2.60	0.07				0.80
20									2.46	0.04				1.10
21									2.40	0.10				0.82
22									2.70	0.08				1.05
23									2.68	0.00				0.82
24									2.68	0.04				0.80
25									2.71	0.07				0.80
26									2.80	0.05				0.98
27									2.77	0.09				0.80
28									2.26	0.00				0.77
29									2.07	0.06				0.86
30									2.00	0.04				1.15
31														

* All parameters are to be expressed in mg/l except pH and turbidity
DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds							Filters		Chlorine Residual			Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phosphate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap	D S	
												Free	Total	
1	216						8.0	2.0		24	8.4	1.20	1.26	0.77 0.97
2	191						8.0	2.0		24		1.23	1.35	0.59 0.64
3	204						7.0	1.8		24	8.4	1.26	1.31	0.90 1.10
4	191						5.0	2.0		24		1.04	1.37	0.61 0.70
5	212						8.0	2.3		24	8.4	0.83	1.05	0.83 0.92
6	196						7.5	1.0		24		0.86	1.00	0.55 0.62
7	207						7.0	1.0		24		0.90	1.02	0.95 0.99
8	218						8.0	2.0		24	8.4	0.99	1.20	0.73 1.01
9	247						9.0	2.3		24	8.4	1.24	1.47	0.54 0.89
10	197						8.0	2.3		24	8.4	0.93	1.10	0.70 0.90
11	215						8.5	2.0		24		0.78	1.30	0.91 1.03
12	196						7.0	1.8		24	8.4	0.91	1.41	0.55 0.97
13	166						6.0	1.5		24		1.01	1.23	0.79 1.07
14	216						8.0	1.8		24	8.4	0.66	1.71	0.66 0.71
15	161						6.5	2.3		21	8.4	0.81	1.64	0.36 0.52
16	113						4.0	0.5		16		0.62	1.01	0.41 0.50
17	162						6.0	1.3		20	8.4	0.51	0.96	0.44 0.58
18	153						4.5	1.8		20		0.55	0.97	0.38 0.83
19	194						7.0	1.3		24	8.4	0.72	0.91	0.49 0.61
20	276						10.0	2.0		14	8.4	0.64	1.02	0.54 0.60
21	287						8.0	1.8		16	8.4	0.94	1.16	0.55 0.60
22	263						9.5	2.5		20	8.4	0.67	1.21	0.65 0.77
23	260						8.0	2.0		15		1.23	1.48	0.83 0.87
24	275						10.5	1.8		15	8.4	1.01	1.12	0.94 0.98
25	274						9.5	1.8		15		0.94	1.05	0.80 0.90
26	267						8.5	2.5		15	8.4	0.99	1.03	0.88 1.07
27	273						15.0	1.8		15		0.85	0.97	0.75 0.89
28	236						8.5	1.8		15	8.4	1.14	1.31	0.85 0.90
29	252						8.5	2.0		15		0.94	1.09	0.57 0.64
30	248						8.5	2.0		15	8.4	0.80	1.00	0.71 0.77
31														

Monthly Water Treatment

Total Gallons	6,566.00
Max. Day	287.00
Min. Day	113.00
Avg. Daily	219.00

Total Backwash
Gallons = 151,200
2.3%

Mail To:
Department of Environmental Management
Drinking Water Branch 60-14
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name WATER PLANT #2 (TWIN LAKES) PWSID Number 5245046

For the Month of May 2007 IDEM Field Rep. P. Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.66	0.04				1.00
2									2.68	0.07				1.00
3									2.00	0.03				0.95
4									2.20	0.07				0.81
5									2.13	0.00				0.86
6									2.19	0.20				0.94
7									2.05	0.00				0.82
8									2.27	0.00				0.81
9									2.12	0.00				1.02
10									2.29	0.03				0.80
11									2.17	0.01				0.84
12									2.25	0.00				0.95
13									2.12	0.08				1.20
14									2.31	0.09				0.89
15									2.34	0.14				1.10
16									2.49	0.34				1.03
17									2.50	0.00				1.30
18									2.13	0.00				1.14
19									2.20	0.06				1.10
20									2.20	0.03				1.04
21									3.04	0.27				1.17
22									1.95	0.01				1.20
23									2.00	0.03				0.94
24									2.12	0.02				1.04
25									2.14	0.28				1.06
26									2.78	0.00				0.97
27									2.56	0.00				1.01
28									1.79	0.04				0.96
29									2.18	0.00				0.91
30									1.63	0.00				1.28
31									2.03	0.00				0.91

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD.

Date	Water Treated	Chemicals Used -- Pounds							Filters	Chlorine Residual				Remarks			
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride		Phosphate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S		
													Free		Total	Free	Total
1	253						8.5	1.5		24	8.4	0.87	1.05	0.60	0.70	Total Backwash Gallons = 210,000 2.4%	
2	241						9.0	1.5				0.81	0.93	0.89	0.98		
3	278						8.5	1.5				0.81	1.02	0.79	0.92		
4	253						8.5	2.0			8.4	0.68	0.89	0.81	0.83		
5	279						9.0	1.8			8.4	0.85	0.93	0.71	0.82		
6	222						9.0	1.5			8.4	0.79	1.27	0.41	0.61		
7	250						8.5	2.0			8.4	0.82	1.02	0.63	0.66		
8	245						7.5	1.8			8.4	0.85	1.03	0.72	0.85		
9	258						8.0	2.3				0.67	0.88	0.65	0.86		
10	252						9.0	2.3			8.4	0.72	0.91	0.61	0.75		
11	236						8.0	1.5			8.4	0.71	0.92	0.76	0.79		
12	244						8.0	1.8				0.76	0.92	0.70	0.86		
13	356						12.5	1.5			8.4	0.97	1.12	0.87	0.93		
14	362						13.0	3.0			8.4	0.77	1.17	0.72	0.84		
15	421						15.0	3.5			8.4	0.62	1.65	0.67	0.88		
16	240						8.5	2.3			8.4	0.91	1.50	0.64	0.82		
17	251						11.0	2.0			8.4	0.92	1.14	0.63	0.81		
18	268						4.0	2.3			8.4	0.91	1.12	0.68	0.84		
19	303						12.5	3.0			8.4	0.90	1.11	0.71	0.81		
20	338						12.0	2.5			8.4	0.77	0.85	0.63	0.80		
21	297						10.5	3.0			8.4	1.03	1.09	0.70	0.85		
22	284						11.0	2.5			8.4	1.08	1.26	0.60	0.70		
23	267						9.5	3.3				1.05	1.39	0.61	0.70		
24	283						11.0	2.5		24	8.4	0.88	0.90	0.65	0.74		
25	191						7.0	1.8		23.3	8.4	0.89	1.14	0.74	0.78		
26	319						11.0	3.0		24	8.4	0.80	1.07	0.43	0.52		
27	283						11.0	2.8			8.4	0.67	0.92	0.50	0.67		
28	337						13.0	3.5			8.4	0.93	1.20	0.56	0.79		
29	287						17.5	3.5			8.4	0.77	0.97	0.76	0.89		
30	319						11.5	2.8			8.4	0.99	1.27	0.62	0.89		
31	310						12.0	3.0		24	8.4	0.69	0.91	0.63	0.71		

Attachment to IURC 4-27
Page 3 of 93

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015

Total Backwash Ga
= 210,000
2.4%

Monthly Water Treatment			
Total Gallons	8,727,000		
Max. Day	424,000		
Min. Day	191,000		
Avg. Daily	281,500		

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-4015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name WATER PLANT #2 (TWIN LAKES)

PWSID Number 5245046

For the Month of JUNE, 2007

IDEM Field Rep. P. Mahoney

Signed Chad P. Chappell

Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									1.85	0.00				1.30
2									2.54	0.02				0.95
3									2.62	0.02				1.20
4									1.96	0.00				1.32
5									2.29	0.04				1.07
6									2.00	0.00				0.98
7									2.54	0.02				1.14
8									1.85	0.00				0.87
9									3.30	0.01				1.02
10									2.04	0.01				1.11
11									2.53	0.19				0.91
12									1.88	0.00				0.82
13									2.36	0.05				0.82
14									2.42	0.03				1.07
15									2.40	0.03				0.91
16									2.42	0.00				1.06
17									2.46	0.07				1.01
18									2.41	0.08				1.06
19									2.20	0.06				0.94
20									3.30	0.01				1.44
21									2.85	0.00				1.14
22									2.62	0.13				1.22
23									2.71	0.01				1.30
24									2.77	0.00				0.84
25									2.68	0.08				0.90
26									2.54	0.03				0.87
27									2.25	0.04				0.82
28									2.05	0.04				1.02
29									2.10	0.07				1.15
30									1.88	0.01				1.34
31														

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Filters		Chlorine Residual			Remarks
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (Hours)	Gallons per wash x 1000	Plant Tap	D. S.	
1	68						2.5	2.5		8.2	8.4	Free	Total	
2	220						9.0	2.0		24	8.4	0.83	1.04	0.67 0.84
3	193						8.5	1.5		24	8.4	0.50	1.10	0.66 0.86
4	208						7.5	1.8		23.5	8.4	0.88	1.19	0.61 0.79
5	248						9.5	2.3		24	8.4	0.84	1.34	0.64 0.82
6	279						11.0	3.3			8.4	0.78	1.03	0.70 0.86
7	199						8.0	3.0			8.4	0.95	1.25	0.82 0.88
8	260						9.5	2.5			8.4	1.03	1.47	0.59 0.86
9	214						8.5	2.0			8.4	0.84	1.13	0.65 0.99
10	301						11.5	3.3			8.4	1.11	1.30	0.50 0.72
11	205						8.0	2.0			8.4	1.03	1.42	0.81 0.98
12	363						14.5	3.0			8.4	0.87	1.44	0.80 0.97
13	317						12.5	3.5			8.4	1.06	1.25	0.61 0.87
14	235						12.0	2.3				1.24	1.50	0.67 0.78
15	343						13.5	2.5				0.95	1.64	0.73 0.96
16	342						12.5	4.0				0.91	1.18	0.67 0.73
17	331						10.0	4.3				1.16	1.33	0.58 0.66
18	239						10.5	2.8				0.87	1.42	0.71 0.82
19	270						10.5	2.3				0.70	1.41	0.68 0.79
20	261						10.5	3.0				1.12	1.23	0.73 0.85
21	371						14.5	3.8				0.92	1.07	0.53 0.66
22	352						13.0	3.0				0.70	1.33	0.39 0.75
23	235						9.5	2.3			8.4	0.88	1.47	0.65 0.83
24	245						10.0	3.0			8.4	1.33	1.55	0.68 0.78
25	330						12.5	3.5			8.4	1.10	1.88	0.70 0.95
26	225						9.5	2.5				1.13	1.35	0.67 0.72
27	265						10.0	2.5				0.73	1.47	1.05 1.17
28	233						9.0	2.5				1.04	1.50	0.70 1.13
29	319						11.5	2.5				1.05	1.41	0.52 0.72
30	340						14.0	4.0		24	8.4	1.11	1.50	0.64 0.78
31												0.63	1.59	0.42 0.61
Total BW Gallons = 218,400 2.7%														
Monthly Water Treatment Total Gallons 8,011,000 Max. Day 371,000 Min. Day 68,000 Avg. Daily 267,000														

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities ^{Water} Plant # 2 PWSID Number 3245046

For the Month of July 2007 IDEM Field Rep. Paul Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.46	0.06				0.94
2									2.19	0.23				1.27
3									2.37	0.17				0.93
4									2.36	0.04				0.83
5									2.46	0.07				1.06
6									2.66	0.05				1.11
7									2.53	0.02				1.22
8									2.62	0.14				1.17
9									2.45	0.23				1.03
10									3.30	0.00				1.58
11									2.27	0.03				1.00
12									1.89	0.02				0.81
13									2.34	0.02				1.06
14									3.00	0.00				1.01
15									1.35	1.02				1.21
16									3.04	0.00				1.36
17									3.09	0.00				1.12
18									2.43	0.00				0.92
19									2.19	0.00				1.02
20									2.33	0.07				0.95
21									2.14	0.00				1.19
22									2.40	0.08				0.82
23									2.44	0.14				1.20
24									2.40	0.05				0.98
25									2.21	0.03				0.89
26									2.50	0.05				0.82
27									2.45	0.03				0.90
28									2.15	0.13				0.94
29									2.21	0.14				1.34
30									2.42	0.05				0.96
31									2.49	0.00				0.82

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds						Filters		Chlorine Residual			Remarks		
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phosphate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D S	
												Free	Total	Free	Total
1	436						16.5	4.5		24	8.4	0.59	1.78	0.34	0.48
2	384						15.5	3.5				0.93	1.44	0.33	0.60
3	264						11.0	3.0				0.57	1.74	0.58	0.74
4	424						14.0	4.0				0.67	1.30	0.57	0.76
5	362						13.0	3.3				0.48	1.30	0.39	0.43
6	262						12.0	2.5				0.85	1.60	0.52	0.68
7	379						16.0	3.5				0.72	1.50	0.76	0.82
8	448						18.0	4.3				0.85	1.60	0.64	0.72
9	362						15.0	4.3				0.50	1.46	0.40	1.42
10	316						13.0	2.3				0.71	1.43	0.58	0.61
11	238						11.0	2.3				0.71	1.34	0.51	0.65
12	234						10.5	2.3				0.76	1.10	0.55	0.68
13	327						13.5	3.0				0.71	1.16	0.52	0.66
14	335						15.0	3.5				0.80	1.17	0.58	0.68
15	277						13.5	2.5				0.96	1.50	0.66	0.76
16	309						14.0	3.3				0.92	1.51	0.79	0.74
17	362						14.5	3.0				0.82	1.80	0.58	0.66
18	239						10.5	2.3				0.84	1.08	0.75	0.80
19	302						13.5	3.0				1.04	1.72	0.45	0.64
20	269						11.5	2.3				0.55	1.31	0.70	0.80
21	381						16.5	3.5				0.81	1.08	0.84	1.13
22	384						15.0	3.8				0.84	1.75	0.77	0.85
23	294						12.0	3.0				0.76	1.71	0.63	0.75
24	313						13.5	3.4				0.81	1.43	0.66	0.88
25	293						12.0	3.0				0.82	1.70	0.91	1.02
26	293						13.0	3.3				0.73	1.54	0.64	0.82
27	374						15.5	3.5				0.95	1.58	0.63	0.77
28	380						17.0	3.3				1.04	1.13	0.57	0.77
29	342						15.5	3.5				0.64	1.67	0.59	0.78
30	297						13.0	2.8				1.02	1.41	0.72	0.91
31	238						11.0	2.0		24	8.4	0.35	1.62	0.86	1.12

Total BW Gallons
= 260,400
2.57%

Monthly Water Treatment
Total Gallons 10,118,000
Max. Day 448,000
Min. Day 264,000
Avg. Daily 326,387

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-0015

Mail To
Department of Environmental Management
Drinking Water Branch 66.34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-0015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WTP # 2 PWSID Number 5245046

For the Month of September 2007 IDEM Field Rep. Paul Mahoney

Signed Paul Mahoney Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.73	0.04				1.04
2									2.91	0.00				0.99
3									2.84	0.00				1.16
4									2.75	0.03				1.18
5									2.84	0.01				1.12
6									2.31	0.00				0.89
7									2.61	0.02				1.07
8									2.72	0.02				1.08
9									2.45	0.03				1.19
10									2.74	0.01				1.08
11									2.21	0.00				0.85
12									2.32	0.04				0.98
13									2.43	0.04				0.88
14									2.45	0.03				1.11
15									2.50	0.02				1.09
16									2.75	0.01				1.23
17									2.61	0.03				0.94
18									2.42	0.00				0.91
19									2.59	0.03				1.19
20									2.54	0.02				0.95
21									2.60	0.04				1.12
22									2.48	0.04				1.03
23									2.70	0.00				0.90
24									2.43	0.00				1.16
25									2.69	0.04				1.19
26									2.52	0.01				1.20
27									2.47	0.01				1.16
28									2.46	0.05				0.95
29									2.45	0.01				1.17
30									2.43	0.00				1.12
31														

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

Date	Water Treated (1000 gallons)	Chemicals Used -- Pounds							Filters	Chlorine Residual			Remarks			
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride		Phosphate	Plant Tap			D S		
											Free	Total			Free	Total
1	92						4.5	1.3		13	8.4	1.01	1.76	0.92	1.21	Backwash Gallons = 252,000 3.9%
2	280						11.0	3.5		24		0.81	1.53	1.00	1.32	
3	285						11.0	2.5		24		0.60	1.17	0.66	0.90	
4	179						6.5	2.3		24		0.89	1.46	0.69	0.82	
5	309						14.0	3.3		24		0.78	1.64	0.64	0.80	
6	168						6.5	1.3		23		1.01	1.21	0.60	0.92	
7	282						10.0	3.5		24		0.94	1.60	0.63	0.93	
8	288						12.0	3.3		24		1.14	1.59	1.02	1.17	
9	329						14.0	2.5		24		1.06	1.44	0.80	0.96	
10	244						9.5	2.5		24		1.08	1.30	0.91	1.12	
11	273						10.0	3.5		24		1.14	1.77	0.82	1.01	
12	261						12.0	2.5		24		1.02	1.58	0.75	0.92	
13	296						12.0	3.5		24		1.24	1.58	0.87	0.99	
14	316						13.0	3.5		24		1.19	1.41	1.00	1.14	
15	197						7.0	2.0		24		1.09	1.51	1.02	1.20	
16	260						9.5	3.0		24		0.60	1.22	1.00	1.23	
17	216						8.5	2.0		24		1.04	1.23	0.74	0.86	
18	197						7.5	2.8		24		1.12	1.49	0.68	0.80	
19	158						6.5	1.8		21		0.73	1.41	0.70	0.84	
20	173						8.0	1.8		23		1.03	1.69	0.73	0.85	
21	204						6.5	2.5		24		0.67	1.50	0.62	0.79	
22	179						12.0	2.0		24		1.21	1.48	0.68	0.84	
23	173						9.0	1.5		23		1.31	1.95	0.73	0.94	
24	170						7.5	2.0		23		1.21	1.86	0.93	1.25	
25	169						9.5	1.8		23		1.30	1.99	1.25	1.36	
26	177						8.0	1.8		24		1.11	2.60	1.18	1.35	
27	178						10.0	1.8		24		1.08	2.62	1.12	1.32	
28	190						9.0	2.8		24		1.05	2.19	1.05	1.30	
29	164						9.0	1.3		22		1.06	2.30	0.86	1.06	
30	181						9.5	1.5		24	8.4	1.10	2.18	0.33	0.38	
31																

Monthly Water Treatment	Total Gallons	Max. Day	Min. Day	Avg. Daily
	6,407,000	329,000	92,000	214,000

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-0015

Page Form 54009 (Rev. 3-84)

Monthly Water Treatment

Total Gallons	6,407,000
Max. Day	329,000
Min. Day	92,000
Avg. Daily	214,000

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

CUII Response to IURC DE #4

Attachment to IURC 4-27

Page 85 of 88

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WTP # 2 PWSID Number 324504b

For the Month of October, 2007 IDEM Field Rep. Paul Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/04016

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.42	0.03				1.17
2									2.46	0.03				1.11
3									2.48	0.04				0.94
4									2.54	0.04				1.07
5									2.42	0.03				0.93
6									2.62	0.03				0.97
7									2.45	0.02				1.05
8									2.65	0.03				1.10
9									2.52	0.02				1.14
10									2.68	0.02				1.08
11									2.64	0.04				1.15
12									2.58	0.04				0.93
13									2.61	0.07				1.05
14									2.54	0.04				0.94
15									2.58	0.05				0.88
16									2.57	0.02				1.06
17									2.31	0.07				0.96
18									2.56	0.02				1.08
19									2.54	0.01				0.98
20									2.46	0.00				0.99
21									2.65	0.05				0.88
22									2.56	0.04				0.92
23									2.61	0.06				1.19
24									2.54	0.02				1.08
25									2.51	0.03				0.82
26									2.59	0.01				1.00
27									2.58	0.01				0.80
28									2.51	0.00				1.11
29									2.56	0.01				1.01
30									2.57	0.01				1.08
31									2.56	0.03				1.02

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD.

FWO LV - 267046

Date	Water Treated 1000 gallons	Chemicals Used -- Pounds							Filters		Chlorine Residual			Remarks		
		Sulf	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phos- phate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap			D. S.	
												Free	Total		Free	Total
1	167						9.0	1.8		23	8.4	1.15	2.36	1.23	1.24	Total BW Gals = 235,200 = 4.6%
2	175						8.5	1.5		23		1.12	2.05	1.11	1.30	
3	169						8.5	1.5		23		1.08	2.00	0.98	1.18	
4	176						10.5	1.8		23		0.99	2.12	1.02	1.20	
5	173						8.0	2.5		22		0.88	2.10	0.90	1.26	
6	170						9.0	2.0		23		0.74	1.86	0.66	0.78	
7	171						8.0	1.5		24		0.84	1.09	0.57	0.64	
8	161						7.5	1.5		23		0.66	1.72	0.75	0.87	
9	176						10.5	1.8		24		0.70	1.95	0.65	0.81	
10	160						8.0	2.0		23		0.83	1.81	0.67	0.84	
11	171						10.0	2.0		19		0.77	1.89	0.72	0.85	
12	132						7.0	1.3		24		1.15	2.22	0.69	0.82	
13	166						9.0	1.8		23		1.04	1.96	0.64	0.79	
14	159						9.0	1.8		26		1.06	2.06	0.88	1.04	
15	177						11.0	1.8		22		1.30	2.30	0.97	1.59	
16	154						7.5	1.8		24		0.97	2.16	1.10	1.22	
17	166						8.5	1.8		24		0.99	1.32	1.10	1.17	
18	164						9.0	1.3		24	8.4	1.16	1.62	1.07	1.26	
19	198						12.0	3.3		24		1.22	1.92	1.10	1.28	
20	179						9.5	1.8		24		0.95	1.32	1.10	1.25	
21	131						7.5	1.3		20	8.4	1.54	1.95	1.07	1.19	
22	156						8.0	1.8		23		1.39	2.12	0.98	1.08	
23	157						8.5	2.0		23		0.93	1.89	0.94	1.12	
24	156						9.5	2.3		23		0.91	1.77	0.90	1.10	
25	170						8.5	2.3		24		1.07	2.03	1.00	1.12	
26	163						8.5	1.8		24		1.15	2.09	0.93	1.07	
27	160						8.5	2.0		20		0.91	1.27	0.49	0.61	
28	143						6.0	1.8		24	8.4	1.15	1.85	0.82	1.08	
29	162						10.5	2.5		23	8.4	1.21	2.38	0.87	1.04	
30	164						8.0	2.0		24		1.27	2.42	0.93	1.07	
31	165						8.0	1.8		24	8.4	1.16	1.83	1.19	1.46	

Page Form 1420 (Rev. 3-84)

Attachment to IURC 4-27

Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P. O. Box 6015
Indianapolis, IN 46206-6015

Total BW Gals
= 235,200
= 4.6%

Monthly Water Treatment

Total Gallons	5,090,000
Max. Day	198,000
Min. Day	131,000
Avg. Daily	164,194

Mail To:
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave
P.O. Box 6015
Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities #2 PWSID Number 5245046

For the Month of NOVEMBER, 2007 IDEM Field Rep. Paul Maloney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.48	0.04				1.19
2									2.60	0.06				0.89
3									2.34	0.00				0.81
4									2.48	0.00				1.22
5									2.51	0.01				1.17
6									2.54	0.03				1.03
7									2.46	0.03				1.22
8									2.52	0.02				0.98
9									2.42	0.04				1.05
10									2.57	0.02				0.93
11									2.59	0.01				1.18
12									2.62	0.10				0.99
13									2.54	0.01				1.17
14									2.68	0.03				1.15
15									2.65	0.06				0.88
16									2.56	0.01				1.18
17									2.43	0.00				1.03
18									2.44	0.00				1.11
19									2.61	0.06				1.15
20									2.58	0.03				1.08
21									2.49	0.02				1.13
22									2.55	0.01				1.06
23									2.56	0.08				1.16
24									2.53	0.02				0.90
25									2.53	0.03				0.97
26									2.57	0.07				1.04
27									2.46	0.00				1.30
28									2.48	0.00				0.97
29									2.48	0.02				1.19
30									1.93	0.03				0.95
31														

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

DI FACE CEND MODE FORMIC

Date	Water Treated 1000 gallons	Chemicals Used - Pounds							Filters		Chlorine Residual				Remarks	
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride	Phosphate	Filter Run (hours)	Gallons per wash x 1000	Plant Tap		D. S.		
												Free	Total	Free		Total
1	156						7.5	1.8		22		0.96	2.15	1.06	1.24	Total BW Gallons = 159,600 = 3.5%
2	163						9.0	2.3		24	8.4	1.14	1.93	0.98	1.16	
3	182						10.0	2.0		24	8.4	0.96	1.84	1.10	1.14	
4	134						7.0	1.8		20	8.4	1.09	1.94	1.02	1.22	
5	157						8.5	1.8		24	8.4	1.10	2.02	0.99	1.13	
6	164						8.0	1.8		24		1.20	2.35	0.94	1.10	
7	153						7.5	1.8		24	8.4	1.07	1.93	0.84	1.05	
8	166						8.5	1.8		24		0.92	1.86	0.80	1.09	
9	153						8.0	1.8		24	8.4	1.08	2.15	0.72	0.90	
10	155						7.5	1.8		24		1.04	1.93	0.64	0.74	
11	155						8.0	2.0		24	8.4	1.18	1.97	0.89	1.05	
12	154						8.5	2.0		24	8.4	0.82	1.65	0.87	1.04	
13	172						8.5	2.0		24		0.98	1.76	0.84	0.98	
14	157						7.0	1.5		23	8.4	0.60	1.72	0.82	0.94	
15	152						8.5	1.8		24		0.74	1.66	0.64	0.89	
16	168						8.5	2.0		24	8.4	0.78	1.84	0.62	0.84	
17	144						7.5	1.8		22	8.4	0.94	1.77	0.72	0.92	
18	171						8.5	1.5		24		0.76	1.98	0.71	0.92	
19	144						7.5	1.3		22	8.4	0.91	1.93	0.77	0.96	
20	167						7.5	2.0		24		0.96	1.82	0.76	0.88	
21	149						8.0	2.0		23	8.4	0.84	2.00	0.82	0.97	
22	159						7.5	1.5		23		1.16	1.98	0.86	1.07	
23	149						7.5	2.0		23	8.4	0.97	1.67	1.02	1.28	
24	168						8.0	1.8		24		1.07	2.01	1.01	1.24	
25	158						6.5	2.3		24	8.4	1.13	1.86	1.14	1.40	
26	141						8.0	2.0		22	8.4	1.48	2.20	0.71	1.03	
27	152						7.0	1.8		24	8.4	1.24	1.43	0.84	0.98	
28	170						8.5	1.8		24	8.4	1.31	1.79	1.00	1.14	
29	142						6.5	1.5		21		1.36	2.19	0.57	1.40	
30	164						7.0	2.5		24	8.4	0.87	1.53	1.17	1.40	
31																

Attachment to IURC 4-27
Page 88 of 100

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-6015

Memo To
 Department of Environmental Management
 Drinking Water Branch 66-34
 100 N. Senate Ave.
 P. O. Box 6015
 Indianapolis, IN 46206-6015



MONTHLY REPORT OF OPERATION WATER TREATMENT PLANT

State Form 34609 (R6 / 3-04)

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

System Name Twin Lakes Utilities WTP # 2 PWSID Number 5245046

For the Month of December 2007 IDEM Field Rep. Bob Mahoney

Signed [Signature] Title Operator

I certify under penalty of law by this signature that this document was prepared by me or Under my direction and the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am also aware that there are significant penalties for submitting false information.

Certification Number 031702/040169

PHYSICAL AND CHEMICAL DATA *

Date	Turbidity		Alkalinity		pH		Hardness		Iron		Manganese		Phosphate	Fluoride
	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Finished	Finished
1									2.43	0.02				1.35
2									2.54	0.08				1.18
3									2.37	0.00				1.21
4									2.53	0.12				1.11
5									2.48	0.02				1.20
6									2.34	0.04				0.90
7									2.40	0.00				0.91
8									2.39	0.03				1.17
9									2.31	0.01				1.04
10									1.99	0.02				0.80
11									2.19	0.07				0.88
12									2.21	0.00				1.01
13									2.31	0.05				0.88
14									2.37	0.01				1.00
15									1.96	0.02				0.99
16									2.41	0.09				1.14
17									1.91	0.08				1.07
18									2.25	0.00				1.25
19									1.88	0.02				0.99
20									2.29	0.00				0.78
21									2.55	0.02				0.96
22									2.48	0.01				1.27
23									2.40	0.01				0.71
24									2.44	0.01				1.00
25									2.41	0.08				0.98
26									2.38	0.00				1.09
27									2.33	0.00				0.92
28									3.01	0.05				1.08
29									2.41	0.02				1.06
30									2.38	0.01				0.90
31									2.69	0.09				1.03

* All parameters are to be expressed in mg/l except pH and turbidity

DUE BY THE 10TH OF THE MONTH FOLLOWING THE REPORTING PERIOD

PLEASE SEND MORE FORMS

PWSID 5245046

Date	Water Treated <small>(1000 gallons)</small>	Chemicals Used -- Pounds							Filters	Chlorine Residual				Remarks		
		Salt	Alum	Lime	Soda Ash	Carbon	Chlorine	Fluoride		Phosphate	Plant Tap		D. S.			
											Free	Total	Free		Total	
1	136						6.5	1.8		21.5	8.4	103	130	1.00	118	
2	161						6.0	1.8		24.0		0.93	1.15	0.90	106	
3	147						7.5	2.0		23.4	8.4	1.12	1.66	0.73	0.73	
4	149						6.0	1.8		23.5		1.2	1.41	0.80	110	
5	238						9.0	2.3		24.0		1.25	1.58	0.71	109	
6	259						12.0	3.5		23.8		1.25	1.35	1.12	126	
7	255						11.0	3.5		24.0		1.08	1.38	2.90	110	
8	253						11.5	2.5				0.91	1.48	0.62	109	
9	235						9.5	2.3				0.93	1.33	0.82	129	
10	240						9.0	3.3				0.93	1.22	0.88	118	
11	255						11.0	3.0				0.97	1.17	0.90	114	
12	247						9.5	3.3				1.08	1.43	0.80	120	
13	238						9.5	3.0				1.34	1.56	1.10	126	
14	243						9.0	2.8				1.20	1.48	1.00	120	
15	303						11.5	3.5				1.12	1.33	1.31	1.51	
16	213						9.0	2.5				1.16	1.40	0.91	1.14	
17	217						8.0	2.0				1.25	1.60	1.10	132	
18	250						9.0	3.0				0.93	1.16	0.70	0.88	
19	241						9.5	2.0				0.81	1.09	0.71	0.80	
20	279						10.5	2.5				0.97	1.18	0.74	0.96	
21	230						8.5	2.3				1.07	1.37	0.80	110	Monthly Water Treatment
22	226						8.0	2.5								Total Gallons
23	244						8.0	2.8				0.71	0.90	0.80	1.00	Max. Day
24	229						8.0	2.3				0.71	0.92	0.85	0.85	Min. Day
25	248						13.0	2.8				0.86	1.05	0.78	0.97	Avg. Daily
26	245						4.0	2.3		24.0		0.71	0.91	0.67	0.97	
27	104						3.5	2.3		16.5		0.60	0.82	0.69	0.87	
28	109						2.0	1.5		16.8		1.08	1.31	0.72	0.88	
29	241						8.0	1.3		23.2		1.42	1.68	0.64	0.25	
30	154						8.0	2.0		15.1		0.56	0.88	0.61	0.24	
31	48						1.0	0.8		7.5	8.4	1.46	1.61	0.60	0.87	

Mail To

Department of Environmental Management

Drinking Water Branch 66-34

100 N. Senate Ave

P.O. Box 6015

Indianapolis, IN 46206-6015

Monthly Water Treatment
Total Gallons 6,638,000
Max. Day 303,000
Min. Day 48,000
Avg. Daily 214,128

Mail To
Department of Environmental Management
Drinking Water Branch 66-34
100 N. Senate Ave.
P. O. Box 6015
Indianapolis, IN 46206-0015

STATE OF INDIANA
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF WATER
 WATER WITHDRAWAL REGISTRATION AND REPORTING SYSTEM

Registration Information

Regno: 45-03749-PS
 County: Lake
 Topographic Map: Palmer
 Standard Industrial Classification (SIC): 4941

Basin: Lake Michigan
 Township: 34N
 Range: 7W
 Section: 9

Water Use Purpose(s):
 Public Water Supply-GW

Sources(s):
 Ground Water

Facility Information:
 Total Capacity: .576 MGD

Number of Wells: 2
 Number of Intakes: None

Withdrawal Capability: 400 GPM
 Withdrawal Capability: None

Ground Water Source Information:
 Number
 8
 9

Capacity, GPM
 180
 220

Depth, FT
 100
 100

Diameter, IN
 12
 12

Aquifer Utilized
 SD
 SD

Surface Water Source Information:
 No Surface Water Sources

NOTE: If a well or intake has been added to your facility, please include the following information in addition to the water use amounts.
 WELL
 1) Capacity
 2) Depth
 3) Diameter
 4) Aquifer Utilized
 5) Location
 INTAKE
 1) Capacity
 2) Source Name
 3) Location
 (Include a map for the locations)

ANNUAL WATER USE REPORT FORM FOR A
SIGNIFICANT WATER WITHDRAWAL FACILITY
FORM # : 21915R

Please complete items (1) through (7)

Facility Registration Number : 45-03749-PS

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
402 WEST WASHINGTON ST., ROOM W264
INDIANAPOLIS, INDIANA 46204
TELEPHONE (317) 232-4160

Water Withdrawal Report for Year Ending December 31, 2006

OWNER OF WATER WITHDRAWAL FACILITY

Twin Lakes Utilities, Inc
9201 East 123rd Avenue
Contact : Charles Alexander
9201 East 123rd Avenue

Crown Point IN 46307

Phone no.: (219) 988-3018

WATER WITHDRAWAL RECORD

(1) Units Used in Reporting Amounts Withdrawn (Check One) : Thousand Gallons _____ Million Gallons ☒

(2) Monthly Report for Ground Water Sources

WELL#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
8	4.5	1.9	6.6	3.1	3.7	3.4	3.8	3.4	3.5	4.7	2.6	1.9	34.3
9	4.2	2.9	3.3	4.1	4.2	4.7	4.7	4.1	3.6	2.9	3.0	2.0	43.7
TOTAL	6.6	4.8	5.5	7.2	7.6	8.1	8.5	7.5	7.1	5.6	5.6	3.9	78.0

(3) Monthly Report for Surface Water Sources

INTAKE#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL													

METHOD OF MEASUREMENT

(4) Are withdrawal amounts based on flow meter readings? Check one ==> Yes ☒ No ☐

If 'No', please check and complete one of the lines:

Hours operated: Hour meter _____ Manual record _____

Acres: # of acres _____, # inches _____

NPDES data: Consumptive use _____ %

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

Other _____

STATEMENT OF AFFIRMATION

(6) Is your registration information still correct?
Check one ==> Yes ☒ No ☐ If 'No', please correct where appropriate.

(7) I hereby affirm under the penalties of perjury, that the information submitted herewith is to the best of my knowledge and belief, true, accurate, and complete.

Owner or Agent

Printed Name Charles C. Alexander

Signature *Charles C. Alexander*

Date 1/25/07

TOTAL YEARLY OPERATION TIME

(5) Complete ONLY one:
No. of Hours 7603 -OR- No. of Days _____

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
402 WEST WASHINGTON ST., ROOM W264
INDIANAPOLIS, INDIANA 46204
TELEPHONE (317) 232-4160

Facility Registration Number : 45-03749-PS

OWNER OF WATER WITHDRAWAL FACILITY

Contact: Charles Alexander

0204-East-123rd-Avenue
10946 Four Seasons Pl. Ste 100 G
Crown Point IN 46307

Phone no.: ~~2491988-8048~~ 219-226-1630 Ext 101

----- WATER WITHDRAWAL RECORD -----

(1) Units Used in Reporting Amounts Withdrawn (Check One): Thousand Gallons _____

(2) Monthly Report for Ground Water Sources

WELL#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
8	2.7	2.5	3.6	4.0	4.1	4.1	5.1	4.7	4.9	5.4	4.8	3.0	48.9
9	3.1	0.9	2.9	2.8	5.2	4.5	5.8	4.6	2.2	0.0	0.0	4.1	36.1
TOTAL	5.8	3.4	6.5	6.8	9.3	8.6	10.9	9.3	7.1	5.4	4.8	7.1	85.0

3) Monthly Report for Surface Water Sources

INTAKE#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
---------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-------

TOTAL

METHOD OF MEASUREMENT

(4) Are withdrawal amounts based on flow meter readings? Check one ==> Yes ☒ No ☐

No

'No', please check and complete one of the lines:

Hours operated: Hour meter _____ Manual record _____

_____ Acre inches: # of acres _____, # inches _____

NPDES date: Consumptive use _____ %

Other

TOTAL YEARLY OPERATION TIME

5) Complete ONLY one:

-OR- No. of Days 365

STATEMENT OF AFFIRMATION

(6) Is your registration information still correct?

Check one ==> Yes No ✓

(7) I hereby affirm under the penalties of perjury, that the information submitted herewith is to the best of my knowledge and belief, true, accurate, and complete.

Owner or Agent

Printed Name Charles Alexander

Signature

Date 2/13/08



Chapter 5

Selecting and Sizing Water-Storage Tanks

The selection and sizing of a water-storage tank involve a number of engineering considerations and generally require a detailed analysis of water demands, supply sources, and the distribution system. The purpose of this chapter is to discuss these design parameters and factors to consider in selecting and sizing a steel tank. A detailed treatment of each factor has not been attempted.

PEAK DEMAND

Peak demand is usually the first factor to consider when sizing a distribution system tank. Most water supply sources are best operated on a 24-hour production basis and produce a quantity of water in 24 hours that is equal to the 24-hour demand. Although clearwells offer a cushion between production and demand, clearwell capacity is usually considered production reserve rather than distribution reserve. If distribution system supply sources are operated with a relatively constant pumping rate equal to the daily demand rate, any water in excess of the hourly demand must be stored in elevated tanks (whether the elevation is natural or structural). The usual curves for demand are lowest in the early morning hours, and the tanks are filled during this period. As the day progresses, demand increases and usually peaks in late afternoon; the tanks feed back into the system during this period. A tank functioning in this manner helps maintain a relatively constant pressure in the system.

Figure 5-1 shows a typical daily demand curve. In this example, the maximum consumption rate is 200 percent of the average daily rate, and the quantity stored to achieve a level pumping rate is 20 percent of the daily consumption. This 20 percent of daily consumption is not necessarily the optimal ratio of storage to consumption, because most water regulatory agencies require more storage or emergency sources.

FIRE FLOW

Fire flow is usually the second factor to consider when determining tank capacity. Insurance underwriters have developed formulas to determine desirable quantities, pressures, and flow duration. Using these formulas, all classes and uses of all buildings within the area served are considered. Frequently, storage requirements for fire flow are greater than the storage required for system regulation, and a large fire-flow demand may require additional pumping capacity as well as the use of stored water.

TOP AND BOTTOM CAPACITY LEVELS

In addition to establishing the storage facility's necessary capacity, required top and bottom capacity levels must also be established. These three values, combined with aesthetic and economic considerations, greatly influence the geometry of the final tank design.

A detailed hydraulic analysis of the water distribution system for which the storage tank is being designed is usually conducted to establish the BCL and TCL elevations that will provide effective, functional storage at a given tank site. A distribution system is analyzed by creating a computer model with hydraulic data for the pipeline distribution network, distribution system pumping facilities, and various water demand conditions. This program produces hydraulic gradients across the distribution system for the particular demand condition represented (e.g., fire flow, maximum hour, maximum day, tank replenishment). The goals of this exercise are (1) to produce a coordinated design covering system pumping capacity, head conditions, and pipeline improvements necessary to provide adequate system transmission capacity to and from the tank, and (2) to establish the range of operating gradients or water levels at the tank. For further information, refer to AWWA Manual M31, *Distribution System Requirements for Fire Protection*, and AWWA Manual M32, *Computer Modeling of Water Distribution Systems*.

WATER QUALITY ISSUES

The design phase of a new tank project is the best time to consider how a tank design and piping configuration may contribute to water quality. Water circulation and water flow should be included in the design parameters. Water age can be managed through a well-designed system that “exercises” the tank; considerations include water turnover, altitude valves, pumping management, and other components for maintaining fresh water in the tank and mitigating water quality issues. Both active and passive systems for improving water quality in tanks are available for new and existing tanks.

Water quality is a significant concern to water distribution system managers. Disinfection by-product (DBP) formation is largely dependent on reaction time, and it can continue for several days within the distribution system. At the same time, disinfectant residual must be maintained throughout the most remote components of the system to ensure pathogen-free water. Managing the residence time of water within storage tanks is one practice available to minimize water age within the distribution system. Water system managers and engineers should consider the need for circulation of water and residence time management within storage tanks during the design phase.

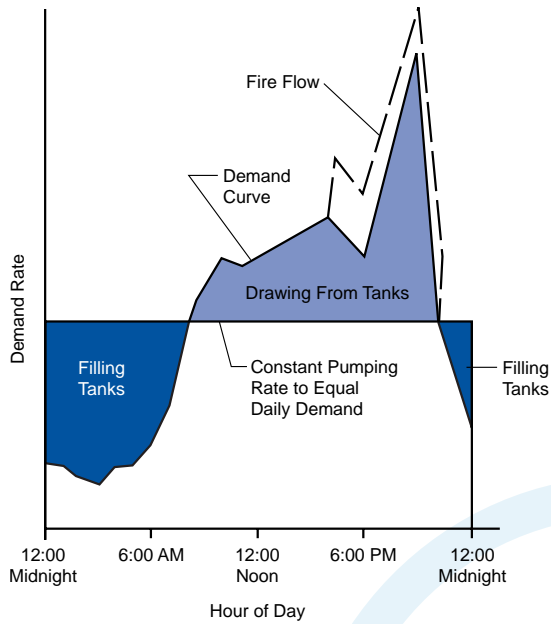


Figure 5-1 Typical daily flow at constant pumping rate

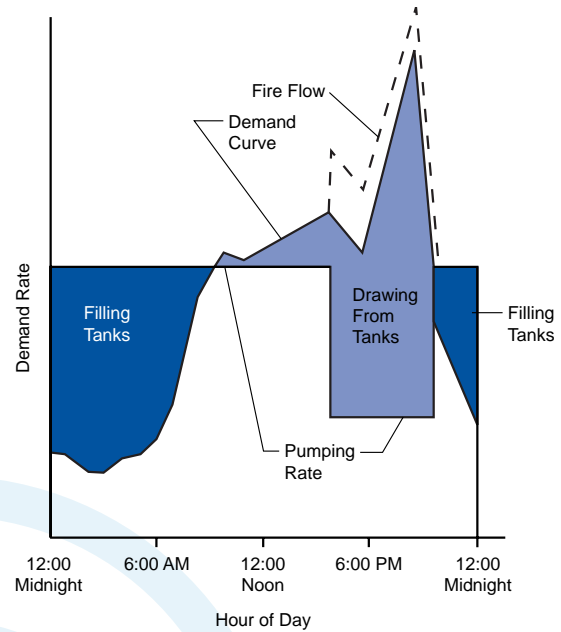


Figure 5-2 Typical daily flow with variable-rate pumping

ENERGY COSTS

Many power utilities have adopted rates based on when electricity is used, and it may be cost-effective to control pumping in an effort to reduce the maximum power demand. Figure 5-1 shows the use of constant-rate pumping for 24 hours. However, the part-time use of more or larger pumps may be more cost-effective. To get the best electric power rates, pumping (or power-demand load) must be reduced during the periods when the maximum electrical demand occurs. A simple way to reduce rates is to pump more water into the storage tanks during hours when electrical power demand is low and to reduce pumping during periods when that demand is high (Figure 5-2). This technique requires increased storage capacity.

FUTURE NEEDS

Future needs are an important consideration, and where practical, a tank should be sized to provide for anticipated future growth and the resulting increase in water demands. This consideration is particularly important in the design of water-storage tanks, since they represent a large capital investment, and future enlargement of their storage capacity is not always feasible. Proper sizing of a storage tank must also establish proper water turnover and circulation to ensure that water quality standards are met.

ENVIRONMENTAL IMPACT

The major environmental impact of the tank itself is its appearance. This impact can be mitigated by the use of tank designs and exterior coating systems that blend into the surrounding terrain. Site location and site development (discussed in detail in chapter 6) are also important factors to consider in reducing any adverse environmental impacts.

The increased availability of water for use by customers made possible by greater storage may also be an environmental concern, but this consideration relates to the broader topics of land-use planning and wastewater discharge capacity, which should be evaluated before the need for additional storage is addressed.

TANK COSTS

Tank costs vary with type, capacity, and site. These factors are interrelated and are discussed in the following paragraphs.

Variation With Type

The prime influence on cost is the configuration of the tank—i.e., whether a standpipe, reservoir, or elevated tank. Figure 5-3 illustrates the relative differences in the cost per unit volume for the three tank configurations. It is apparent that if an accessible high-elevation site is available, a reservoir-type tank will be the most economical.

The cost of a standpipe depends on its ratio of height to diameter. A tall, small-diameter standpipe will cost more than one of the same capacity having a diameter only slightly greater than its height. Two elements influence this cost differential. First, the minimum weight of steel to contain a given capacity is usually found in tanks that have a diameter equal to their height. Second, taller tanks cost more per unit weight of steel to erect because of the difficulties in lifting the steel and conducting assembly operations at greater heights.

When the cost per unit volume of a standpipe is computed, only part of the total storage may be considered effective storage. The designer should determine the head range within which the water is useful and compute from this the amount of effective water storage. The comparison of standpipe costs should then be based on cost per unit volume of effective storage.

Variation With Capacity

With elevated tanks, the cost per unit volume decreases significantly as the tank capacity is increased. A 100,000-gal (380,000-L) elevated tank has approximately twice the cost per unit volume of a 500,000-gal (1.9-ML) elevated tank (Figure 5-4). For reservoirs and standpipes, an increase in capacity also lowers the cost per unit volume, but the unit cost levels out at a capacity of approximately 5 mil gal (19 ML).

Variation With Site

The importance of a well-conceived site location cannot be overemphasized. Access costs, construction costs, foundation costs, and insurance costs can all be minimized if the site selection guidelines set forth in chapter 6 are followed.

Cost Estimates

As improvements are made in methods of design and construction, and as competitive market forces change, the pricing guidelines will change. This will affect the accuracy of Figures 5-3 and 5-4. Current estimates of construction costs should be obtained from tank contractors before a tank size, configuration, or style is selected.

SELECTING AND SIZING WATER-STORAGE TANKS 61

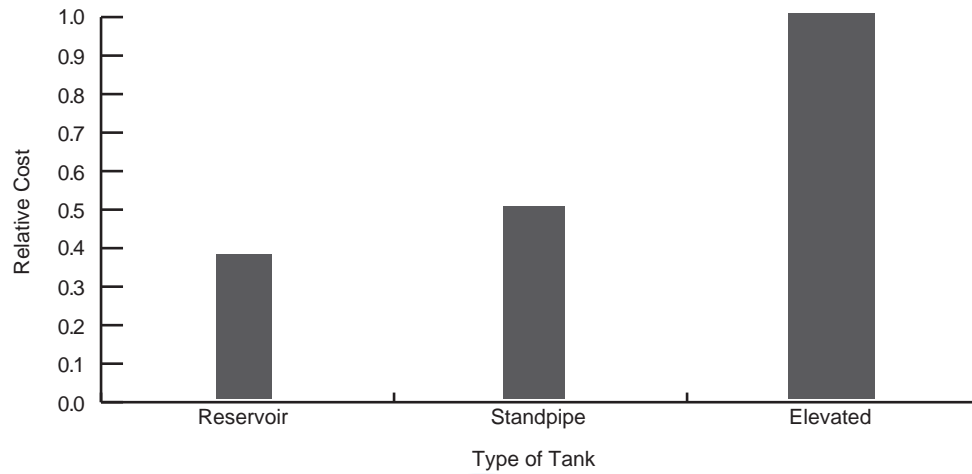
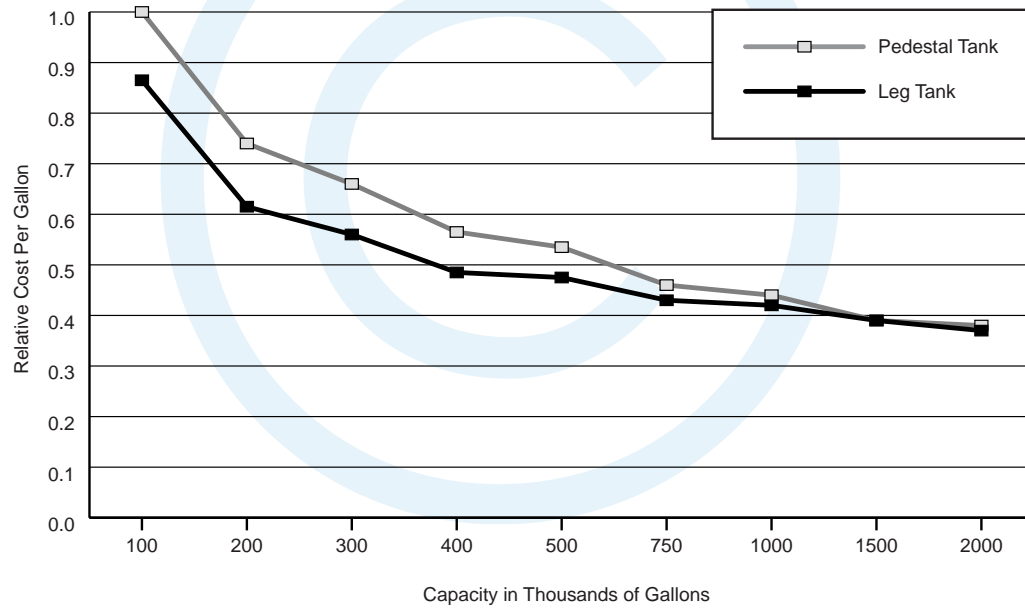


Figure 5-3 Relative cost by type of steel tank for 500,000-gal (1.9-ML) tanks



NOTE: Horizontal axis not to scale.

Figure 5-4 Relative cost by type of elevated steel tank

CUII Revenue Bridge

TB Account #	TB Account Description	A Trial Balance September 30, 2015	B General Ledger Rev 09.2015	C Difference	D Sch.D - Rev 09.2016	E 09.2015 to 09.2016 Change	F Sch.D - Rev 09.2017	G 09.2016 to 09.2017 Change
5020	WATER REVENUE UNMETERED	\$ 363	\$ 363	\$ -	\$ 396	\$ 33	\$ 396	\$ -
5025	WATER REVENUE-RESIDENTIAL	1,837,881	1,838,180	299	1,749,372	(88,808)	1,715,102	(34,270)
5030	WATER REVENUE-ACCRUALS	9,711	-	(9,711)	-	-	-	-
5035	WATER REVENUE-COMMERCIAL	139,974	139,974	0	137,432	(2,543)	139,131	1,699
Total	Water Service Revenue	\$ 1,987,929	\$ 1,978,518	\$ (9,412)	\$ 1,887,200	\$ (91,318)	\$ 1,854,628	\$ (32,571)
5100	SEWER REVENUE-RESIDENTIAL UNMETERED	\$ 1,786,071	\$ 1,786,642	\$ 571	\$ 1,781,052	\$ (5,590)	\$ 1,781,052	\$ -
5105	SEWER REVENUE-ACCRUALS	10,185	-	(10,185)	-	-	-	-
5110	SEWER REVENUE-COMMERCIAL UNMETERED	75,372	75,372	-	90,619	15,248	90,619	-
5140	SEWER REVENUE-RESIDENTIAL METERED	129,515	129,528	13	127,910	(1,618)	124,762	(3,148)
5155	SEWER REVENUE-COMMERCIAL METERED	180,166	180,166	0	177,582	(2,584)	172,234	(5,348)
Total	Sewer Service Revenue	\$ 2,181,309	\$ 2,171,708	\$ (9,601)	\$ 2,177,164	\$ 5,456	\$ 2,168,667	\$ (8,496)
Total	Combined Service Revenue	\$ 4,169,238	\$ 4,150,225	\$ (19,013)	\$ 4,064,363	\$ (85,862)	\$ 4,023,295	\$ (41,068)

A) Trial Balance Amounts
B) Tab, "General Ledger Rev 09.2015" - General Ledger Detailed Support
C) C = B-A, This is the difference between the General Ledger Billing Detail and the Trial Balance
D) D = B+E, agrees to Tab, "Sch.D - Rev 09.2016"
E) Tab, "09.2015 to 09.2016 Change"
F) F = D+G, agrees to Tab, "Sch.D - Rev 09.2017"
E) Tab, "09.2016 to 09.2017 Change"

Test Year / Present Revenues

Base Year (Per Books) Ended September 30, 2015

Future Test Year Ended September 30, 2017

	A	B	C	D	E	F	G	H	I	J	K
	WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"	5/8" Res.	260,922,196	\$ 4.09	\$ 1,067,462	57,324	\$ 10.19	\$ 583,999	\$ 1,651,460	
3	RES	3/4"	3/4" Res.	58,349	\$ 4.07	\$ 237	12	\$ 11.86	\$ 142	\$ 380	
4	RES	1"	1" Res.	465,496	\$ 4.05	\$ 1,885	60	\$ 16.55	\$ 993	\$ 2,878	
5	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
6	RES	1.5"	1.5" Res.	10,692,267	\$ 4.05	\$ 43,304	516	\$ 33.10	\$ 17,080	\$ 60,383	
7	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
8	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
9	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
10	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
11	COML	5/8"	5/8" Coml.	7,352,076	\$ 4.35	\$ 31,952	840	\$ 11.42	\$ 9,591	\$ 41,542	
12	COML	3/4"	3/4" Coml.	185,029	\$ 4.07	\$ 753	36	\$ 11.86	\$ 427	\$ 1,180	
13	COML	1"	1" Coml.	713,052	\$ 4.18	\$ 2,980	96	\$ 25.19	\$ 2,418	\$ 5,399	
14	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
15	COML	1.5"	1.5" Coml.	6,440,490	\$ 4.05	\$ 26,091	108	\$ 38.92	\$ 4,204	\$ 30,295	
16	COML	2"	2" Coml.	10,193,164	\$ 4.88	\$ 49,785	132	\$ 82.80	\$ 10,930	\$ 60,715	
17	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
18	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
19	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
20				297,022,119		\$ 1,224,450	59,124		\$ 629,783	\$ 1,854,232	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
23	FLAT	Drinking Fountain		-	\$ -	\$ -	24	\$ 16.49	\$ 396	\$ 396	
24				-		\$ -	24		\$ 396	\$ 396	
25											
26	Water Total			297,022,119		\$ 1,224,450	59,148		\$ 630,178	\$ 1,854,628	
27											
28											
29											
30											
31	SEWER										
32											
33	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
34											
35	All Subs:										
36	RES	5/8"	5/8" Res.	173,099,222	\$ 0.44	\$ 75,555	38,244	\$ 47.84	\$ 1,829,671	\$ 1,905,226	
37	RES	3/4"	3/4" Res.	58,349	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588	
38	RES	1"	1" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	1.5"	1.5" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	5/8"	5/8" Coml.	4,141,012	\$ 5.16	\$ 21,352	684	\$ 40.04	\$ 27,389	\$ 48,740	
46	COML	3/4"	3/4" Coml.	185,029	\$ -	\$ -	36	\$ 49.00	\$ 1,764	\$ 1,764	
47	COML	1"	1" Coml.	455,082	\$ 1.87	\$ 852	60	\$ 110.90	\$ 6,654	\$ 7,505	
48	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	1.5"	1.5" Coml.	109,127	\$ -	\$ -	12	\$ 245.00	\$ 2,940	\$ 2,940	
50	COML	2"	2" Coml.	8,339,339	\$ 10.20	\$ 85,041	84	\$ 312.42	\$ 26,244	\$ 111,284	
51	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
54				186,387,160		\$ 182,799	39,132		\$ 1,895,249	\$ 2,078,048	
55											
56	FLAT	Other		-	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588	
57	FLAT	Campground		-	\$ -	\$ -	4,830	\$ 18.64	\$ 90,031	\$ 90,031	
58				-		\$ -	4,842		\$ 90,619	\$ 90,619	
59											
60	Sewer Total			186,387,160		\$ 182,799	43,974		\$ 1,985,868	\$ 2,168,667	

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		168,509,026	\$ 4.07	\$ 685,832	36,624	\$ 11.86	\$ 434,361	\$ 1,120,192
3	RES	3/4"		58,349	\$ 4.07	\$ 237	12	\$ 11.86	\$ 142	\$ 380
4	RES	1"		-	\$ 4.07	\$ -	-	\$ 29.65	\$ -	\$ -
5	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
6	RES	1.5"		-	\$ 4.07	\$ -	-	\$ 59.30	\$ -	\$ -
7	RES	2"		-	\$ 4.07	\$ -	-	\$ 94.88	\$ -	\$ -
8	RES	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
9	RES	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
10	RES	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
11	COML	5/8"		2,687,524	\$ 4.07	\$ 10,938	432	\$ 11.86	\$ 5,124	\$ 16,062
12	COML	3/4"		185,029	\$ 4.07	\$ 753	36	\$ 11.86	\$ 427	\$ 1,180
13	COML	1"		397,108	\$ 4.07	\$ 1,616	48	\$ 29.65	\$ 1,423	\$ 3,039
14	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
15	COML	1.5"		346,879	\$ 4.07	\$ 1,412	24	\$ 59.30	\$ 1,423	\$ 2,835
16	COML	2"		2,550,318	\$ 4.07	\$ 10,380	48	\$ 94.88	\$ 4,554	\$ 14,934
17	COML	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
18	COML	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
19	COML	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
20				174,734,233		\$ 711,168	37,224		\$ 447,454	\$ 1,158,622
21										
22	FLAT	Drinking Fountain		-	\$ -	\$ -	24	\$ 16.49	\$ 396	\$ 396
23	Water Total			174,734,233		\$ 711,168	37,248		\$ 447,850	\$ 1,159,018
24										
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32										
33	All Subs:									
34	RES	5/8"		167,955,938	\$ -	\$ -	36,336	\$ 49.00	\$ 1,780,464	\$ 1,780,464
35	RES	3/4"		58,349	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588
36	RES	1"		-	\$ -	\$ -	-	\$ 122.50	\$ -	\$ -
37	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.5"		-	\$ -	\$ -	-	\$ 245.00	\$ -	\$ -
39	RES	2"		-	\$ -	\$ -	-	\$ 392.00	\$ -	\$ -
40	RES	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
41	RES	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
42	RES	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
43	COML	5/8"		2,687,524	\$ -	\$ -	420	\$ 49.00	\$ 20,580	\$ 20,580
44	COML	3/4"		185,029	\$ -	\$ -	36	\$ 49.00	\$ 1,764	\$ 1,764
45	COML	1"		397,108	\$ -	\$ -	48	\$ 122.50	\$ 5,880	\$ 5,880
46	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.5"		109,127	\$ -	\$ -	12	\$ 245.00	\$ 2,940	\$ 2,940
48	COML	2"		2,550,318	\$ -	\$ -	48	\$ 392.00	\$ 18,816	\$ 18,816
49	COML	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
50	COML	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
51	COML	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
52				173,943,393			36,912		\$ 1,831,032	\$ 1,831,032
53										
54	FLAT	Other		-	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588
55	Sewer Total			173,943,393			36,924		\$ 1,831,620	\$ 1,831,620

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		5,038,848	\$ 5.51	\$ 27,764	1,884	\$ 13.31	\$ 25,076	\$ 52,840
3	RES	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -
4	RES	1"		-	\$ 5.51	\$ -	-	\$ 33.28	\$ -	\$ -
5	RES	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -
6	RES	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -
7	RES	2"		-	\$ 5.51	\$ -	-	\$ 106.48	\$ -	\$ -
8	RES	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -
9	RES	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -
10	RES	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -
11	COML	5/8"		1,453,488	\$ 5.51	\$ 8,009	264	\$ 13.31	\$ 3,514	\$ 11,523
12	COML	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -
13	COML	1"		57,974	\$ 5.51	\$ 319	12	\$ 33.28	\$ 399	\$ 719
14	COML	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -
15	COML	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -
16	COML	2"		5,789,021	\$ 5.51	\$ 31,898	36	\$ 106.48	\$ 3,833	\$ 35,731
17	COML	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -
18	COML	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -
19	COML	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -
20				12,339,331		\$ 67,990	2,196		\$ 32,823	\$ 100,812
21										
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
23	Water Total			12,339,331		\$ 67,990	2,196		\$ 32,823	\$ 100,812
24										
25										
26										
27	SEWER									
28										
29										
30	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
31										
32	All Subs:									
33										
34	RES	5/8"		5,143,284	\$ 14.69	\$ 75,555	1,908	\$ 25.79	\$ 49,207	\$ 124,762
35	RES	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -
36	RES	1"		-	\$ 14.69	\$ -	-	\$ 64.48	\$ -	\$ -
37	RES	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -
38	RES	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -
39	RES	2"		-	\$ 14.69	\$ -	-	\$ 206.32	\$ -	\$ -
40	RES	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -
41	RES	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -
42	RES	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -
43	COML	5/8"		1,453,488	\$ 14.69	\$ 21,352	264	\$ 25.79	\$ 6,809	\$ 28,160
44	COML	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -
45	COML	1"		57,974	\$ 14.69	\$ 852	12	\$ 64.48	\$ 774	\$ 1,625
46	COML	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -
47	COML	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -
48	COML	2"		5,789,021	\$ 14.69	\$ 85,041	36	\$ 206.32	\$ 7,428	\$ 92,468
49	COML	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -
50	COML	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -
51	COML	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -
52				12,443,767			2,220		\$ 64,217	\$ 247,016
53										
54	FLAT	Campground		-	\$ -	\$ -	4,830	\$ 18.64	\$ 90,031	\$ 90,031
55	Sewer Total			12,443,767			7,050		\$ 154,248	\$ 337,047

	A	B	C	D	E	F	G	H	I	J	K
	WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"		87,374,322	\$ 4.05	\$ 353,866	18,816	\$ 6.62	\$ 124,562	\$ 478,428	
3	RES	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -	
4	RES	1"		465,496	\$ 4.05	\$ 1,885	60	\$ 16.55	\$ 993	\$ 2,878	
5	RES	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -	
6	RES	1.5"		10,692,267	\$ 4.05	\$ 43,304	516	\$ 33.10	\$ 17,080	\$ 60,383	
7	RES	2"		-	\$ 4.05	\$ -	-	\$ 52.96	\$ -	\$ -	
8	RES	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -	
9	RES	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -	
10	RES	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -	
11	COML	5/8"		3,211,064	\$ 4.05	\$ 13,005	144	\$ 6.62	\$ 953	\$ 13,958	
12	COML	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -	
13	COML	1"		257,970	\$ 4.05	\$ 1,045	36	\$ 16.55	\$ 596	\$ 1,641	
14	COML	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -	
15	COML	1.5"		6,093,611	\$ 4.05	\$ 24,679	84	\$ 33.10	\$ 2,780	\$ 27,460	
16	COML	2"		1,853,825	\$ 4.05	\$ 7,508	48	\$ 52.96	\$ 2,542	\$ 10,050	
17	COML	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -	
18	COML	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -	
19	COML	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -	
20				109,948,555		\$ 445,292	19,704		\$ 149,506	\$ 594,798	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ 58.20	\$ -	\$ -	
24	Water Total			109,948,555		\$ 445,292	19,704		\$ 149,506	\$ 594,798	
25											
26											
27											
28											
29	SEWER										
30											
31	Bill code										
32			Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
33	All Subs:										
34											
35	RES	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
36	RES	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
37	RES	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
38	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	COML	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
46	COML	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
47	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
48	COML	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
50	COML	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
51	COML	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53				-			-		\$ -	\$ -	
54											
55	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
56	Sewer Total			-			-		\$ -	\$ -	
										-	

Community Utilities of Indiana, Inc.
Sch.D - Rev 09.2016 to Sch.D - Rev 09.2017

	A	B	C	D	E	F	G	H	I	J	K
	<div>WATER</div>										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"	5/8" Res.	(8,029,876)	\$ 4.10	\$ (32,932)	-	\$ -	\$ -	\$ (32,932)	
3	RES	3/4"	3/4" Res.	(1,817)	\$ 4.07	\$ (7)	-	\$ -	\$ -	\$ (7)	
4	RES	1"	1" Res.	(13,705)	\$ 4.05	\$ (56)	-	\$ -	\$ -	\$ (56)	
5	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
6	RES	1.5"	1.5" Res.	(314,802)	\$ 4.05	\$ (1,275)	-	\$ -	\$ -	\$ (1,275)	
7	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
8	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
9	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
10	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
11	COML	5/8"	5/8" Coml.	189,700	\$ 3.49	\$ 663	-	\$ -	\$ -	\$ 663	
12	COML	3/4"	3/4" Coml.	957	\$ 4.07	\$ 4	-	\$ -	\$ -	\$ 4	
13	COML	1"	1" Coml.	19,109	\$ 3.83	\$ 73	-	\$ -	\$ -	\$ 73	
14	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
15	COML	1.5"	1.5" Coml.	472,955	\$ 4.05	\$ 1,916	-	\$ -	\$ -	\$ 1,916	
16	COML	2"	2" Coml.	(132,159)	\$ 7.24	\$ (956)	-	\$ -	\$ -	\$ (956)	
17	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
18	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
19	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
20				(7,809,638)		\$ (32,571)	-		\$ -	\$ (32,571)	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
23	FLAT	Drinking Fountain		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
24				-		\$ -	-		\$ -	\$ -	
25											
26	Water Total			(7,809,638)		\$ (32,571)	-		\$ -	\$ (32,571)	
27											
28											
29											
30											
31	<div>SEWER</div>										
32											
33	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
34											
35	All Subs:										
36	RES	5/8"	5/8" Res.	(5,444,525)	\$ 0.58	\$ (3,148)	-	\$ -	\$ -	\$ (3,148)	
37	RES	3/4"	3/4" Res.	(1,817)	\$ -	\$ -	-	\$ -	\$ -	\$ -	
38	RES	1"	1" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	1.5"	1.5" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	5/8"	5/8" Coml.	(58,581)	\$ 18.18	\$ (1,065)	-	\$ -	\$ -	\$ (1,065)	
46	COML	3/4"	3/4" Coml.	957	\$ -	\$ -	-	\$ -	\$ -	\$ -	
47	COML	1"	1" Coml.	(837)	\$ 50.74	\$ (42)	-	\$ -	\$ -	\$ (42)	
48	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	1.5"	1.5" Coml.	565	\$ -	\$ -	-	\$ -	\$ -	\$ -	
50	COML	2"	2" Coml.	(275,498)	\$ 15.39	\$ (4,241)	-	\$ -	\$ -	\$ (4,241)	
51	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
54				(5,779,736)		\$ (8,496)	-		\$ -	\$ (8,496)	
55											
56	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
57	FLAT	Campground		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
58				-		\$ -	-		\$ -	\$ -	
59											
60	Sewer Total			(5,779,736)		\$ (8,496)	-		\$ -	\$ (8,496)	

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		(5,247,445)	\$ 4.07	\$ (21,357)	-	\$ 11.86	\$ -	\$ (21,357)
3	RES	3/4"		(1,817)	\$ 4.07	\$ (7)	-	\$ 11.86	\$ -	\$ (7)
4	RES	1"		-	\$ 4.07	\$ -	-	\$ 29.65	\$ -	\$ -
5	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
6	RES	1.5"		-	\$ 4.07	\$ -	-	\$ 59.30	\$ -	\$ -
7	RES	2"		-	\$ 4.07	\$ -	-	\$ 94.88	\$ -	\$ -
8	RES	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
9	RES	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
10	RES	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
11	COML	5/8"		13,903	\$ 4.07	\$ 57	-	\$ 11.86	\$ -	\$ 57
12	COML	3/4"		957	\$ 4.07	\$ 4	-	\$ 11.86	\$ -	\$ 4
13	COML	1"		2,054	\$ 4.07	\$ 8	-	\$ 29.65	\$ -	\$ 8
14	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
15	COML	1.5"		1,794	\$ 4.07	\$ 7	-	\$ 59.30	\$ -	\$ 7
16	COML	2"		13,193	\$ 4.07	\$ 54	-	\$ 94.88	\$ -	\$ 54
17	COML	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
18	COML	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
19	COML	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
20				(5,217,361)		\$ (21,235)	-		\$ -	\$ (21,235)
21										
22	FLAT	Drinking Fountain		-	\$ -	\$ -	-	\$ 16.49	\$ -	\$ -
23		Water Total		(5,217,361)		\$ (21,235)	-		\$ -	\$ (21,235)
24										
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code		Description	Gallage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32										
33	All Subs:									
34	RES	5/8"		(5,230,222)	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
35	RES	3/4"		(1,817)	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
36	RES	1"		-	\$ -	\$ -	-	\$ 122.50	\$ -	\$ -
37	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.5"		-	\$ -	\$ -	-	\$ 245.00	\$ -	\$ -
39	RES	2"		-	\$ -	\$ -	-	\$ 392.00	\$ -	\$ -
40	RES	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
41	RES	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
42	RES	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
43	COML	5/8"		13,903	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
44	COML	3/4"		957	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
45	COML	1"		2,054	\$ -	\$ -	-	\$ 122.50	\$ -	\$ -
46	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.5"		565	\$ -	\$ -	-	\$ 245.00	\$ -	\$ -
48	COML	2"		13,193	\$ -	\$ -	-	\$ 392.00	\$ -	\$ -
49	COML	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
50	COML	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
51	COML	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
52				(5,201,367)			-		\$ -	\$ -
53										
54	FLAT	Other		-	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
55		Sewer Total		(5,201,367)			-		\$ -	\$ -

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallonage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		(209,952)	\$ 5.51	\$ (1,157)	-	\$ 13.31	\$ -	\$ (1,157)
3	RES	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -
4	RES	1"		-	\$ 5.51	\$ -	-	\$ 33.28	\$ -	\$ -
5	RES	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -
6	RES	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -
7	RES	2"		-	\$ 5.51	\$ -	-	\$ 106.48	\$ -	\$ -
8	RES	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -
9	RES	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -
10	RES	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -
11	COML	5/8"		(72,484)	\$ 5.51	\$ (399)	-	\$ 13.31	\$ -	\$ (399)
12	COML	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -
13	COML	1"		(2,891)	\$ 5.51	\$ (16)	-	\$ 33.28	\$ -	\$ (16)
14	COML	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -
15	COML	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -
16	COML	2"		(288,691)	\$ 5.51	\$ (1,591)	-	\$ 106.48	\$ -	\$ (1,591)
17	COML	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -
18	COML	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -
19	COML	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -
20				(574,018)		\$ (3,163)	-		\$ -	\$ (3,163)
21										
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
23	Water Total			(574,018)		\$ (3,163)	-		\$ -	\$ (3,163)
24										
25										
26										
27										
28	SEWER									
29										
30	Bill code									
31			Description	Gallonage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32	All Subs:									
33										
34	RES	5/8"		(214,303)	\$ 14.69	\$ (3,148)	-	\$ 25.79	\$ -	\$ (3,148)
35	RES	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -
36	RES	1"		-	\$ 14.69	\$ -	-	\$ 64.48	\$ -	\$ -
37	RES	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -
38	RES	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -
39	RES	2"		-	\$ 14.69	\$ -	-	\$ 206.32	\$ -	\$ -
40	RES	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -
41	RES	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -
42	RES	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -
43	COML	5/8"		(72,484)	\$ 14.69	\$ (1,065)	-	\$ 25.79	\$ -	\$ (1,065)
44	COML	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -
45	COML	1"		(2,891)	\$ 14.69	\$ (42)	-	\$ 64.48	\$ -	\$ (42)
46	COML	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -
47	COML	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -
48	COML	2"		(288,691)	\$ 14.69	\$ (4,241)	-	\$ 206.32	\$ -	\$ (4,241)
49	COML	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -
50	COML	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -
51	COML	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -
52				(578,369)			-		\$ -	\$ (8,496)
53										
54	FLAT	Campground		-	\$ -	\$ -	-	\$ 18.64	\$ -	\$ -
55	Sewer Total			(578,369)			-		\$ -	\$ (8,496)

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		(2,572,479)	\$ 4.05	\$ (10,419)	-	\$ 6.62	\$ -	\$ (10,419)
3	RES	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -
4	RES	1"		(13,705)	\$ 4.05	\$ (56)	-	\$ 16.55	\$ -	\$ (56)
5	RES	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -
6	RES	1.5"		(314,802)	\$ 4.05	\$ (1,275)	-	\$ 33.10	\$ -	\$ (1,275)
7	RES	2"		-	\$ 4.05	\$ -	-	\$ 52.96	\$ -	\$ -
8	RES	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -
9	RES	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -
10	RES	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -
11	COML	5/8"		248,281	\$ 4.05	\$ 1,006	-	\$ 6.62	\$ -	\$ 1,006
12	COML	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -
13	COML	1"		19,946	\$ 4.05	\$ 81	-	\$ 16.55	\$ -	\$ 81
14	COML	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -
15	COML	1.5"		471,161	\$ 4.05	\$ 1,908	-	\$ 33.10	\$ -	\$ 1,908
16	COML	2"		143,339	\$ 4.05	\$ 581	-	\$ 52.96	\$ -	\$ 581
17	COML	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -
18	COML	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -
19	COML	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -
20				(2,018,259)		\$ (8,174)	-		\$ -	\$ (8,174)
21										
22	FLAT	Other		-	\$ -	\$ -	-	\$ 58.20	\$ -	\$ -
24	Water Total			(2,018,259)		\$ (8,174)	-		\$ -	\$ (8,174)
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code									
32			Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
33	All Subs:									
34										
35	RES	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
36	RES	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
37	RES	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
39	RES	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
40	RES	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
41	RES	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
42	RES	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
43	RES	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
44	COML	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
45	COML	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
46	COML	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
48	COML	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
49	COML	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
50	COML	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
51	COML	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
52	COML	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
53				-			-		\$ -	\$ -
54										
55	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
56	Sewer Total			-			-		\$ -	\$ -

	A	B	C	D	E	F	G	H	I	J	K
	WATER										
Line	Class	Meter Size	Meter Size	Gallonage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"	5/8" Res.	268,952,072	\$ 4.09	\$ 1,100,394	57,324	\$ 10.19	\$ 583,999	\$ 1,684,393	
3	RES	3/4"	3/4" Res.	60,166	\$ 4.07	\$ 245	12	\$ 11.86	\$ 142	\$ 387	
4	RES	1"	1" Res.	479,201	\$ 4.05	\$ 1,941	60	\$ 16.55	\$ 993	\$ 2,934	
5	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
6	RES	1.5"	1.5" Res.	11,007,069	\$ 4.05	\$ 44,579	516	\$ 33.10	\$ 17,080	\$ 61,658	
7	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
8	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
9	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
10	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
11	COML	5/8"	5/8" Coml.	7,162,376	\$ 4.37	\$ 31,289	840	\$ 11.42	\$ 9,591	\$ 40,880	
12	COML	3/4"	3/4" Coml.	184,072	\$ 4.07	\$ 749	36	\$ 11.86	\$ 427	\$ 1,176	
13	COML	1"	1" Coml.	693,943	\$ 4.19	\$ 2,907	96	\$ 25.19	\$ 2,418	\$ 5,326	
14	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
15	COML	1.5"	1.5" Coml.	5,967,535	\$ 4.05	\$ 24,175	108	\$ 38.92	\$ 4,204	\$ 28,379	
16	COML	2"	2" Coml.	10,325,323	\$ 4.91	\$ 50,742	132	\$ 82.80	\$ 10,930	\$ 61,671	
17	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
18	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
19	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
20				304,831,757		\$ 1,257,021	59,124		\$ 629,783	\$ 1,886,804	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
23	FLAT	Drinking Fountain		-	\$ -	\$ -	24	\$ 16.49	\$ 396	\$ 396	
24				-		\$ -	24		\$ 396	\$ 396	
25											
26	Water Total			304,831,757		\$ 1,257,021	59,148		\$ 630,178	\$ 1,887,200	
27											
28											
29											
30											
31	SEWER										
32											
33	Bill code		Description	Gallonage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
34											
35	All Subs:										
36	RES	5/8"	5/8" Res.	178,543,747	\$ 0.44	\$ 78,703	38,244	\$ 47.84	\$ 1,829,671	\$ 1,908,374	
37	RES	3/4"	3/4" Res.	60,166	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588	
38	RES	1"	1" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	1.5"	1.5" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	5/8"	5/8" Coml.	4,199,593	\$ 5.34	\$ 22,417	684	\$ 40.04	\$ 27,389	\$ 49,805	
46	COML	3/4"	3/4" Coml.	184,072	\$ -	\$ -	36	\$ 49.00	\$ 1,764	\$ 1,764	
47	COML	1"	1" Coml.	455,919	\$ 1.96	\$ 894	60	\$ 110.90	\$ 6,654	\$ 7,548	
48	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	1.5"	1.5" Coml.	108,562	\$ -	\$ -	12	\$ 245.00	\$ 2,940	\$ 2,940	
50	COML	2"	2" Coml.	8,614,837	\$ 10.36	\$ 89,282	84	\$ 312.42	\$ 26,244	\$ 115,525	
51	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
54				192,166,896		\$ 191,295	39,132		\$ 1,895,249	\$ 2,086,544	
55											
56	FLAT	Other		-	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588	
57	FLAT	Campground		-	\$ -	\$ -	4,830	\$ 18.64	\$ 90,031	\$ 90,031	
58				-		\$ -	4,842		\$ 90,619	\$ 90,619	
59											
60	Sewer Total			192,166,896		\$ 191,295	43,974		\$ 1,985,868	\$ 2,177,164	

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallonge	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		173,756,471	\$ 4.07	\$ 707,189	36,624	\$ 11.86	\$ 434,361	\$ 1,141,549
3	RES	3/4"		60,166	\$ 4.07	\$ 245	12	\$ 11.86	\$ 142	\$ 387
4	RES	1"		-	\$ 4.07	\$ -	-	\$ 29.65	\$ -	\$ -
5	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
6	RES	1.5"		-	\$ 4.07	\$ -	-	\$ 59.30	\$ -	\$ -
7	RES	2"		-	\$ 4.07	\$ -	-	\$ 94.88	\$ -	\$ -
8	RES	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
9	RES	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
10	RES	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
11	COML	5/8"		2,673,621	\$ 4.07	\$ 10,882	432	\$ 11.86	\$ 5,124	\$ 16,005
12	COML	3/4"		184,072	\$ 4.07	\$ 749	36	\$ 11.86	\$ 427	\$ 1,176
13	COML	1"		395,054	\$ 4.07	\$ 1,608	48	\$ 29.65	\$ 1,423	\$ 3,031
14	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
15	COML	1.5"		345,085	\$ 4.07	\$ 1,404	24	\$ 59.30	\$ 1,423	\$ 2,828
16	COML	2"		2,537,125	\$ 4.07	\$ 10,326	48	\$ 94.88	\$ 4,554	\$ 14,880
17	COML	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
18	COML	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
19	COML	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
20				179,951,594		\$ 732,403	37,224		\$ 447,454	\$ 1,179,857
21										
22	FLAT	Drinking Fountain		-	\$ -	\$ -	24	\$ 16.49	\$ 396	\$ 396
23	Water Total			179,951,594		\$ 732,403	37,248		\$ 447,850	\$ 1,180,253
24										
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code		Description	Gallonge	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32										
33	All Subs:									
34	RES	5/8"		173,186,160	\$ -	\$ -	36,336	\$ 49.00	\$ 1,780,464	\$ 1,780,464
35	RES	3/4"		60,166	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588
36	RES	1"		-	\$ -	\$ -	-	\$ 122.50	\$ -	\$ -
37	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.5"		-	\$ -	\$ -	-	\$ 245.00	\$ -	\$ -
39	RES	2"		-	\$ -	\$ -	-	\$ 392.00	\$ -	\$ -
40	RES	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
41	RES	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
42	RES	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
43	COML	5/8"		2,673,621	\$ -	\$ -	420	\$ 49.00	\$ 20,580	\$ 20,580
44	COML	3/4"		184,072	\$ -	\$ -	36	\$ 49.00	\$ 1,764	\$ 1,764
45	COML	1"		395,054	\$ -	\$ -	48	\$ 122.50	\$ 5,880	\$ 5,880
46	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.5"		108,562	\$ -	\$ -	12	\$ 245.00	\$ 2,940	\$ 2,940
48	COML	2"		2,537,125	\$ -	\$ -	48	\$ 392.00	\$ 18,816	\$ 18,816
49	COML	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
50	COML	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
51	COML	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
52				179,144,760			36,912		\$ 1,831,032	\$ 1,831,032
53										
54	FLAT	Other		-	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588
55	Sewer Total			179,144,760			36,924		\$ 1,831,620	\$ 1,831,620
										-

	A	B	C	D	E	F	G	H	I	J	K
	WATER										
Line	Class	Meter Size	Meter Size	Gallonge	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"		89,946,801	\$ 4.05	\$ 364,285	18,816	\$ 6.62	\$ 124,562	\$ 488,846	
3	RES	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -	
4	RES	1"		479,201	\$ 4.05	\$ 1,941	60	\$ 16.55	\$ 993	\$ 2,934	
5	RES	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -	
6	RES	1.5"		11,007,069	\$ 4.05	\$ 44,579	516	\$ 33.10	\$ 17,080	\$ 61,658	
7	RES	2"		-	\$ 4.05	\$ -	-	\$ 52.96	\$ -	\$ -	
8	RES	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -	
9	RES	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -	
10	RES	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -	
11	COML	5/8"		2,962,783	\$ 4.05	\$ 11,999	144	\$ 6.62	\$ 953	\$ 12,953	
12	COML	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -	
13	COML	1"		238,024	\$ 4.05	\$ 964	36	\$ 16.55	\$ 596	\$ 1,560	
14	COML	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -	
15	COML	1.5"		5,622,450	\$ 4.05	\$ 22,771	84	\$ 33.10	\$ 2,780	\$ 25,551	
16	COML	2"		1,710,486	\$ 4.05	\$ 6,927	48	\$ 52.96	\$ 2,542	\$ 9,470	
17	COML	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -	
18	COML	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -	
19	COML	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -	
20				111,966,814		\$ 453,466	19,704		\$ 149,506	\$ 602,972	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ 58.20	\$ -	\$ -	
24	Water Total			111,966,814		\$ 453,466	19,704		\$ 149,506	\$ 602,972	
25											
26											
27											
28											
29	SEWER										
30											
31	Bill code										
32			Description	Gallonge	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
33	All Subs:										
34											
35	RES	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
36	RES	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
37	RES	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
38	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	COML	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
46	COML	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
47	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
48	COML	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
50	COML	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
51	COML	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53				-			-		\$ -	\$ -	
54											
55	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
56	Sewer Total			-			-		\$ -	\$ -	

Community Utilities of Indiana, Inc.
Sch.D - Rev 09.2016 to General Ledger 09.2015

	A	B	C	D	E	F	G	H	I	J	K
	<div>WATER</div>										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"	5/8" Res.	(8,189,661)	\$ 9.44	\$ (77,340)	(366)	\$ 8.94	\$ (3,271)	\$ (80,611)	
3	RES	3/4"	3/4" Res.	(1,874)	\$ 4.07	\$ (8)	-	\$ -	\$ -	\$ (8)	
4	RES	1"	1" Res.	(14,109)	\$ 20.62	\$ (291)	(0)	\$ 16.59	\$ (0)	\$ (291)	
5	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
6	RES	1.5"	1.5" Res.	(334,731)	\$ 23.60	\$ (7,898)	0	\$ 33.14	\$ 0	\$ (7,898)	
7	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
8	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
9	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
10	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
11	COML	5/8"	5/8" Coml.	166,686	\$ (4.59)	\$ (765)	23	\$ 12.13	\$ 275	\$ (489)	
12	COML	3/4"	3/4" Coml.	952	\$ 4.07	\$ 4	-	\$ -	\$ -	\$ 4	
13	COML	1"	1" Coml.	17,413	\$ (2.54)	\$ (44)	12	\$ 29.65	\$ 356	\$ 312	
14	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
15	COML	1.5"	1.5" Coml.	436,265	\$ (1.57)	\$ (686)	0	\$ 59.30	\$ 18	\$ (669)	
16	COML	2"	2" Coml.	(157,707)	\$ 11.58	\$ (1,827)	1	\$ 94.88	\$ 127	\$ (1,700)	
17	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
18	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
19	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
20				(8,076,766)		\$ (88,855)	(329)		\$ (2,496)	\$ (91,351)	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
23	FLAT	Drinking Fountain		-	\$ -	\$ -	2	\$ 16.49	\$ 33	\$ 33	
24				-		\$ -	2		\$ 33	\$ 33	
25											
26	Water Total			(8,076,766)		\$ (88,855)	(327)		\$ (2,463)	\$ (91,318)	
27											
28											
29											
30											
31	<div>SEWER</div>										
32											
33	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
34											
35	All Subs:										
36	RES	5/8"	5/8" Res.	172,968,057	\$ (0.01)	\$ (2,014)	(99)	\$ 52.61	\$ (5,193)	\$ (7,207)	
37	RES	3/4"	3/4" Res.	60,166	\$ -	\$ -	-	\$ -	\$ -	\$ -	
38	RES	1"	1" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	1.5"	1.5" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	5/8"	5/8" Coml.	2,597,523	\$ (0.43)	\$ (1,118)	22	\$ 44.44	\$ 964	\$ (154)	
46	COML	3/4"	3/4" Coml.	184,072	\$ -	\$ -	-	\$ -	\$ -	\$ -	
47	COML	1"	1" Coml.	392,019	\$ (0.11)	\$ (45)	12	\$ 122.50	\$ 1,470	\$ 1,425	
48	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	1.5"	1.5" Coml.	108,562	\$ -	\$ -	0	\$ 245.00	\$ 74	\$ 74	
50	COML	2"	2" Coml.	2,234,037	\$ (1.99)	\$ (4,452)	1	\$ 392.00	\$ 523	\$ (3,930)	
51	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
54				178,544,436		\$ (7,629)	(63)		\$ (2,163)	\$ (9,792)	
55											
56	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
57	FLAT	Campground		-	\$ -	\$ -	818	\$ 18.64	\$ 15,248	\$ 15,248	
58				-		\$ -	818		\$ 15,248	\$ 15,248	
59											
60	Sewer Total			178,544,436		\$ (7,629)	755		\$ 13,085	\$ 5,456	

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		(5,349,181)	\$ 4.07	\$ (21,771)	(148)	\$ 11.86	\$ (1,761)	\$ (23,532)
3	RES	3/4"		(1,874)	\$ 4.07	\$ (8)	-	\$ 11.86	\$ -	\$ (8)
4	RES	1"		-	\$ 4.07	\$ -	-	\$ 29.65	\$ -	\$ -
5	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
6	RES	1.5"		-	\$ 4.07	\$ -	-	\$ 59.30	\$ -	\$ -
7	RES	2"		-	\$ 4.07	\$ -	-	\$ 94.88	\$ -	\$ -
8	RES	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
9	RES	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
10	RES	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
11	COML	5/8"		13,831	\$ 4.07	\$ 56	18	\$ 11.86	\$ 219	\$ 275
12	COML	3/4"		952	\$ 4.07	\$ 4	-	\$ 11.86	\$ -	\$ 4
13	COML	1"		2,044	\$ 4.07	\$ 8	12	\$ 29.65	\$ 356	\$ 364
14	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
15	COML	1.5"		1,785	\$ 4.07	\$ 7	0	\$ 59.30	\$ 18	\$ 25
16	COML	2"		13,125	\$ 4.07	\$ 53	1	\$ 94.88	\$ 127	\$ 180
17	COML	3"		-	\$ 4.07	\$ -	-	\$ 177.90	\$ -	\$ -
18	COML	4"		-	\$ 4.07	\$ -	-	\$ 296.50	\$ -	\$ -
19	COML	6"		-	\$ 4.07	\$ -	-	\$ 593.00	\$ -	\$ -
20				(5,319,318)		\$ (21,650)	(116)		\$ (1,042)	\$ (22,691)
21										
22	FLAT	Drinking Fountain		-	\$ -	\$ -	2	\$ 16.49	\$ 33	\$ 33
23		Water Total		(5,319,318)		\$ (21,650)	(114)		\$ (1,009)	\$ (22,658)
24										
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32										
33	All Subs:									
34	RES	5/8"		173,186,160	\$ -	\$ -	(114)	\$ 49.00	\$ (5,590)	\$ (5,590)
35	RES	3/4"		60,166	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
36	RES	1"		-	\$ -	\$ -	-	\$ 122.50	\$ -	\$ -
37	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.5"		-	\$ -	\$ -	-	\$ 245.00	\$ -	\$ -
39	RES	2"		-	\$ -	\$ -	-	\$ 392.00	\$ -	\$ -
40	RES	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
41	RES	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
42	RES	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
43	COML	5/8"		2,673,621	\$ -	\$ -	17	\$ 49.00	\$ 854	\$ 854
44	COML	3/4"		184,072	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
45	COML	1"		395,054	\$ -	\$ -	12	\$ 122.50	\$ 1,470	\$ 1,470
46	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.5"		108,562	\$ -	\$ -	0	\$ 245.00	\$ 74	\$ 74
48	COML	2"		2,537,125	\$ -	\$ -	1	\$ 392.00	\$ 523	\$ 523
49	COML	3"		-	\$ -	\$ -	-	\$ 735.00	\$ -	\$ -
50	COML	4"		-	\$ -	\$ -	-	\$ 1,225.00	\$ -	\$ -
51	COML	6"		-	\$ -	\$ -	-	\$ 2,450.00	\$ -	\$ -
52				179,144,760			(83)		\$ (2,669)	\$ (2,669)
53										
54	FLAT	Other		-	\$ -	\$ -	-	\$ 49.00	\$ -	\$ -
55		Sewer Total		179,144,760			(83)		\$ (2,669)	\$ (2,669)

A	B	C	D	E	F	G	H	I	J	K
<div>WATER</div>										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		(213,570)	\$ 5.51	\$ (1,171)	(11)	\$ 13.31	\$ (143)	\$ (1,314)
3	RES	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -
4	RES	1"		-	\$ 5.51	\$ -	-	\$ 33.28	\$ -	\$ -
5	RES	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -
6	RES	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -
7	RES	2"		-	\$ 5.51	\$ -	-	\$ 106.48	\$ -	\$ -
8	RES	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -
9	RES	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -
10	RES	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -
11	COML	5/8"		(76,098)	\$ 5.51	\$ (419)	4	\$ 13.31	\$ 57	\$ (363)
12	COML	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -
13	COML	1"		(3,035)	\$ 5.51	\$ (17)	-	\$ 33.28	\$ -	\$ (17)
14	COML	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -
15	COML	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -
16	COML	2"		(303,088)	\$ 5.51	\$ (1,670)	-	\$ 106.48	\$ -	\$ (1,670)
17	COML	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -
18	COML	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -
19	COML	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -
20				(595,791)		\$ (3,277)	(6)		\$ (86)	\$ (3,363)
21										
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
23	Water Total			(595,791)		\$ (3,277)	(6)		\$ (86)	\$ (3,363)
24										
25										
26										
27	<div>SEWER</div>									
28										
29										
30	Bill code									
31			Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32	All Subs:									
33										
34	RES	5/8"		(218,103)	\$ 14.69	\$ (2,014)	15	\$ 25.79	\$ 396	\$ (1,618)
35	RES	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -
36	RES	1"		-	\$ 14.69	\$ -	-	\$ 64.48	\$ -	\$ -
37	RES	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -
38	RES	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -
39	RES	2"		-	\$ 14.69	\$ -	-	\$ 206.32	\$ -	\$ -
40	RES	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -
41	RES	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -
42	RES	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -
43	COML	5/8"		(76,098)	\$ 14.69	\$ (1,118)	4	\$ 25.79	\$ 110	\$ (1,008)
44	COML	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -
45	COML	1"		(3,035)	\$ 14.69	\$ (45)	-	\$ 64.48	\$ -	\$ (45)
46	COML	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -
47	COML	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -
48	COML	2"		(303,088)	\$ 14.69	\$ (4,452)	-	\$ 206.32	\$ -	\$ (4,452)
49	COML	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -
50	COML	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -
51	COML	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -
52				(600,324)			20		\$ 506	\$ (7,122)
53										
54	FLAT	Campground		-	\$ -	\$ -	818	\$ 18.64	\$ 15,248	\$ 15,248
55	Sewer Total			(600,324)			838		\$ 15,754	\$ 8,125

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		(2,626,910)	\$ 4.05	\$ (54,399)	(207)	\$ 6.62	\$ (1,367)	\$ (55,766)
3	RES	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -
4	RES	1"		(14,109)	\$ 4.05	\$ (291)	(0)	\$ 16.55	\$ (0)	\$ (291)
5	RES	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -
6	RES	1.5"		(334,731)	\$ 4.05	\$ (7,898)	0	\$ 33.10	\$ 0	\$ (7,898)
7	RES	2"		-	\$ 4.05	\$ -	-	\$ 52.96	\$ -	\$ -
8	RES	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -
9	RES	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -
10	RES	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -
11	COML	5/8"		228,953	\$ 4.05	\$ (401)	(0)	\$ 6.62	\$ (0)	\$ (401)
12	COML	3/4"		-	\$ 4.05	\$ -	-	\$ 6.62	\$ -	\$ -
13	COML	1"		18,404	\$ 4.05	\$ (36)	0	\$ 16.55	\$ 0	\$ (36)
14	COML	1.25"		-	\$ 4.05	\$ -	-	\$ 24.83	\$ -	\$ -
15	COML	1.5"		434,480	\$ 4.05	\$ (694)	0	\$ 33.10	\$ 0	\$ (694)
16	COML	2"		132,256	\$ 4.05	\$ (210)	0	\$ 52.96	\$ 0	\$ (210)
17	COML	3"		-	\$ 4.05	\$ -	-	\$ 99.30	\$ -	\$ -
18	COML	4"		-	\$ 4.05	\$ -	-	\$ 165.50	\$ -	\$ -
19	COML	6"		-	\$ 4.05	\$ -	-	\$ 331.00	\$ -	\$ -
20				(2,161,657)		\$ (63,929)	(207)		\$ (1,367)	\$ (65,296)
21										
22	FLAT	Other		-	\$ -	\$ -	-	\$ 58.20	\$ -	\$ -
24	Water Total			(2,161,657)		\$ (63,929)	(207)		\$ (1,367)	\$ (65,296)
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code									
32			Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
33	All Subs:									
34										
35	RES	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
36	RES	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
37	RES	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
39	RES	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
40	RES	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
41	RES	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
42	RES	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
43	RES	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
44	COML	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
45	COML	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
46	COML	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
48	COML	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
49	COML	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
50	COML	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
51	COML	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
52	COML	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
53				-			-		\$ -	\$ -
54										
55	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
56	Sewer Total			-			-		\$ -	\$ -

	A	B	C	D	E	F	G	H	I	J	K
	WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"	5/8" Res.	277,141,733	\$ 4.25	\$ 1,177,735	57,690	\$ 10.18	\$ 587,270	\$ 1,765,004	
3	RES	3/4"	3/4" Res.	62,040	\$ 4.07	\$ 253	12	\$ 11.86	\$ 142	\$ 395	
4	RES	1"	1" Res.	493,310	\$ 4.52	\$ 2,232	60	\$ 16.55	\$ 993	\$ 3,225	
5	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
6	RES	1.5"	1.5" Res.	11,341,800	\$ 4.63	\$ 52,477	516	\$ 33.10	\$ 17,080	\$ 69,557	
7	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
8	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
9	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
10	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
11	COML	5/8"	5/8" Coml.	6,995,690	\$ 4.58	\$ 32,054	817	\$ 11.40	\$ 9,315	\$ 41,369	
12	COML	3/4"	3/4" Coml.	183,120	\$ 4.07	\$ 745	36	\$ 11.86	\$ 427	\$ 1,172	
13	COML	1"	1" Coml.	676,530	\$ 4.36	\$ 2,951	84	\$ 24.55	\$ 2,063	\$ 5,014	
14	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
15	COML	1.5"	1.5" Coml.	5,531,270	\$ 4.49	\$ 24,862	108	\$ 38.87	\$ 4,186	\$ 29,048	
16	COML	2"	2" Coml.	10,483,030	\$ 5.01	\$ 52,569	131	\$ 82.68	\$ 10,803	\$ 63,372	
17	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
18	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
19	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
20				312,908,523		\$ 1,345,877	59,453		\$ 632,278	\$ 1,978,155	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
23	FLAT	Drinking Fountain		-	\$ -	\$ -	22	\$ 16.49	\$ 363	\$ 363	
24				-		\$ -	22		\$ 363	\$ 363	
25											
26	Water Total			312,908,523		\$ 1,345,877	59,475		\$ 632,641	\$ 1,978,518	
27											
28											
29											
30											
31	SEWER										
32											
33	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
34											
35	All Subs:										
36	RES	5/8"	5/8" Res.	5,575,690	\$ 14.48	\$ 80,717	38,343	\$ 47.85	\$ 1,834,865	\$ 1,915,581	
37	RES	3/4"	3/4" Res.	-	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588	
38	RES	1"	1" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
39	RES	1.25"	1.25" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
40	RES	1.5"	1.5" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
41	RES	2"	2" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
42	RES	3"	3" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
43	RES	4"	4" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
44	RES	6"	6" Res.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
45	COML	5/8"	5/8" Coml.	1,602,070	\$ 14.69	\$ 23,534	662	\$ 39.90	\$ 26,424	\$ 49,959	
46	COML	3/4"	3/4" Coml.	-	\$ -	\$ -	36	\$ 49.00	\$ 1,764	\$ 1,764	
47	COML	1"	1" Coml.	63,900	\$ 14.69	\$ 939	48	\$ 108.00	\$ 5,184	\$ 6,122	
48	COML	1.25"	1.25" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
49	COML	1.5"	1.5" Coml.	-	\$ -	\$ -	12	\$ 245.00	\$ 2,867	\$ 2,867	
50	COML	2"	2" Coml.	6,380,800	\$ 14.69	\$ 93,734	83	\$ 311.14	\$ 25,721	\$ 119,455	
51	COML	3"	3" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
52	COML	4"	4" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
53	COML	6"	6" Coml.	-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
54				13,622,460		\$ 198,924	39,195		\$ 1,897,412	\$ 2,096,336	
55											
56	FLAT	Other		-	\$ -	\$ -	12	\$ 49.00	\$ 588	\$ 588	
57	FLAT	Campground		-	\$ -	\$ -	4,012	\$ 18.64	\$ 74,784	\$ 74,784	
58				-		\$ -	4,024		\$ 75,372	\$ 75,372	
59											
60	Sewer Total			13,622,460		\$ 198,924	43,219		\$ 1,972,784	\$ 2,171,708	

•

A	B	C	D	E	F	G	H	I	J	K	
WATER											
Line	Class	Meter Size	Meter Size	Gallonage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
1	All Subs:										
2	RES	5/8"		5,462,370	\$ 5.51	\$ 30,091	1,895	\$ 13.31	\$ 25,219	\$ 55,311	
3	RES	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -	
4	RES	1"		-	\$ 5.51	\$ -	-	\$ 33.28	\$ -	\$ -	
5	RES	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -	
6	RES	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -	
7	RES	2"		-	\$ 5.51	\$ -	-	\$ 106.48	\$ -	\$ -	
8	RES	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -	
9	RES	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -	
10	RES	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -	
11	COML	5/8"		1,602,070	\$ 5.51	\$ 8,827	260	\$ 13.31	\$ 3,457	\$ 12,285	
12	COML	3/4"		-	\$ 5.51	\$ -	-	\$ 13.31	\$ -	\$ -	
13	COML	1"		63,900	\$ 5.51	\$ 352	12	\$ 33.28	\$ 399	\$ 751	
14	COML	1.25"		-	\$ 5.51	\$ -	-	\$ 49.91	\$ -	\$ -	
15	COML	1.5"		-	\$ 5.51	\$ -	-	\$ 66.55	\$ -	\$ -	
16	COML	2"		6,380,800	\$ 5.51	\$ 35,158	36	\$ 106.48	\$ 3,833	\$ 38,992	
17	COML	3"		-	\$ 5.51	\$ -	-	\$ 199.65	\$ -	\$ -	
18	COML	4"		-	\$ 5.51	\$ -	-	\$ 332.75	\$ -	\$ -	
19	COML	6"		-	\$ 5.51	\$ -	-	\$ 665.50	\$ -	\$ -	
20				13,509,140		\$ 74,429	2,202		\$ 32,909	\$ 107,338	
21											
22	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -	
23	Water Total			13,509,140		\$ 74,429	2,202		\$ 32,909	\$ 107,338	
24											
25											
26											
27											
28											
29	SEWER										
30											
31	Bill code		Description	Gallonage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues	
32											
33	All Subs:										
34	RES	5/8"		5,575,690	\$ 14.48	\$ 80,717	1,893	\$ 25.79	\$ 48,811	\$ 129,528	
35	RES	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -	
36	RES	1"		-	\$ 14.69	\$ -	-	\$ 64.48	\$ -	\$ -	
37	RES	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -	
38	RES	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -	
39	RES	2"		-	\$ 14.69	\$ -	-	\$ 206.32	\$ -	\$ -	
40	RES	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -	
41	RES	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -	
42	RES	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -	
43	COML	5/8"		1,602,070	\$ 14.69	\$ 23,534	260	\$ 25.79	\$ 6,699	\$ 30,233	
44	COML	3/4"		-	\$ 14.69	\$ -	-	\$ 25.79	\$ -	\$ -	
45	COML	1"		63,900	\$ 14.69	\$ 939	12	\$ 64.48	\$ 774	\$ 1,712	
46	COML	1.25"		-	\$ 14.69	\$ -	-	\$ 96.71	\$ -	\$ -	
47	COML	1.5"		-	\$ 14.69	\$ -	-	\$ 128.95	\$ -	\$ -	
48	COML	2"		6,380,800	\$ 14.69	\$ 93,734	36	\$ 206.32	\$ 7,428	\$ 101,161	
49	COML	3"		-	\$ 14.69	\$ -	-	\$ 386.85	\$ -	\$ -	
50	COML	4"		-	\$ 14.69	\$ -	-	\$ 644.75	\$ -	\$ -	
51	COML	6"		-	\$ 14.69	\$ -	-	\$ 1,289.50	\$ -	\$ -	
52				13,622,460			2,200		\$ 63,711	\$ 262,635	
53											
54	FLAT	Campground		-	\$ -	\$ -	4,012	\$ 18.64	\$ 74,784	\$ 74,784	
55	Sewer Total			13,622,460			6,212		\$ 138,494	\$ 337,418	

A	B	C	D	E	F	G	H	I	J	K
WATER										
Line	Class	Meter Size	Meter Size	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
1	All Subs:									
2	RES	5/8"		92,573,711	\$ 4.52	\$ 418,683	19,023	\$ 6.62	\$ 125,929	\$ 544,612
3	RES	3/4"		-	\$ -	\$ -	-	\$ 6.62	\$ -	\$ -
4	RES	1"		493,310	\$ 4.52	\$ 2,232	60	\$ 16.55	\$ 993	\$ 3,225
5	RES	1.25"		-	\$ -	\$ -	-	\$ 24.83	\$ -	\$ -
6	RES	1.5"		11,341,800	\$ 4.63	\$ 52,477	516	\$ 33.10	\$ 17,080	\$ 69,557
7	RES	2"		-	\$ -	\$ -	-	\$ 52.96	\$ -	\$ -
8	RES	3"		-	\$ -	\$ -	-	\$ 99.30	\$ -	\$ -
9	RES	4"		-	\$ -	\$ -	-	\$ 165.50	\$ -	\$ -
10	RES	6"		-	\$ -	\$ -	-	\$ 331.00	\$ -	\$ -
11	COML	5/8"		2,733,830	\$ 4.54	\$ 12,401	144	\$ 6.62	\$ 953	\$ 13,354
12	COML	3/4"		-	\$ -	\$ -	-	\$ 6.62	\$ -	\$ -
13	COML	1"		219,620	\$ 4.55	\$ 1,000	36	\$ 16.55	\$ 596	\$ 1,596
14	COML	1.25"		-	\$ -	\$ -	-	\$ 24.83	\$ -	\$ -
15	COML	1.5"		5,187,970	\$ 4.52	\$ 23,465	84	\$ 33.10	\$ 2,780	\$ 26,245
16	COML	2"		1,578,230	\$ 4.52	\$ 7,138	48	\$ 52.96	\$ 2,542	\$ 9,680
17	COML	3"		-	\$ -	\$ -	-	\$ 99.30	\$ -	\$ -
18	COML	4"		-	\$ -	\$ -	-	\$ 165.50	\$ -	\$ -
19	COML	6"		-	\$ -	\$ -	-	\$ 331.00	\$ -	\$ -
20				114,128,471		\$ 517,395	19,911		\$ 150,873	\$ 668,268
21										
22	FLAT	Other		-	\$ -	\$ -	-	\$ 58.20	\$ -	\$ -
23	Water Total			114,128,471		\$ 517,395	19,911		\$ 150,873	\$ 668,268
24										
25										
26										
27										
28										
29	SEWER									
30										
31	Bill code		Description	Gallorage	Usage Charge	Vol Revenue	Units	BFC	Base Revenue	Revenues
32										
33	All Subs:									
34	RES	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
35	RES	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
36	RES	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
37	RES	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
38	RES	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
39	RES	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
40	RES	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
41	RES	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
42	RES	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
43	COML	5/8"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
44	COML	3/4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
45	COML	1"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
46	COML	1.25"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
47	COML	1.5"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
48	COML	2"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
49	COML	3"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
50	COML	4"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
51	COML	6"		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
52				-			-		\$ -	\$ -
53										
54	FLAT	Other		-	\$ -	\$ -	-	\$ -	\$ -	\$ -
55	Sewer Total			-			-		\$ -	\$ -

ACCT_ID	SA_ID	CHAR_PREM_ID	FT_ID	BILL_ID	CIS_DIVISION
2653273708	2653273265	953510483	265711594793	265567036998	150
4290933582	4290933617	9924500145	429560656868	429772182605	150
7442220564	7442220093	3614510065	744327877012	744422741828	150
2653273708	2653273445	953510483	265578335144	265567036998	150
2653273708	2653273445	953510483	265578335144	265567036998	150
4290933582	4290933837	9924500145	429841571994	429772182605	150
4290933582	4290933837	9924500145	429841571994	429772182605	150
7442220564	7442220068	3614510065	744920962158	744422741828	150
7442220564	7442220068	3614510065	744920962158	744422741828	150
2550598726	2550598032	9890510874	255396644801	255065862022	150
4789074465	4789074277	520500156	478775493021	478770826253	150
5501145190	5501961072	3611610119	550923519894	550564920179	150
2550598726	2550598807	9890510874	255928472460	255065862022	150
2550598726	2550598807	9890510874	255928472460	255065862022	150
4789074465	4789074675	520500156	478828516603	478770826253	150
4789074465	4789074675	520500156	478828516603	478770826253	150
5501145190	5506030823	3611610119	550817059450	550564920179	150
5501145190	5506030823	3611610119	550817059450	550564920179	150
8456726030	8456726523	5559510526	845486827605	845758914619	150
3644613869	3644613955	3134500159	364213621680	364009155742	150
2682823866	2682823717	5155510451	268177261504	268493299400	150
8456726030	8456726555	5559510526	845985670588	845758914619	150
8456726030	8456726555	5559510526	845985670588	845758914619	150
3644613869	3644613241	3134500159	364048979092	364009155742	150
3644613869	3644613241	3134500159	364048979092	364009155742	150
2682823866	2682823042	5155510451	268853772198	268493299400	150
2682823866	2682823042	5155510451	268853772198	268493299400	150
9439410000	9439410672	9439410254	943547504016	943288375143	150
3474308645	3474308097	6306400942	347285908914	347180629299	150
9439410000	9439410671	9439410254	943362034753	943288375143	150
3474308645	3474308200	6306400942	347613063346	347180629299	150
3474308645	3474308200	6306400942	347613063346	347180629299	150
7206807304	7206807426	7856500446	720926523876	720333866430	150
7206807304	7206807716	7856500446	720925300661	720333866430	150
7206807304	7206807716	7856500446	720925300661	720333866430	150
4738118560	4738118766	6452510432	473931229131	473008283777	150
4738118560	4738118135	6452510432	473963247305	473008283777	150
4016400000	4016400782	4016400010	401966689725	401504209354	150
4016400000	4016400781	4016400010	401488183259	401504209354	150
4016400000	4016400781	4016400010	401488183259	401504209354	150
5900291600	5900291842	8319410046	590004216342	590663915995	150
5900291600	5900291293	8319410046	590391567333	590663915995	150
5900291600	5900291293	8319410046	590391567333	590663915995	150
3633400000	3633400639	3633400277	363120101721	363518225391	150
4779410000	4779410206	4779410677	477095697841	477908499541	150
5505310000	5505310902	5505310913	550172430939	550617274111	150

3633400000	3633400638	3633400277	363732337616	363518225391	150
3633400000	3633400638	3633400277	363732337616	363518225391	150
4779410000	4779410205	4779410677	477047162898	477908499541	150
4779410000	4779410205	4779410677	477047162898	477908499541	150
5505310000	5505310901	5505310913	550820528239	550617274111	150
5505310000	5505310901	5505310913	550820528239	550617274111	150
4605400000	4605400381	4605400959	460439916472	460053232979	150
6915935746	6919988657	9808410010	691093609094	691748397083	150
6915935746	6919988657	9808410010	691222110206	691748397083	150
4383795644	4383423234	5791510855	438448735159	438800533883	150
4605400000	4605400380	4605400959	460197855233	460053232979	150
4605400000	4605400380	4605400959	460197855233	460053232979	150
6915935746	6910249043	9808410010	691693905374	691748397083	150
6915935746	6910249043	9808410010	691693905374	691748397083	150
6915935746	6910249043	9808410010	691748452905	691748397083	150
6915935746	6910249043	9808410010	691748452905	691748397083	150
4383795644	4381924813	5791510855	438764502361	438800533883	150
4383795644	4381924813	5791510855	438764502361	438800533883	150
799828474	799828311	8703774150	79189476531	79644996009	150
799828474	799828311	8703774150	79189476531	79644996009	150
2862600000	2862600536	2862600559	286276854892	286455582290	150
2862600000	2862600536	2862600559	286276854892	286455582290	150
3813541512	3813541805	1541308116	381315787072	381444151062	150
3813541512	3813541805	1541308116	381315787072	381444151062	150
2862600000	2862600537	2862600559	286882528214	286455582290	150
3813541512	3813541570	1541308116	381778180958	381444151062	150
8639410000	8639410708	8639410273	863421047566	863535953610	150
8639410000	8639410707	8639410273	863418549134	863535953610	150
8639410000	8639410707	8639410273	863418549134	863535953610	150
48510000	48510428	48510372	4101370105	4872840208	150
33500000	33500234	33500174	3942180173	3593476586	150
5510000	5510074	5510911	865474041	571983891	150
19410000	19410333	19410008	1963538993	1751926554	150
56500000	56500016	56500359	5974428690	5259153540	150
11610000	11610695	11610058	1402915606	1468968529	150
46500000	46500856	46500258	4205266308	4213592414	150
28510000	28510220	28510174	2347790198	2780503738	150
10610000	10610500	10610066	1575796472	1975703936	150
610000	610350	610966	893396278	663937142	150
17410000	17410728	17410032	1450752068	1741666548	150
39510000	39510550	39510274	3089888810	3607750659	150
108410000	108410830	108410930	10877659918	10108452950	150
109410000	109410220	109410919	10840502366	10387827666	150
229410000	229410548	229410127	22466904172	22882911336	150
207410000	207410697	207410951	20819745128	20806614460	150
190610000	190610444	190610870	19639711193	19108094075	150
232510000	232510894	232510205	23745570282	23980450699	150

198410000	198410097	198410820	19424407174	19322198600	150
129410000	129410528	129410117	12325664601	12570662975	150
149410000	149410786	149410315	14796820238	14641572577	150
147410000	147410276	147410336	14824006056	14838651887	150
131510000	131510052	9031510194	13037674933	13789970394	150
351510000	351510025	351510409	35258176512	35088500790	150
358410000	358410511	358410445	35235825918	35332479053	150
325510000	325510328	325510149	32486231294	32893057783	150
349410000	349410825	349410335	34142099859	34884797343	150
356510000	356510002	356510501	35899320721	35717254321	150
321610000	321610854	321610185	32219891832	32681211447	150
288410000	288410932	288410729	28307374497	28782840482	150
291610000	291610219	291610865	29421452010	29920332304	150
267510000	267510274	267510600	26406910575	26099402441	150
285500000	285500259	285500664	28641502947	28006516726	150
278410000	278410781	278410630	27915482972	27369887515	150
270510000	270510247	270510609	27346635047	27998896791	150
249410000	249410806	249410325	24557019433	24866352792	150
437410000	437410240	437410270	43169367008	43141738738	150
436410000	436410801	436410268	43971792697	43273936869	150
453510000	453510468	453510435	45429741491	45095366850	150
479510000	479510119	479510708	47138937291	47673535771	150
443510000	443510288	443510333	44185391266	44267828584	150
459510000	459510903	459510511	45821600154	45957687218	150
396510000	396510556	396510908	39288262786	39883492678	150
416510000	416510597	416510110	41793757625	41028811243	150
410610000	410610464	410610106	41958196063	41881200602	150
426500000	426500689	426500099	42422534430	42149923818	150
397410000	397410704	397410850	39282333842	39434344448	150
376410000	376410317	376410659	37729937075	37257628659	150
427410000	427410028	427410171	42416079579	42828063716	150
378410000	378410797	378410640	37962058202	37249142054	150
590610000	590610516	590610909	59835385216	59504390509	150
597410000	597410734	597410870	59218863910	59854010181	150
618410000	618410967	618410081	61174678033	61318468874	150
575510000	575510068	575510710	57195868623	57433448702	150
616410000	616410514	616410088	61325320224	61438707233	150
585500000	585500234	585500695	58688485087	58490600245	150
586410000	586410506	586410781	58948676883	58386736690	150
543510000	543510306	543510343	54973343089	54477782389	150
546500000	546500937	546500309	54679148765	54307412555	150
556500000	556500017	556500409	55224091465	55598762113	150
495510000	495510336	495510910	49710789116	49138270505	150
549510000	549510753	549510421	54729413342	54004778516	150
527510000	527510906	527510228	52010148625	52369592082	150
497510000	497510872	497510916	49946776757	49635493865	150
525500000	525500873	525500095	52760214017	52546547209	150

498410000	498410109	498410850	49192749674	49924371769	150
702510000	702510430	702510952	70865201705	70179348779	150
717410000	717410838	717410102	71949131733	71462397368	150
706500000	706500486	706500928	70962419273	70540182024	150
709510000	709510286	709510042	70157580276	70253838934	150
691610000	691610291	691610905	69762935771	69256221424	150
725510000	725510392	725510191	72246184269	72828394763	150
646500000	646500955	646500319	64980469038	64534490646	150
681610000	681610116	681610805	68219845057	68300642153	150
672510000	672510162	672510646	67850543356	67994479397	150
658410000	658410569	658410475	65887539918	65822466376	150
637410000	637410286	637410290	63922493750	63003858150	150
667410000	667410568	667410584	66473348390	66072811457	150
638510000	638510422	638510332	63211835261	63667866740	150
676510000	676510324	676510737	67649338349	67653235469	150
836500000	836500827	836500238	83780607942	83748465300	150
839510000	839510692	839510351	83449253957	83251715493	150
843510000	843510360	843510374	84403347050	84982730886	150
861610000	861610776	861610626	86890734232	86455275520	150
837410000	837410199	9737410308	83456459843	83637824353	150
852510000	852510403	852510467	85916610725	85645595535	150
757510000	757510184	757510551	75912191855	75621376116	150
749410000	749410773	749410375	74748039363	74781623829	150
750510000	750510990	750510461	75111713234	75618180981	150
770610000	770610281	770610729	77805441655	77704956539	150
795510000	795510390	795510940	79052257473	79071727600	150
758410000	758410590	758410484	75688167451	75741449317	150
771610000	771610938	771610715	77719282713	77706506888	150
778410000	778410842	778410680	77825499754	77245087309	150
958410000	958410550	958410504	95227294340	95297681791	150
943510000	943510377	943510384	94036911810	94752542732	150
967510000	967510392	967510668	96354224382	96602927704	150
935510000	935510622	935510315	93799183369	93310602786	150
960610000	960610155	960610649	96366814056	96617156251	150
912510000	912510656	912510074	91414917313	91018431119	150
915510000	915510257	915510110	91906156039	91390994538	150
918410000	918410014	918410110	91216718739	91440663658	150
890510000	890510244	890510865	89569651248	89702084788	150
924510000	924510359	924510192	92030540187	92008798509	150
1095510000	1095510264	1095510870	109002835481	109052166551	150
929410000	929410567	929410196	92661690555	92046334581	150
896510000	896510647	896510958	89381846758	89676957993	150
885510000	885510224	885510849	88441332958	88084057158	150
1117510000	1117510772	1117510090	111694795411	111500597261	150
1107410000	1107410679	1107410941	110600683789	110758972668	150
1080610000	1080610261	1080610761	108018188219	108592411401	150
1059410000	1059410827	1059410406	105338226739	105547945153	150

1103510000	1103510785	1103510901	110484507578	110692676743	150
1016500000	1016500533	1016500960	101263168614	101609753492	150
1050510000	1050510862	1050510392	105851946810	105489323362	150
1018410000	1018410865	1018410022	101892523972	101840539244	150
1025510000	1025510276	1025510121	102399347997	102869728937	150
1039410000	1039410584	1039410207	103507400984	103580018333	150
1055510000	1055510721	1055510437	105841704548	105880164452	150
1027510000	1027510814	1027510179	102581089740	102926504240	150
1211510000	1211510570	1211510007	121441041257	121162902609	150
1216410000	1216410454	1216410049	121267430801	121603907147	150
1193510000	1193510935	1193510806	119191389584	119896075862	150
1217510000	1217510791	1217510101	121954073233	121037530256	150
1187410000	1187410667	1187410732	118198512266	118350314821	150
1189510000	1189510152	1189510779	118813440732	118795900393	150
1239510000	1239510588	1239510294	123662249044	123130059708	150
1183510000	1183510771	1183510703	118424789192	118597458225	150
1197510000	1197510818	1197510888	119567001838	119364492676	150
1209510000	1209510201	1209510992	120414462802	120497573553	150
1241610000	1241610285	1241610369	124607583924	124670214488	150
1186410000	1186410447	1186410742	118028645474	118272716244	150
1139410000	1139410600	1139410217	113035271909	113941569008	150
1142510000	1142510902	1142510296	114268678967	114658956076	150
1126500000	1126500646	1126500070	112162976605	112478552873	150
1159410000	1159410845	1159410416	115076124215	115205204813	150
1146410000	1146410912	1146410339	114547588892	114751129357	150
1127510000	1127510834	1127510188	112974959258	112808204334	150
1135510000	1135510489	1135510235	113149350936	113597698326	150
1346410000	1346410943	1346410359	134263151405	134261546249	150
1309410000	1309410259	1309410940	130161132887	130997887114	150
1347510000	1347510089	1347510413	134184664087	134540420923	150
1326510000	1326510668	1326510203	132175330179	132174871431	150
1332510000	1332510914	1332510216	133046573334	133967247862	150
1335510000	1335510527	1335510256	133638612783	133055857905	150
1270610000	1270610205	1270610680	127693645051	127568979794	150
1298410000	1298410116	1298410831	129201602684	129902818820	150
1283510000	1283510787	1283510713	128030294628	128293098118	150
1263510000	1263510483	1263510513	126933407623	126509148869	150
1254510000	1254510646	1254510431	125389972148	125509174103	150
1435500000	1435500838	1435500184	143626628259	143511862293	150
1487410000	1487410718	1487410762	148477667882	148846227804	150
1441510000	1441510748	1441510322	144728351900	144152970191	150
1438410000	1438410209	1438410259	143503773788	143649128812	150
1476410000	1476410333	1476410670	147743329231	147450358997	150
1485500000	1485500219	1485500687	148402043396	148948960917	150
1446500000	1446500923	1446500300	144050280363	144275355951	150
1446510000	1446510914	1446510415	144931948115	144651059154	150
1405510000	1405510141	1405510955	140181684108	140111930212	150

1387410000	1387410700	1387410752	138560820661	138254577024	150
1425500000	1425500859	1425500086	142443245460	142505883205	150
1591510000	1591510697	1591510831	159678204566	159804505361	150
1606500000	1606500473	1606500919	160515211751	160010141333	150
1608510000	1608510974	1608510037	160435752178	160649417777	150
1595500000	1595500392	1595500808	159298500609	159661416203	150
1616500000	1616500628	1616500020	161437610977	161933856842	150
1579410000	1579410165	1579410654	157639105921	157226078506	150
1596510000	1596510595	1596510929	159809720773	159510775309	150
1569410000	1569410973	1569410555	156328032754	156779149009	150
1496510000	1496510576	1496510919	149861793816	149172951001	150
1509410000	1509410296	1509410960	150154808432	150913369004	150
1510610000	1510610483	1510610117	151281797589	151030549373	150
1537510000	1537510071	1537510330	153625005964	153456468696	150
1699510000	1699510288	1699510927	169946275455	169365545758	150
1715500000	1715500741	1715500014	171739629705	171625943663	150
1730510000	1730510799	1730510263	173920041329	173391916429	150
1716510000	1716510565	1716510143	171846424613	171430712820	150
1703510000	1703510800	1703510963	170012591899	170566154964	150
1725500000	1725500907	1725500116	172815620261	172806107419	150
1698510000	1698510102	1698510932	169381863461	169277461936	150
1710510000	1710510613	1710510066	171005984644	171071438377	150
1693510000	1693510955	1693510855	169696728850	169448738728	150
1638410000	1638410246	1638410280	163663444176	163613336813	150
1622510000	1622510790	1622510146	162737382097	162775823994	150
1671510000	1671510318	1671510641	167894408988	167383329694	150
1662510000	1662510554	1662510548	166756414603	166625079327	150
1647410000	1647410390	1647410383	164356512370	164499485747	150
1858410000	1858410533	1858410495	185167604100	185036660066	150
1863500000	1863500545	1863500548	186917921477	186093369380	150
1786510000	1786510450	1786510849	178282788138	178615267176	150
1803510000	1803510819	1803510973	180474441885	180501862389	150
1786410000	1786410471	1786410800	178795108489	178421100418	150
1802510000	1802510454	1802510963	180241754913	180282261829	150
1756500000	1756500052	1756500430	175955437107	175223278848	150
1772510000	1772510184	1772510657	177809719418	177409351622	150
1773500000	1773500805	1773500636	177567934255	177629463086	150
1968410000	1968410732	1968410602	196626667840	196366265743	150
1914600000	1914600133	1914600056	191225435653	191103479840	150
1879410000	1879410218	1879410684	187234076377	187758806868	150
1887410000	1887410787	1887410801	188403707062	188571389698	150
1873510000	1873510720	1873510673	187135512227	187807338473	150
1889510000	1889510263	1889510849	188427400155	188878378254	150
1926500000	1926500769	1926500150	192626763328	192665259061	150
1890610000	1890610490	1890610940	189713187990	189043731897	150
2077510000	2077510277	2077510680	207888232951	207512277412	150
2086510000	2086510397	2086510779	208886739422	208821519236	150

2088410000	2088410901	2088410711	208508120280	208363941743	150
2090510000	2090510088	2090510789	209212819401	209283601789	150
2084510000	2084510871	2084510713	208818515870	208404708485	150
2067510000	2067510239	2067510583	206345958241	206399740014	150
2098410000	2098410083	2098410812	209284501345	209369228397	150
2092510000	2092510586	2092510787	209942888385	209439694397	150
2068410000	2068410570	2068410515	206967014051	206107856216	150
2049410000	2049410771	2049410307	204805654969	204288418405	150
1991510000	1991510768	1991510872	199888127757	199022444416	150
1996510000	1996510663	1996510969	199535938223	199308698662	150
2041510000	2041510667	2041510285	204336466910	204180503416	150
2022510000	2022510679	2022510087	202997306992	202882313498	150
2191510000	2191510624	2191510792	219033981942	219242058281	150
2186510000	2186510416	2186510790	218509278112	218699732234	150
2218510000	2218510083	2218510097	221555128604	221662680872	150
2179510000	2179510077	2179510680	217363968393	217364698669	150
2209410000	2209410240	2209410931	220877661075	220060821226	150
2235500000	2235500808	2235500166	223297950853	223577345949	150
2168410000	2168410588	2168410525	216252787134	216084554149	150
2137410000	2137410179	2137410244	213879222100	213144416119	150
2339410000	2339410637	2339410237	233571271124	233585096532	150
2132510000	2132510879	2132510197	213144423282	213264523432	150
2158410000	2158410477	2158410428	215415039167	215402817471	150
2161610000	2161610134	2161610558	216155681969	216615551653	150
2164510000	2164510678	2164510523	216640870929	216773372397	150
2156500000	2156500034	2156500371	215186870979	215001677106	150
2312510000	2312510545	2312510014	231040642083	231426180269	150
2348510000	2348510483	2348510405	234231804997	234276833242	150
2316410000	2316410472	2316410060	231950039785	231989795121	150
2357410000	2357410509	2357410455	235242151324	235365695072	150
2329410000	2329410572	2329410139	232430207336	232048816756	150
2329510000	2329510510	2329510206	232496283552	232840828637	150
2290510000	2290510126	2290510807	229064575237	229630752963	150
2258410000	2258410496	2258410437	225472246447	225941547501	150
2291510000	2291510643	2291510802	229834353676	229164320825	150
2293510000	2293510887	2293510817	229478238623	229687823967	150
2271610000	2271610852	2271610667	227720406833	227800312013	150
2285500000	2285500262	2285500666	228545366885	228616134763	150
2285510000	2285510126	2285510790	228416298698	228316516172	150
2250510000	2250510900	2250510413	225352760108	225742257074	150
2280610000	2280610298	2280610782	228286757618	228556426292	150
2456500000	2456500005	2456500401	245517336247	245512248435	150
2438510000	2438510393	2438510314	243614844566	243267341870	150
2479410000	2479410149	2479410645	247567650766	247983165437	150
2467510000	2467510308	2467510622	246326850481	246219777456	150
2489510000	2489510198	2489510810	248775136857	248108271973	150
2428510000	2428510215	2428510216	242499503907	242288880988	150

2442510000	2442510956	2442510328	244277173351	244024394728	150
2470610000	2470610235	2470610701	247709169625	247828633784	150
2458510000	2458510667	2458510516	245359409305	245634588250	150
2468510000	2468510761	2468510615	246420452428	246037002137	150
2488410000	2488410973	2488410751	248854701044	248511378133	150
2371510000	2371510260	2371510611	237673766354	237669741163	150
2363510000	2363510504	2363510524	236594818334	236069184144	150
2395500000	2395500362	2395500788	239756425968	239530748023	150
2377510000	2377510325	2377510710	237312471594	237833549105	150
2579510000	2579510138	2579510720	257839553442	257670949361	150
2597510000	2597510893	2597510928	259390386812	259898655717	150
2595510000	2595510359	2595510922	259350057822	259350868374	150
2555510000	2555510806	2555510491	255152019958	255428842871	150
2608410000	2608410910	2608410983	260950306721	260067203019	150
2580610000	2580610341	2580610812	258704301814	258607392736	150
2578410000	2578410807	2578410662	257537793016	257275976758	150
2591610000	2591610276	2591610897	259767003823	259334801411	150
2508410000	2508410894	2508410973	250460970346	250494611776	150
2532510000	2532510952	2532510238	253054227220	253840254964	150
2538410000	2538410228	2538410271	253285478563	253157515244	150
2491510000	2491510680	2491510822	249311506273	249356334254	150
2519410000	2519410430	2519410059	251133870933	251957679223	150
2533510000	2533510224	2533510246	253052184314	253591576420	150
2548410000	2548410362	2548410370	254338676748	254435289034	150
2539410000	2539410679	2539410257	253465542857	253154460874	150
2702610000	2702610023	2702610016	270308519489	270335769838	150
2684510000	2684510974	2684510773	268220832021	268332600572	150
2718410000	2718410987	2718410092	271770840451	271957677296	150
2697410000	2697410754	2697410882	269474293137	269555210177	150
2676410000	2676410365	2676410691	267022933783	267862901953	150
2641610000	2641610359	2641610409	264038412587	264616042419	150
2658510000	2658510621	2658510536	265740117840	265047858041	150
2668410000	2668410683	2668410573	266211701235	266630255581	150
2619410000	2619410445	2619410069	261291745814	261655880188	150
2656500000	2656500038	2656500421	265569748561	265909706024	150
2624510000	2624510309	2624510163	262522428460	262228175224	150
2627510000	2627510926	2627510240	262112535322	262076454428	150
2669410000	2669410992	2669410566	266414458512	266795976683	150
2805510000	2805510208	2805510996	280401996048	280564368809	150
2807510000	2807510722	2807510061	280541797160	280156126347	150
2818410000	2818410001	2818410102	281967459765	281013968520	150
2812510000	2812510638	2812510066	281178118629	281546648180	150
2816500000	2816500603	2816500041	281845828953	281612056727	150
2825500000	2825500928	2825500127	282829173977	282988494375	150
2834510000	2834510514	2834510286	283806693107	283646508654	150
2829410000	2829410554	2829410188	282097422618	282979297549	150
2763510000	2763510575	2763510564	276199175289	276216480828	150

2756510000	2756510074	2756510545	275314994289	275707529788	150
2748510000	2748510549	2748510445	274690568998	274961967675	150
2794510000	2794510024	2794510884	279562306216	279033643720	150
2765510000	2765510924	2765510624	276832082292	276704578677	150
2788510000	2788510039	2788510843	278525398909	278556536093	150
2766410000	2766410304	2766410601	276102224981	276310992488	150
2973510000	2973510741	2973510684	297756987317	297151200523	150
2979410000	2979410059	2979410695	297317666140	297853525387	150
2946510000	2946510937	2946510465	294637011924	294259774707	150
2935500000	2935500920	2935500235	293595000084	293880022728	150
2925500000	2925500946	2925500137	292719009270	292218312391	150
2891610000	2891610330	2891610927	289112602302	289033491521	150
2898410000	2898410178	2898410891	289617527662	289528796555	150
2900610000	2900610489	2900610058	290426943635	290169688547	150
2915500000	2915500775	2915500037	291174109698	291334427129	150
2919410000	2919410494	2919410099	291067333772	291597318096	150
2872510000	2872510208	2872510667	287903585403	287440570387	150
2911510000	2911510814	2911510078	291497096295	291329927355	150
2876410000	2876410396	2876410711	287013138729	287243824476	150
3057410000	3057410464	3057410426	305916972513	305910992168	150
3075510000	3075510982	3075510658	307886412491	307847966669	150
3078410000	3078410755	3078410613	307767640937	307105947687	150
3081610000	3081610994	3081610748	308558023377	308455921120	150
3051510000	3051510869	3051510382	305544341747	305008341668	150
3051610000	3051610945	3051610450	305022363658	305500388363	150
3069500000	3069500609	3069500487	306271047802	306934982568	150
3091510000	3091510608	3091510783	309800835934	309960065418	150
3074510000	3074510833	3074510614	307648750509	307503606002	150
3032510000	3032510863	3032510188	303534543709	303603035114	150
3035500000	3035500779	3035500148	303538962141	303874012799	150
3045500000	3045500940	3045500246	304552750907	304888149301	150
2984510000	2984510022	2984510803	298914399659	298528430473	150
3025500000	3025500795	3025500048	302199461979	302669204166	150
3028410000	3028410035	2028410122	302826334810	302554349213	150
3026510000	3026510619	3026510175	302517474270	302077797542	150
2997510000	2997510963	2997510968	299611762367	299731982551	150
3003510000	3003510771	3003510891	300812300342	300609542266	150
3013510000	3013510865	3013510997	301748788678	301448863162	150
3191610000	3191610205	3191610858	319392291421	319877818063	150
3222510000	3222510718	3222510107	322840552720	322383471752	150
3223510000	3223510094	3223510117	322108474757	322847604338	150
3177410000	3177410654	3177410635	317010231087	317919629774	150
3219410000	3219410375	3219410031	321028866645	321499662432	150
3227410000	3227410000	3227410154	322443050400	322005431903	150
3187510000	3187510456	3187510791	318230397082	318856721582	150
3150510000	3150510883	3150510404	315374154427	315780824972	150
3144510000	3144510568	3144510320	314801107155	314807534504	150

3119410000	3119410356	3119410021	311751645044	311152452042	150
3136410000	3136410760	3136410241	313496147522	313141520870	150
3116510000	3116510551	3116510084	311410561909	311957041027	150
3133500000	3133500260	3133500187	313268377529	313272383309	150
3158510000	3158510617	3158510487	315348236336	315844348203	150
3118410000	3118410886	3118410034	311816297746	311529530544	150
3338510000	3338510378	3338510305	333080607115	333213710227	150
3319410000	3319410394	3319410041	331386995978	331061733723	150
3354510000	3354510665	3354510443	335727259803	335198580061	150
3300610000	3300610400	3300610999	330273044423	330925532259	150
3252510000	3252510108	3252510409	325718403751	325383410750	150
3286510000	3286510434	3286510801	328905015168	328683053745	150
3236510000	3236510703	3236510298	323235092814	323176940867	150
3273510000	3273510666	3273510616	327090362909	327375293495	150
3258410000	3258410498	3258410438	325755265635	325526098459	150
3245500000	3245500972	3245500265	324881464337	324998057307	150
3448410000	3448410345	3448410361	344489621195	344869763524	150
3470510000	3470510293	3470510632	347613113095	347604494313	150
3428410000	3428410048	3428410161	342401405403	342437981946	150
3429410000	3429410593	3429410149	342937693565	342249901698	150
3461510000	3461510240	3461510524	346434984149	346778506238	150
3461610000	3461610190	3461610589	346743868932	346447826480	150
3439510000	3439510628	3439510315	343507611209	343246383170	150
3478510000	3478510849	3478510713	347099137582	347824477729	150
3435500000	3435500842	3435500186	343890163593	343081282575	150
3401510000	3401510407	3401510929	340769228526	340024951911	150
3378410000	3378410803	3378410643	337998160551	337386763955	150
3375510000	3375510036	3375510692	337524162752	337532648347	150
3392510000	3392510643	3392510819	339607697128	339717179054	150
3406500000	3406500445	3406500901	340508777523	340844289055	150
3387410000	3387410704	3387410754	338332286053	338874596967	150
3383510000	3383510808	3383510727	338351382905	338129792792	150
3416500000	3416500599	3416500002	341630870388	341432846953	150
3552510000	3552510349	3552510440	355107540012	355346674990	150
3600610000	3600610445	3600610029	360409837681	360337687126	150
3550510000	3550510956	3550510444	355646074875	355735301617	150
3581510000	3581510515	3581510733	358953075240	358468227650	150
3547410000	3547410375	3547410376	354253847246	354709936163	150
3506500000	3506500462	3506500911	350280625702	350298366291	150
3512510000	3512510583	3512510036	351603165721	351176097965	150
3515510000	3515510195	3515510071	351309311415	351290895234	150
3529410000	3529410610	3529410159	352472248380	352492174135	150
3486410000	3486410495	3486410774	348670670458	348151685507	150
3545500000	3545500023	3545500295	354292768877	354556292157	150
3729410000	3729410537	3729410179	372071840692	372834787142	150
3712510000	3712510620	3712510056	371726354469	371945045515	150
3700610000	3700610460	3700610039	370068174311	370676917938	150

3657510000	3657510171	3657510544	365492056128	365673877092	150
3660510000	3660510132	3660510554	366043689731	366439284346	150
3664510000	3664510766	3664510575	366450423958	366788997012	150
3658410000	3658410576	3658410478	365333560270	365609819818	150
3609410000	3609410316	3609410972	360808151972	360758411658	150
3612510000	3612510603	3612510046	361197699898	361343931187	150
3625500000	3625500893	3625500108	362547949081	362361963772	150
3666500000	3666500198	3666500522	366809223174	366913279726	150
3659410000	3659410943	3659410467	365998812360	365823219027	150
3817510000	3817510781	3817510161	381405188151	381698997883	150
3801610000	3801610666	3801610041	380995295865	380631853963	150
3819410000	3819410481	3819410090	381609102729	381350421327	150
3804510000	3804510158	3804510982	380866363254	380778720613	150
3808410000	3808410838	3808410004	380892561087	380675218244	150
3797410000	3797410769	3797410893	379186969150	379105679077	150
3837510000	3837510009	3837510366	383023788720	383747420939	150
3769410000	3769410012	3769410577	376315769102	376593175506	150
3757410000	3757410422	3757410496	375660568947	375252339865	150
3767410000	3767410591	3767410596	376601873435	376824513580	150
3969410000	3969410054	3969410597	396438668517	396310517078	150
3939510000	3939510717	3939510364	393975946433	393877335263	150
3927510000	3927510980	3927510272	392398727378	392251930577	150
3860510000	3860510170	3860510573	386626173438	386171870113	150
3881610000	3881610152	3881610828	388899538529	388443031916	150
3882510000	3882510545	3882510768	388590163044	388361490218	150
3916500000	3916500617	3916500052	391709164620	391809968407	150
3888410000	3888410048	3888410793	388398477026	388506936146	150
3918410000	3918410018	3918410113	391594029775	391132793160	150
3895500000	3895500438	3895500841	389174233351	389540341182	150
4058410000	4058410463	4058410420	405429192110	405282806382	150
4042510000	4042510888	4042510289	404996840001	404694312100	150
4036500000	4036500788	4036500163	403990870820	403693466064	150
4090610000	4090610434	4090610864	409766270647	409693298432	150
4078510000	4078510862	4078510675	407499807750	407079548796	150
4065510000	4065510891	4065510548	406107327327	406467436284	150
4066500000	4066500104	4066500463	406760713646	406709820489	150
4069410000	4069410020	4069410508	406327147894	406550142816	150
4076510000	4076510227	4076510679	407749329458	407782353811	150
4049410000	4049410774	4049410309	404849612315	404271025285	150
4021510000	4021510840	4021510090	402874097065	402576595954	150
4006500000	4006500467	4006500864	400099491509	400527977755	150
4008410000	4008410818	4008410924	400063130715	400545123624	150
3995510000	3995510338	3995510963	399061911670	399444018942	150
4011610000	4011610704	4011610061	401791133782	401944494368	150
3998410000	3998410195	3998410902	399709180904	399292507311	150
3996410000	3996410648	3996410923	399529698649	399024115784	150
4002610000	4002610899	4002610949	400578146074	400312017654	150

4201510000	4201510369	4201510909	420173752455	420748312331	150
4165510000	4165510909	4165510560	416043785869	416704086248	150
4166500000	4166500121	4166500473	416580385553	416721603995	150
4189410000	4189410100	4189410717	418603266642	418494533418	150
4202510000	4202510347	4202510905	420931260695	420070048394	150
4175510000	4175510005	4175510671	417899522867	417008294421	150
4133510000	4133510155	4133510208	413497138342	413143250691	150
4136500000	4136500804	4136500173	413457637794	413742096727	150
4123510000	4123510076	4123510108	412316823770	412006484488	150
4129410000	4129410536	4129410121	412316637659	412881506777	150
4105510000	4105510098	4105510925	410786530917	410015477680	150
4112510000	4112510514	4112510995	411904372755	411259956922	150
4115510000	4115510263	4115510029	411384107349	411181391918	150
4125510000	4125510301	4125510133	412738428665	412804886734	150
4141610000	4141610274	4141610362	414868063380	414607876484	150
4318410000	4318410928	4318410055	431936749687	431062194989	150
4325500000	4325500845	4325500079	432274845179	432887465856	150
4306500000	4306500431	4306500892	430002608965	430496956539	150
4337510000	4337510046	4337510312	433423200786	433745560852	150
4290610000	4290610470	4290610884	429589997976	429079031164	150
4284510000	4284510907	4284510735	428026959651	428503491162	150
4342510000	4342510943	4342510319	434719721883	434475372730	150
4302610000	4302610951	4302610978	430107821418	430803974017	150
4272510000	4272510095	4272510613	427616798401	427900515469	150
4225510000	4225510318	4225510143	422185161439	422951856730	150
4242510000	4242510924	4242510309	424326952854	424623319764	150
4258510000	4258510637	4258510498	425854502837	425972413642	150
4445510000	4445510723	4445510374	444253154360	444046510287	150
4267410000	4267410508	4267410547	426368463266	426206857143	150
4239410000	4239410624	4239410230	423126298565	423854220087	150
4268410000	4268410611	4268410536	426705813556	426905558798	150
4246510000	4246510882	4246510399	424739537569	424672132161	150
4237410000	4237410209	4237410255	423265232122	423568089072	150
4417510000	4417510829	4417510124	441824591127	441997239702	150
4427410000	4427410035	4427410175	442428190361	442902362523	150
4409510000	4409510240	4409510015	440185654944	440915876843	150
4407510000	4407510656	4407510023	440194427176	440773883153	150
4425500000	4425500863	4425500089	442210880979	442705198130	150
4425510000	4425510350	4425510164	442707726478	442906832114	150
4346500000	4346500914	4346500293	434557703626	434501355054	150
4401610000	4401610599	4401610003	440289279793	440914474261	150
4361610000	4361610172	4361610580	436159566678	436994927175	150
4393510000	4393510907	4393510830	439815689694	439119884283	150
4380610000	4380610314	4380610794	438317800760	438410931703	150
4374510000	4374510886	4374510644	437054023344	437625306794	150
4404510000	4404510093	4404510941	440152803317	440098075703	150
4564510000	4564510748	4564510565	456168188894	456299298057	150

4571610000	4571610910	4571610699	457103579811	457830548220	150
4551510000	4551510069	4551510433	455640048471	455114864693	150
4590510000	4590510187	4590510839	459942049318	459588187059	150
4587410000	4587410744	4587410775	458742548327	458510602805	150
4557510000	4557510155	4557510535	455170608339	455390430336	150
4506410000	4506410346	4506410981	450022315867	450518161684	150
4477410000	4477410558	4477410666	447009600462	447321934214	150
4511510000	4511510638	4511510040	451992262509	451729507469	150
4531610000	4531610164	4531610303	453974262062	453187760451	150
4483510000	4483510828	4483510738	448968880350	448206439911	150
4711610000	4711610751	4711610129	471730002294	471518288823	150
4682510000	4682510421	4682510749	468784740013	468843470097	150
4716500000	4716500647	4716500033	471960431557	471190286505	150
4601510000	4601510450	4601510950	460452178197	460788877321	150
4616510000	4616510551	4616510134	461969939923	461622870535	150
4601610000	4601610635	4601610023	460984422272	460662641923	150
4633510000	4633510246	4633510259	463342563388	463627806389	150
4621610000	4621610913	4621610217	462938512805	462047059398	150
4602610000	4602610009	4602610008	460632265031	460319397689	150
4623510000	4623510067	4623510158	462916371070	462894872978	150
4792510000	4792510720	4792510861	479600941984	479511892711	150
4801510000	4801510494	4801510970	480543358413	480799834358	150
4822510000	4822510831	4822510168	482412052543	482823349490	150
4825510000	4825510416	4825510207	482912961533	482555792343	150
4798510000	4798510122	4798510945	479177328952	479583736593	150
4823500000	4823500205	4823500158	482710602274	482081229605	150
4747510000	4747510156	4747510456	474952705950	474499981271	150
4724510000	4724510329	4724510175	472813060966	472897869767	150
4741510000	4741510814	4741510354	474229565889	474654999232	150
4777510000	4777510395	4777510752	477098968220	477591323237	150
4719410000	4719410465	4719410081	471226107995	471511217594	150
4759410000	4759410963	4759410478	475776829394	475881148063	150
4778510000	4778510893	4778510744	477668762534	477413921864	150
4733510000	4733510263	3733510268	473306800408	473784455347	150
4719510000	4719510404	4719510148	471096528772	471399123171	150
4737510000	4737510994	4737510357	473151417672	473585408465	150
4776510000	4776510347	4776510751	477835929259	477381761540	150
4948510000	4948510585	4948510468	494673371795	494947560806	150
4952510000	4952510429	4952510481	495744767080	495465310675	150
4938510000	4938510417	4938510366	493862286985	493551963200	150
4957410000	4957410458	4957410517	495332598150	495775735294	150
4863510000	4863510594	4863510576	486415837626	486944156710	150
4865510000	4865510947	4865510637	486860915714	486133353185	150
4870610000	4870610305	4870610744	487525461068	487550832491	150
4859410000	4859410983	4859410488	485962889205	485750548507	150
4885500000	4885500287	4885500733	488003686969	488457316429	150
4866410000	4866410321	4866410613	486095165304	486625287512	150

4857410000	4857410439	4857410507	485317455756	485114401118	150
4857510000	4857510209	4857510565	485150842625	485779959024	150
4870510000	4870510370	4870510673	487455920887	487477429976	150
5029410000	5029410520	5029410112	502051493649	502373510967	150
5085510000	5085510097	5085510770	508753815943	508504822847	150
5039410000	5039410591	5039410211	503137191067	503946052395	150
5024510000	5024510295	5024510106	502298624977	502448942568	150
5068510000	5068510695	5068510578	506104835531	506961400592	150
5043510000	5043510226	5043510299	504033708305	504604000952	150
4986510000	4986510491	4986510872	498263694491	498355108448	150
4980510000	4980510072	4980510781	498842688193	498345991064	150
5009410000	5009410212	5009410914	500211750271	500471970693	150
4962510000	4962510619	4962510583	496502239739	496890996148	150
5019410000	5019410343	5019410013	501844056417	501175271678	150
4988510000	4988510069	4988510865	498031381833	498045666733	150
4992510000	4992510754	4992510881	499451144961	499472324560	150
4995500000	4995500453	4995500853	499907023366	499123058114	150
5173510000	5173510653	5173510608	517642005229	517069824038	150
5194510000	5194510058	5194510827	519563941934	519396454786	150
5184510000	5184510891	5184510726	518261045092	518832389457	150
5207510000	5207510623	5207510004	520667117309	520447151504	150
5157410000	5157410483	5157410438	515671029482	515136657233	150
5157510000	5157510231	5157510496	515214161784	515942883178	150
5196410000	5196410537	5196410845	519481563498	519745261162	150
5094510000	5094510040	5094510817	509210179731	509558020876	150
5097510000	5097510809	5097510882	509480604341	509952512195	150
5089510000	5089510143	5089510773	508234201683	508454581215	150
5138510000	5138510345	5138510288	513285673535	513935126706	150
5135500000	5135500797	5135500159	513947162562	513908609880	150
5106510000	5106510376	5106510985	510505561340	510717666231	150
5104510000	5104510050	5104510910	510290267051	510716174080	150
5136510000	5136510814	5136510290	513359229813	513153489168	150
5298410000	5298410081	5298410835	529036764654	529223242897	150
5278410000	5278410790	5278410635	527068123773	527758886362	150
5309510000	5309510226	5309510006	530801840780	530267082101	150
5326410000	5326410628	5326410162	532770097847	532265134861	150
5326500000	5326500682	5326500094	532002879409	532841294235	150
5296410000	5296410552	5296410855	529140561944	529651259747	150
5303510000	5303510825	5303510927	530011239980	530084388209	150
5321610000	5321610863	5321610190	532392798036	532703629031	150
5289510000	5289510173	5289510793	528637497301	528905837860	150
5226500000	5226500666	5226500084	522474548173	522986697044	150
5229410000	5229410557	5229410132	522986661845	522391710742	150
5262510000	5262510485	5262510512	526301990463	526341469630	150
5231510000	5231510083	5231510209	523553946163	523435292288	150
5264510000	5264510701	5264510536	526776883422	526025684243	150
5237510000	5237510031	5237510303	523069620539	523428096956	150

5225500000	5225500831	5225500070	522135559870	522304858126	150
5238410000	5238410185	5238410243	523012933191	523890246772	150
5421510000	5421510920	5421510131	542336135947	542494478752	150
5456510000	5456510027	5456510516	545605305204	545593272340	150
5416410000	5416410490	5416410073	541107890291	541603931230	150
5429510000	5429510455	5429510218	542566153954	542039170759	150
5365510000	5365510860	5365510583	536635633084	536285270333	150
5385500000	5385500210	5385500681	538149857876	538917114409	150
5385510000	5385510148	5385510804	538955354486	538875841321	150
5360510000	5360510117	5360510527	536230618269	536809329074	150
5548510000	5548510521	5548510428	554765918932	554076358157	150
5554510000	5554510701	5554510466	555075105657	555931607647	150
5527510000	5527510914	5527510233	552842199352	552675800945	150
5558410000	5558410560	5558410470	555849270900	555663466179	150
5580510000	5580510992	5580510742	558987019447	558457895092	150
5540510000	5540510956	5540510347	554510900808	554343710599	150
5556510000	5556510046	5556510526	555643683612	555507490305	150
5525510000	5525510369	5525510176	552428037763	552594103781	150
5535510000	5535510564	5535510278	553925837318	553863388961	150
5466500000	5466500170	5466500504	546575291087	546746722060	150
5498410000	5498410118	5498410855	549563427342	549606550900	150
5501510000	5501510433	5501510941	550167989067	550451046471	150
5501610000	5501610617	5501610014	550738594741	550394191790	150
5696410000	5696410606	5696410895	569013126925	569927695727	150
5699410000	5699410338	5699410863	569762403678	569055115328	150
5701510000	5701510474	5701510961	570373725184	570162649620	150
5666510000	5666510162	5666510639	566383793793	566641166957	150
5652510000	5652510374	5652510452	565859453082	565969178813	150
5585500000	5585500242	5585500700	558459831160	558807184859	150
5588410000	5588410997	5588410764	558019758098	558944739887	150
5642510000	5642510000	5642510351	564720297925	564441368686	150
5626410000	5626410680	5626410192	562235623998	562223109316	150
5811610000	5811610771	5811610140	581693988321	581444151512	150
5784510000	5784510995	5784510786	578508902172	578089234627	150
5809510000	5809510253	5809510057	580720381519	580713704261	150
5816510000	5816510586	5816510158	581685712575	581021463019	150
5782510000	5782510442	5782510760	578052163526	578495506577	150
5775510000	5775510115	5775510737	577193367891	577388089715	150
5746510000	5746510976	5746510447	574449005167	574830821589	150
5731510000	5731510614	5731510259	573174911206	573346340840	150
5741610000	5741610382	5741610422	574514062755	574007278980	150
5721510000	5721510978	5721510161	572644375684	572373348597	150
5719510000	5719510406	5719510149	571190455728	571239221765	150
5725510000	5725510401	5725510197	572964801567	572733738207	150
5726500000	5726500742	5726500134	572763004486	572093152768	150
5933510000	5933510302	5933510289	593627833887	593772094294	150
5925510000	5925510463	5925510218	592527179665	592100809468	150

5901510000	5901510518	5901510981	590774551728	590132973145	150
5936510000	5936510829	5936510371	593057478095	593271821201	150
5879510000	5879510107	5879510753	587763057639	587573897924	150
5829510000	5829510526	5829510259	582051819483	582376182995	150
5835500000	5835500909	5835500228	583590018170	583153799671	150
5869410000	5869410035	5869410589	586772232578	586935354699	150
5844510000	5844510590	5844510393	584763891267	584289696588	150
5839410000	5839410737	5839410291	583858052089	583871737939	150
5877410000	5877410626	5877410706	587011613815	587018832435	150
5859510000	5859510972	5859510555	585840301967	585518642834	150
6040510000	6040510864	6040510298	604710704733	604539983944	150
6057410000	6057410469	6057410429	605518156610	605945706553	150
6049510000	6049510738	6049510377	604306039884	604407016802	150
6037410000	6037410169	6037410238	603186766031	603419692047	150
6067410000	6067410478	6067410529	606205538739	606660930077	150
6026410000	6026410579	6026410133	602172215567	602480592009	150
6015510000	6015510247	6015510021	601607653950	601236065811	150
6019410000	6019410345	6019410014	601354274514	601797330223	150
5957510000	5957510227	5957510576	595870432239	595808388579	150
5988410000	5988410070	5988410805	598369525186	598068671215	150
5979510000	5979510125	5979510764	597896405867	597599143198	150
5985500000	5985500302	5985500746	598788827616	598713075923	150
5951610000	5951610104	5951610541	595723134550	595280528123	150
5977410000	5977410642	5977410716	597499375844	597241043048	150
5981610000	5981610173	5981610840	598457741823	598957993549	150
6160510000	6160510082	6160510508	616697229509	616162741344	150
6145500000	6145500960	6145500258	614893925988	614764803012	150
6148410000	6148410298	6148410334	614900785384	614912380059	150
6138410000	6138410169	6138410234	613436077213	613166750680	150
6147410000	6147410308	6147410341	614073520879	614363924913	150
6096410000	6096410523	6096410836	609890780265	609991476895	150
6086500000	6086500360	6086500664	608771289372	608612073601	150
6109410000	6109410231	6109410925	610782420904	610331504313	150
6314510000	6314510182	6314510036	631102729027	631391191111	150
6311510000	6311510602	6311510022	631109030824	631451174377	150
6281510000	6281510446	6281510706	628819016883	628809404985	150
6281610000	6281610053	6281610771	628740078616	628532309870	150
6319510000	6319510339	6319510109	631292857843	631706344584	150
6279410000	6279410107	6279410630	627481922144	627883385708	150
6266500000	6266500141	6266500485	626701537368	626411750489	150
6266510000	6266510165	6266510600	626369968726	626126082067	150
6240510000	6240510899	6240510318	624617010947	624428118748	150
6229510000	6229510498	6229510200	622597637966	622821028980	150
6235500000	6235500816	6235500170	623774648882	623485844948	150
6200510000	6200510449	6200510923	620242036156	620609326150	150
6214510000	6214510164	6214510026	621816863324	621970966216	150
6259410000	6259410873	6259410431	625614271529	625208919079	150

6247510000	6247510081	6247510408	624680480489	624344475421	150
6260610000	6260610055	6260610585	626928443438	626079057354	150
6212510000	6212510534	6212510008	621668407505	621228821916	150
6417410000	6417410804	6417410078	641086618164	641561737922	150
6395500000	6395500367	6395500793	639988778122	639113319453	150
6388510000	6388510984	6388510807	638963585076	638210250816	150
6403510000	6403510845	6403510938	640449471270	640907256001	150
6419410000	6419410419	6419410053	641843386367	641179977236	150
6392510000	6392510649	6392510822	639670123058	639757744407	150
6345510000	6345510710	6345510365	634786644036	634886998857	150
6362510000	6362510506	6362510523	636676219999	636685192346	150
6337410000	6337410233	6337410266	633852479038	633841464349	150
6369510000	6369510961	6369510605	636798192313	636273034347	150
6349410000	6349410837	6349410341	634588911220	634840590414	150
6366500000	6366500154	6366500495	636184127036	636001042644	150
6359510000	6359510896	6359510507	635087105994	635981539266	150
6386510000	6386510383	6386510814	638678332844	638467957617	150
6350510000	6350510924	6350510427	635708255871	635182390289	150
6367410000	6367410527	6367410560	636569949714	636825444959	150
6344510000	6344510504	6344510343	634339020486	634906554352	150
6374510000	6374510890	6374510646	637863847151	637783517693	150
6553510000	6553510496	6553510449	655755513504	655601832619	150
6527410000	6527410055	6527410187	652360985039	652871884409	150
6545500000	6545500028	6545500298	654091693286	654479097758	150
6525500000	6525500882	6525500101	652515015542	652090218123	150
6565510000	6565510898	6565510607	656796869803	656570437191	150
6509510000	6509510262	6509510028	650182072412	650695219939	150
6462510000	6462510526	6462510533	646711729145	646596857341	150
6451610000	6451610017	6451610492	645599575286	645030509111	150
6467410000	6467410545	6467410570	646712137352	646528009085	150
6485500000	6485500228	5485500691	648710416960	648249919857	150
6489410000	6489410159	6489410748	648285140997	648831086641	150
6457510000	6457510142	6457510527	645120142180	645900302269	150
6502510000	6502510405	6502510938	650498386507	650109364656	150
6474510000	6474510908	6474510656	647394807794	647435242499	150
6661610000	6661610754	6661610612	666976316101	666104695012	150
6649410000	6649410765	6649410371	664791633153	664058964669	150
6681610000	6681610125	6681610811	668666618314	668372471223	150
6647410000	6647410398	6647410388	664042587294	664927602723	150
6653510000	6653510513	6653510459	665989861185	665797476298	150
6572510000	6572510154	6572510644	657163374890	657174479828	150
6583510000	6583510848	6583510750	658081345110	658925219086	150
6586510000	6586510423	6586510834	658798923539	658246345065	150
6618510000	6618510158	6618510141	661584950956	661347538374	150
6764510000	6764510790	6764510588	676561527266	676849994122	150
6790610000	6790610481	6790610935	679034422870	679401861579	150
6797410000	6797410773	6797410896	679760038499	679281655326	150

6798410000	6798410170	6798410885	679263889359	679359041421	150
6768510000	6768510819	6768510648	676749869975	676766015758	150
6755510000	6755510844	6755510516	675188787302	675083827479	150
6739410000	6739410720	6739410282	673649687066	673043316221	150
6717410000	6717410852	6717410107	671005240139	671182507514	150
6691510000	6691510726	6691510846	669541981432	669044363662	150
6721610000	6721610933	6721610229	672052391722	672928417004	150
6715510000	6715510234	6715510095	671734035908	671473139453	150
6694510000	6694510014	6694510878	669781499182	669039883068	150
6751510000	6751510111	6751510456	675030329233	675746712954	150
6751610000	6751610069	6751610522	675472246437	675887372906	150
6695500000	6695500413	6695500823	669670629817	669382199163	150
6921510000	6921510026	6921510182	692738361486	692400999698	150
6892510000	6892510739	6892510873	689388952493	689996786459	150
6925500000	6925500951	6925500141	692308568671	692459053704	150
6899510000	6899510330	6899510952	689688815038	689163452513	150
6878410000	6878410875	6878410695	687918409940	687204236061	150
6868410000	6868410725	6868410597	686956109743	686623830729	150
6826410000	6826410715	6826410213	682553303914	682964978245	150
6841610000	6841610911	6841610433	684117923990	684544767436	150
6827510000	6827510968	6827510264	682564063968	682096750482	150
6860510000	6860510175	6860510576	686746390169	686178683362	150
6861510000	6861510168	6861510566	686646337944	686635386837	150
6828510000	6828510294	6828510259	682179530957	682874424872	150
6850610000	6850610012	6850610547	685630185936	685745870435	150
6840510000	6840510833	6840510377	684131009594	684051070762	150
6857410000	6857410442	6857410509	685012734639	685854805654	150
6816410000	6816410544	6816410113	681075233235	681479492270	150
7023510000	7023510062	7023510101	702091693902	702980581422	150
7045510000	7045510656	7045510333	704460877746	704275251475	150
7016500000	7016500541	7016500966	701616971306	701914988537	150
7031610000	7031610993	7031610260	703421190785	703953637762	150
7037510000	7037510005	7037510286	703163118373	703268540565	150
7007410000	7007410672	7007410937	700885709001	700055899469	150
6996510000	6996510673	6996510974	699454340738	699123706412	150
7011510000	7011510541	7011510993	701279328569	701608371416	150
6991610000	6991610880	6991610941	699444785752	699092499045	150
6969410000	6969410058	6969410600	696489366107	696954409578	150
6939410000	6939410760	6939410301	693795121138	693002704506	150
6958410000	6958410561	6958410509	695851808294	695192996370	150
6959410000	6959410005	6959410500	695803240210	695293496874	150
6956500000	6956500092	6956500455	695130455205	695837357060	150
6990610000	6990610517	6990610955	699827385188	699924066485	150
6993510000	6993510015	6993510892	699122941353	699491495214	150
6950610000	6950610028	6950610557	695518727360	695906978540	150
7169510000	7169510933	7169510587	716701353933	716829886086	150
7156510000	7156510980	7156510489	715195819374	715488395899	150

7141510000	7141510696	7141510299	714751871600	714312584181	150
7149510000	7149510696	7149510388	714539575640	714961990401	150
7128410000	7128410058	7128410135	712686547567	712199135728	150
7176410000	7176410293	7176410647	717113274135	717776055414	150
7095500000	7095500321	7095500760	709696961175	709896942530	150
7071610000	7071610825	7071610652	707453956105	707354254248	150
7097410000	7097410667	7097410828	709647608174	709798540088	150
7113510000	7113510891	7113510010	711121488040	711644589147	150
7088510000	7088510940	7088510777	708424669163	708630324325	150
7107510000	7107510610	7107510995	710695710739	710480829334	150
7082510000	7082510252	7082510693	708011321915	708655265236	150
7114510000	7114510150	7114510017	711459670945	711845452932	150
7086410000	7086410441	7086410738	708305649866	708605284100	150
7108410000	7108410841	7108410937	710946264773	710900685636	150
7288510000	7288510972	7288510798	728461092057	728497402817	150
7249410000	7249410819	7249410332	724658487962	724364258519	150
7280510000	7280510938	7280510715	728075316817	728484545760	150
7269410000	7269410927	7269410531	726568900805	726269425530	150
7287410000	7287410695	7287410748	728061944599	728152686839	150
7248510000	7248510476	7248510400	724883166311	724513654058	150
7216510000	7216510573	7216510098	721121486323	721531515565	150
7181610000	7181610018	7181610762	718627218323	718351981570	150
7203510000	7203510812	7203510917	720764224860	720777892853	150
7237410000	7237410213	7237410258	723074729588	723959647945	150
7196510000	7196510531	7196510895	719954127100	719645520512	150
7208510000	7208510020	7208510003	720404010678	720720055528	150
7227510000	7227510865	7227510205	722419613210	722136959996	150
7222510000	7222510726	7222510111	722221835876	722654967371	150
7199510000	7199510316	7199510884	719784263702	719216274323	150
7197410000	7197410684	7197410838	719036830752	719339435740	150
7200610000	7200610390	7200610993	720230240130	720004825899	150
7411610000	7411610703	7411610103	741940348230	741679679689	150
7372510000	7372510123	7372510625	737448004756	737428978451	150
7402610000	7402610977	7402610991	740918425570	740314306159	150
7409410000	7409410289	7409410956	740643331624	740462742243	150
7412510000	7412510571	7412510029	741229616055	741548421661	150
7428410000	7428410054	7428410165	742687897822	742332825549	150
7406510000	7406510434	7406510018	740872656862	740469609636	150
7397410000	7397410714	7397410857	739003253540	739787571915	150
7359410000	7359410892	7359410442	735010728276	735566939781	150
7312510000	7312510554	7312510019	731986059221	731643180773	150
7351610000	7351610004	7351610483	735951462339	735721218527	150
7519410000	7519410438	7519410064	751358489402	751352237875	150
7498510000	7498510081	7498510918	749213635088	749846535794	150
7530510000	7530510775	7530510249	753154008390	753454711791	150
7531510000	7531510583	7531510241	753584734538	753549449155	150
7500510000	7500510513	7500510953	750217042096	750309452519	150

7500610000	7500610436	7500610023	750018665826	750976255568	150
7526500000	7526500716	7526500116	752700763347	752248795027	150
7536410000	7536410819	7536410285	753997474797	753800223732	150
7536500000	7536500868	7536500216	753719031446	753662214074	150
7536510000	7536510763	7536510332	753913783494	753860678893	150
7507510000	7507510680	7507510036	750107814004	750130110409	150
7492510000	7492510669	7492510833	749065009137	749581217749	150
7436500000	7436500853	7436500206	743371112232	743323776167	150
7477410000	7477410564	7477410669	747583270738	747853510861	150
7432510000	7432510946	7432510233	743099059957	743893157078	150
7481610000	7481610094	7481610792	748291442287	748779989229	150
7459510000	7459510915	7459510518	745815058736	745133389908	150
7637510000	7637510981	7637510348	763713077993	763715850526	150
7649510000	7649510781	7649510438	764409208333	764213737014	150
7646500000	7646500963	7646500326	764531393311	764912924868	150
7560510000	7560510120	7560510548	756195218610	756557799913	150
7578410000	7578410818	7578410667	757974612317	757637705602	150
7569410000	7569410982	7569410561	756305892679	756674193354	150
7568510000	7568510786	7568510630	756180720732	756950518275	150
7574510000	7574510927	7574510667	757192719128	757492773594	150
7767410000	7767410597	7767410600	776752497576	776496828750	150
7754510000	7754510739	7754510488	775848665449	775054130901	150
7771510000	7771510349	7771510657	777133684889	777318758888	150
7771610000	7771610950	7771610722	777600551215	777672155336	150
7759510000	7759510960	7759510547	775728850889	775797283017	150
7774510000	7774510827	7774510688	777997793429	777214996444	150
7728410000	7728410104	7728410194	772593047809	772467066864	150
7728510000	7728510276	7728510250	772734395095	772507078231	150
7675510000	7675510097	7675510728	767229102265	767835048274	150
7691610000	7691610305	7691610912	769970843100	769661558177	150
7676410000	7676410374	7676410696	767991350290	767470909531	150
7708510000	7708510001	7708510053	770294007531	770798636103	150
7687410000	7687410765	7687410787	768167341431	768700770003	150
7729510000	7729510514	7729510250	772361018883	772564507162	150
7719410000	7719410469	7719410084	771889010783	771807447393	150
7668410000	7668410692	7668410578	766981545924	766142971823	150
7697510000	7697510918	7697510943	769956008055	769002135680	150
7698410000	7698410157	7698410876	769368119776	769089173396	150
7845510000	7845510691	7845510422	784101399288	784239934025	150
7859410000	7859410988	7859410491	785443792396	785780943049	150
7811600000	7811600609	7811600063	781301661516	781884134966	150
7796410000	7796410624	7796410907	779678522274	779259671280	150
7827410000	7827410110	7827410220	782826015274	782183862970	150
7836510000	7836510814	7836510363	783359072238	783290413566	150
7907510000	7907510749	7907510076	790175525135	790143294666	150
7851610000	7851610087	7851610533	785316858842	785477516535	150
7911610000	7911610790	7911610152	791295899387	791563322949	150

7805510000	7805510216	7805510001	780975601474	780539814022	150
7871510000	7871510368	7871510667	787226148167	787333104693	150
7833510000	7833510287	7833510281	783386241636	783654507510	150
7929410000	7929410578	7929410203	792951414471	792092825022	150
7963510000	7963510620	7963510589	796126977169	796065037255	150
7990510000	7990510309	7990510882	799513175373	799545698602	150
8022510000	8022510691	8022510092	802925603833	802617883103	150
7921610000	7921610974	7921610250	792672090563	792668664092	150
8025500000	8025500801	8025500053	802190573064	802771200594	150
7999410000	7999410396	7999410895	799436710050	799513305286	150
7941610000	7941610935	7941610444	794877218062	794057962407	150
7957410000	7957410463	7957410520	795180141721	795924265302	150
7931610000	7931610243	7931610345	793732095361	793885552987	150
8019510000	8019510293	8019510080	801508089916	801025132343	150
7944510000	7944510609	7944510406	794110873206	794909176495	150
7978410000	7978410894	7978410706	797517255524	797541205580	150
7966410000	7966410258	7966410626	796930454255	796828999577	150
7966510000	7966510214	7966510671	796597251417	796401923652	150
8035500000	8035500786	8035500153	803077157854	803019766377	150
7926410000	7926410735	7926410225	792904965574	792669218403	150
7916500000	7916500623	7916500056	791458869905	791966209246	150
7956510000	7956510117	7956510570	795919495810	795562524198	150
8000510000	8000510416	8000510906	800381629469	800482918333	150
8002510000	8002510799	8002510889	800752953963	800879972606	150
8159410000	8159410858	8159410423	815889624898	815879873303	150
8121510000	8121510869	8121510103	812650020496	812447857227	150
8095510000	8095510277	8095510877	809451210791	809190354128	150
8134510000	8134510405	8134510221	813445006414	813901953387	150
8153510000	8153510429	8153510413	815608606376	815099704346	150
8102610000	8102610923	8102610963	810936040332	810814969124	150
8131610000	8131610096	8131610271	813465723415	813161851518	150
8092510000	8092510597	8092510793	809573065998	809493993599	150
8162510000	8162510471	8162510505	816151305511	816945470825	150
8148510000	8148510461	8148510390	814703920116	814589660636	150
8108510000	8108510005	8108510994	810679164718	810724437742	150
8110510000	8110510618	8110510013	811380408108	811137122625	150
8126500000	8126500657	8126500077	812246529145	812203724880	150
8285500000	8285500200	8285500674	828276977539	828887919061	150
8201610000	8201610576	8201610987	820110845374	820082088878	150
8179410000	8179410095	8179410622	817351027513	817194920081	150
8339510000	8339510619	8339510310	833355281598	833502149556	150
8228410000	8228410076	8228410146	822439829295	822937126739	150
8218410000	8218410916	8218410050	821747757235	821678000965	150
8234510000	8234510422	8234510231	823537149107	823805831371	150
8224510000	8224510333	8224510129	822586659745	822954600962	150
8174510000	8174510859	8174510628	817520294422	817091169607	150
8217410000	8217410778	8217410060	821147036728	821394555373	150

8202610000	8202610939	8202610972	820930160643	820876801228	150
8176510000	8176510253	8176510694	817072377407	817170048839	150
8247410000	8247410327	8247410353	824439914119	824816541995	150
8261510000	8261510207	8261510509	826221986013	826913223850	150
8277410000	8277410533	8277410650	827919167803	827653807416	150
8195500000	8195500337	8195500773	819812171421	819412654110	150
8169410000	8169410910	8169410522	816405087807	816015026802	150
8253510000	8253510445	8253510423	825290854882	825275091277	150
8227410000	8227410009	8227410159	822347728231	822480799014	150
8418410000	8418410950	8418410069	841592839666	841635215426	150
8309410000	8309410273	8309410947	830893224385	830139899997	150
8322510000	8322510745	8322510123	832479008110	832391998642	150
8297410000	8297410701	8297410848	829034798355	829700289232	150
8297510000	8297510850	8297510905	829195234494	829216688428	150
8340510000	8340510924	8340510330	834453042590	834181401069	150
8299510000	8299510334	8299510894	829696750965	829882379743	150
8329410000	8329410581	8329410144	832428321740	832550854934	150
8391610000	8391610249	8391610883	839173224861	839034348393	150
8307510000	8307510645	8307510017	830012542519	830347019224	150
8537510000	8537510967	8537510338	853155245735	853858165831	150
8543510000	8543510321	8543510351	854257815414	854830268189	150
8529510000	8529510476	8529510231	852802742776	852398682575	150
8467410000	8467410548	8467410572	846038889810	846215523589	150
8467510000	8467510320	8467510628	846402823253	846013601743	150
8426500000	8426500702	8426500107	842016484372	842813142286	150
8539410000	8539410692	8539410263	853264676260	853818691009	150
8487410000	8487410732	8487410769	848061611020	848422681120	150
8487510000	8487510515	8487510826	848912187312	848728522832	150
8518410000	8518410963	8518410079	851131762663	851737365961	150
8430510000	8430510757	8430510240	843138600279	843155504498	150
8447410000	8447410367	8447410371	844051566309	844496180133	150
8447510000	8447510114	8447510429	844168078390	844319813066	150
8477410000	8477410566	8477410670	847074645701	847058034417	150
8493510000	8493510931	8493510843	849422673410	849661149483	150
8504510000	8504510120	8504510957	850109977932	850284749284	150
8490510000	8490510174	8490510833	849326109438	849206513487	150
8460610000	8460610090	8460610607	846149558931	846289578368	150
8521510000	8521510947	8521510144	852344815928	852663280132	150
8545510000	8545510744	8545510389	854304643353	854869735049	150
8422510000	8422510765	8422510133	842125266038	842569799275	150
8531610000	8531610172	8531610307	853958254331	853114856149	150
8645510000	8645510659	8645510400	864422479708	864141812290	150
8631600000	8631600825	8631600249	863051816638	863476864692	150
8635510000	8635510585	8635510291	863166429133	863090332513	150
8570510000	8570510318	8570510647	857538929594	857436260593	150
8658510000	8658510631	8658510542	865638281137	865145805772	150
8549510000	8549510766	8549510429	854445064078	854545833911	150

8665510000	8665510918	8665510620	866885828454	866718546858	150
8557410000	8557410399	8557410481	855248878533	855663584067	150
8571610000	8571610917	8571610703	857981912368	857306453724	150
8639510000	8639510671	8639510340	863774214670	863754318279	150
8687510000	8687510748	8687510845	868079305029	868243142933	150
8714510000	8714510252	8714510080	871842252440	871461502587	150
8731610000	8731610208	8731610327	873423287441	873970728211	150
8732510000	8732510840	8732510264	873737227091	873232677883	150
8709410000	8709410341	8709410987	870473585595	870333731163	150
8748410000	8748410417	8748410395	874968502901	874685702204	150
8797510000	8797510937	8797510954	879820124058	879712866356	150
8697410000	8697410761	8697410888	869458786475	869650757531	150
8786410000	8786410483	8786410808	878685676781	878855568789	150
8688410000	8688410021	8688410777	868735849622	868011256246	150
8678510000	8678510885	8678510738	867046914718	867910148471	150
8679410000	8679410195	8679410671	867594260971	867286704200	150
8778410000	8778410859	8778410687	877113149879	877389046567	150
8753510000	8753510408	8753510470	875763534679	875570672985	150
8749410000	8749410788	8749410383	874318712717	874782114070	150
8749510000	8749510800	8749510449	874706480286	874993943052	150
8729410000	8729410546	8729410184	872717635706	872430470160	150
8897410000	8897410791	8897410908	889399370621	889075029527	150
8877510000	8877510416	8877510766	887253986706	887997934914	150
8847410000	8847410437	8847410410	884211469251	884364106558	150
8836410000	8836410872	8836410316	883657969569	883467395444	150
8881510000	8881510579	8881510768	888917687729	888608937310	150
8867410000	8867410615	8867410611	886477427167	886053193681	150
8813510000	8813510025	8813510082	881144559389	881565760350	150
8898410000	8898410188	8898410897	889243526856	889470324025	150
8858510000	8858510664	8858510563	885255222580	885848802324	150
8816500000	8816500610	8816500047	881765304045	881574899471	150
8808410000	8808410846	8808410009	880939277337	880125206146	150
8879410000	8879410052	8879410691	887761404574	887366829394	150
9028510000	9028510241	9028510183	902915802908	902594360132	150
9048410000	9048410284	9048410327	904486293305	904727599468	150
8991510000	8991510781	8991510879	899971830655	899624111140	150
9046500000	9046500872	9046500267	904005369525	904902524428	150
8928410000	8928410139	8928410216	892917427582	892576403102	150
8983510000	8983510915	8983510793	898254748514	898296325827	150
8959410000	8959410008	8959410502	895672364590	895077165263	150
9045500000	9045500949	9045500251	904409160349	904827407481	150
8970510000	8970510397	8970510687	897605232745	897105982045	150
9002610000	9002610906	9002610954	900821623742	900459042833	150
9038410000	9038410157	9038410227	903150771791	903913714793	150
8967410000	8967410631	8967410620	896298880019	896628409314	150
9068410000	9068410582	9068410522	906102055978	906434571816	150
9099410000	9099410265	9099410808	909051343122	909946115969	150

9166510000	9166510149	9166510594	916032229226	916200299266	150
9080510000	9080510417	9080510697	908359308725	908913878244	150
9080610000	9080610276	9080610769	908863977702	908381705202	150
9085500000	9085500244	9085500651	908404169666	908722051425	150
9072510000	9072510066	9072510598	907189256395	907325027188	150
9110610000	9110610428	9110610085	911576330403	911467131890	150
9118410000	9118410898	9118410040	911625373955	911187963138	150
9159510000	9159510867	9159510490	915389164570	915881023420	150
9069410000	9069410029	9069410513	906396688334	906861653336	150
9125500000	9125500821	9125500064	912471958160	912623197798	150
9088410000	9088410913	9088410718	908306423251	908991594537	150
9062510000	9062510457	9062510496	906344197303	906783653071	150
9245510000	9245510697	9245510357	924048913501	924745260866	150
9233510000	9233510183	9233510223	923935332875	923456445991	150
9248410000	9248410322	9248410347	924830953095	924494228645	150
9221510000	9221510888	9221510115	922962200986	922403464440	150
9236500000	9236500827	9236500188	923163344968	923648566880	150
9225500000	9225500838	9225500074	922937193754	922672314107	150
9197510000	9197510833	9197510896	919468271139	919542295417	150
9286410000	9286410473	9286410760	928384104428	928546087907	150
9204510000	9204510069	9204510925	920471351076	920229917146	150
9249510000	9249510716	9249510400	924959486569	924679179215	150
9220510000	9220510720	9220510123	922666117082	922274060556	150
9235500000	9235500820	9235500173	923754913482	923636749503	150
9268510000	9268510738	9268510602	926268591992	926621685758	150
9213510000	9213510913	9213510023	921788548257	921428517187	150
9256500000	9256500058	9256500388	925728065990	925571678594	150
9243510000	9243510268	9243510322	924347684497	924757532884	150
9358410000	9358410528	9358410454	935054748926	935460472573	150
9302510000	9302510373	9302510920	930769049682	930534094357	150
9375510000	9375510048	9375510698	937285964517	937439635746	150
9304510000	9304510085	9304510936	930220302628	930006153802	150
9336500000	9336500841	9336500198	933941630681	933597354915	150
9306510000	9306510417	9306510009	930441456194	930712349371	150
9419510000	9419510361	9419510122	941917566764	941495400615	150
9408510000	9408510958	9408510025	940366259467	940636500269	150
9380610000	9380610323	9380610799	938021826422	938462277583	150
9352510000	9352510324	9352510425	935726217085	935847427253	150
9424510000	9424510369	9424510150	942821877048	942040649673	150
9381610000	9381610078	9381610784	938992113150	938662300797	150
9384510000	9384510936	9384510750	938541849855	938374150127	150
9399410000	9399410319	9399410837	939735839960	939239545080	150
9414510000	9414510202	9414510049	941217385511	941806494423	150
9373500000	9373500753	9373500606	937683099652	937811782101	150
9307410000	9307410638	9307410970	930542298615	930753278171	150
9364510000	9364510721	9364510550	936767347100	936559837968	150
9518510000	9518510144	9518510134	951648093456	951314705276	150

9476410000	9476410345	9476410678	947356953060	947221893454	150
9513510000	9513510969	9513510054	951570359630	951958887924	150
9499510000	9499510270	9499510915	949350162236	949699246895	150
9517410000	9517410824	9517410091	951145949403	951662557263	150
9503510000	9503510777	9503510951	950938165606	950401418427	150
9461610000	9461610203	9461610595	946588835731	946430359322	150
9468410000	9468410659	9468410560	946310343197	946381546724	150
9566510000	9566510221	8566510633	956231047105	956851300933	150
9676510000	9676510337	9676510746	967568397043	967994783272	150
9559410000	9559410935	9559410464	955245776978	955091609358	150
9560610000	9560610109	9560610618	956697037665	956026387455	150
9619410000	9619410456	9619410076	961572924547	961715543269	150
9609410000	9609410326	9609410978	960527883879	960407307537	150
9595500000	9595500404	9595500816	959975009343	959191726395	150
9679410000	9679410197	9679410672	967486415835	967302781664	150
9561610000	9561610740	9561610605	956695380996	956355458382	150
9643510000	9643510340	9643510363	964846489850	964669829917	150
9616500000	9616500639	9616500028	961231913880	961924337432	150
9604510000	9604510137	9604510968	960178876617	960643754170	150
9563510000	9563510554	9563510551	956135410670	956700354130	150
9659410000	9659410955	9659410473	965139276505	965774972314	150
9614510000	9614510235	9614510071	961362462248	961537800806	150
9592510000	9592510690	9592510846	959736190002	959301720522	150
9636410000	9636410839	9636410297	963314359471	963473006977	150
9636500000	9636500811	9636500228	963110011932	963763710838	150
9681510000	9681510546	9681510748	968307428975	968029650831	150
9756500000	9756500066	9756500438	975640351708	975779599670	150
9713510000	9713510007	9713510073	971878845758	971558270660	150
9849410000	9849410806	9849410394	984406042545	984103687062	150
9706410000	9706410384	9706410006	970317100702	970185624187	150
9806410000	9806410401	9806410017	980662334309	980911771161	150
9806510000	9806510506	9806510060	980312505804	980720042624	150
9785500000	9785500279	9785500727	978074927493	978440064778	150
9688510000	9688510034	9688510840	968666264311	968652491412	150
9727510000	9727510957	9727510257	972038333403	972933278929	150
9762510000	9762510590	9762510568	976939161338	976075964120	150
9720510000	9720510810	9720510173	972607481522	972695777051	150
9736410000	9736410858	9736410307	973454485444	973848001389	150
9819510000	9819510429	9819510163	981218548677	981662762389	150
9888410000	9888410060	9888410799	988628199206	988744254877	150
9888510000	9888510061	9888510860	988551806167	988003271199	150
9876410000	9876410408	9876410720	987679693320	987128452675	150
9836500000	9836500840	9836500247	983741124733	983377159219	150
9864510000	9864510811	9864510601	986592127558	986724736637	150
9820610000	9820610565	9820610254	982905273869	982711269308	150
9832510000	9832510862	9832510274	983150919061	983085141272	150
9835510000	9835510620	9835510314	983954975004	983275648713	150

9924510000	9924510374	9924510201	992292966422	992961889355	150
9927510000	9927510992	9927510278	992518207014	992078460948	150
9858410000	9858410548	9858410503	985889607208	985961638638	150
9950510000	9950510047	9950510491	995790654428	995268460273	150
9997510000	9997510976	9997510975	999362932161	999030538902	150
9960610000	9960610170	9960610658	996727894949	996468484032	150
1875336811	1875336269	1129910000	187706200600	187079238400	150
5354647273	5354647551	7118410038	535381558369	535064875403	150
8801716781	8801716311	9510510054	880419713211	880408242646	150
8302720957	8302720386	2171510592	830345139547	830775306482	150
5342577954	5342577648	7896410917	534441218534	534089225001	150
9490909798	9490909924	7619910000	949081361865	949443068321	150
4681427780	4681427267	4413510039	468002140424	468920833589	150
4109220903	4109220472	9241510311	410678432294	410384774837	150
2588979099	2588979626	1331610284	258393431738	258840261413	150
2228963763	2228963199	1379510699	222341822020	222938839394	150
8058065423	8058065902	228510194	805518021438	805256862707	150
3043228004	3043228741	2886510860	304903123137	304157090355	150
3452509666	3452509456	8360610597	345597327834	345559945006	150
6774914563	6774914074	5010510000	677401572245	677566102832	150
2188886171	2188886251	5038510278	218787186731	218573516804	150
6176560985	6176560398	1459410446	617012682768	617900029496	150
8081118587	8081118121	3471610688	808184349799	808502241604	150
5123185307	5123185497	6145510343	512347596105	512152645380	150
241494042	241494562	6746500335	24348600237	24448256310	150
8886129383	8886129416	9268410541	888223885298	888091243249	150
5650757018	5650757627	3495500800	565132803444	565615577183	150
7471637814	7471637296	5869510654	747053181248	747955710859	150
5604540380	5604540332	4357410457	560826288307	560648275521	150
476628282	476628450	2318410054	47537766282	47730199685	150
6405586272	6405586261	9230510223	640259027672	640075745302	150
1083891348	1083891329	4709910000	108378967724	108958781534	150
64072665	64072213	9698910000	6995112894	6079150264	150
3554927675	3554927744	546510424	355132584319	355670386467	150
6402503600	6402503785	5246500284	640530520478	640964983328	150
3047181379	3047181715	2848510456	304391239482	304478644108	150
6711757141	6711757132	6541510337	671452290146	671884930718	150
2262965109	2262965249	7526510231	226339261128	226132540139	150
6797472436	6797472881	7371610682	679830329539	679352705170	150
9606790034	9606790780	4211610081	960646791435	960263020189	150
8745470735	8745470437	5795500833	874138655492	874697853699	150
6051724678	6051724355	2866401658	605864704217	605415392736	150
766470926	766470042	6826500145	76378437495	76776808854	150
7118410000	7118410654	679510728	711069966911	711925791304	150
9212167685	9212167018	9978510769	921293077300	921583040940	150
7598612947	7598612764	1919910000	759764663436	759627071291	150
6261893545	6261893957	6238510299	626831566335	626776868458	150

8121779812	8121779764	216500979	812291764065	812627598654	150
6069828130	6069828599	2558510526	606220454115	606674799823	150
974684683	974684246	6445500288	97665827796	97849709281	150
5052634177	5052634247	4277510702	505090635451	505786110705	150
1433570742	1433570239	698410869	143111444320	143003359497	150
3742561212	3742561020	1798410880	374752028133	374139928825	150
2046410000	2046410992	2046410330	204769239070	204895655211	150
2698310221	2698310076	9534510261	269446778635	269886043365	150
9939351783	9939351505	1173500578	993928809675	993392889091	150
6135161732	6135161544	9009510980	613596188890	613658118340	150
8132346632	8132346614	1388410740	813277837868	813862090953	150
1434905399	1434905757	4678410674	143736661788	143633251100	150
9766087515	9766087844	809410989	976976465564	976227626632	150
9508076760	9508076915	2259410427	950769125386	950915453202	150
5172820910	5172820977	9669510638	517172850710	517334114574	150
8755341100	8755341382	4626500123	875178634047	875066513044	150
6916432063	6916432609	5434510248	691608861945	691982820259	150
2786854709	2786854251	8366510612	278918595988	278336188933	150
8294381324	8294381866	7146500275	829344585312	829308815604	150
2945636298	2945636014	636410288	294136673707	294585062539	150
7150367029	7150367561	9528410176	715681487743	715510270515	150
3378157923	3378157952	7856510560	337276636028	337883594590	150
3771694888	3771694633	8787510855	377853353070	377966606507	150
3645829046	3645829306	8740510370	364729623303	364945689081	150
5272047182	5272047259	2918510166	527795326873	527276635447	150
9079239523	9079239572	1086410732	907720806410	907064341080	150
5678365775	5678365770	4507410985	567155741846	567402555625	150
4922140549	4922140185	8916410126	492156571310	492007891293	150
4487510000	4487510274	8597510934	448579913582	448531027561	150
5860432019	5860432130	685500705	586441775193	586788066027	150
7059410000	7059410538	7059410412	705053434472	705733520453	150
6492577798	6492577773	7677410688	649832100342	649226349687	150
5105176345	5105176812	8620510162	510123852232	510986501752	150
9807727787	9807727000	3700510968	980964732678	980481978562	150
9327273927	9327273131	8782994765	932922253137	932024397263	150
1020510000	1020510120	1020510096	102994330830	102563417908	150
2385798531	2385798576	7347410361	238013297812	238116511267	150
1466451648	1466451365	9143510313	146127962905	146007394129	150
5879961495	5879961804	8885510857	587493896678	587487697763	150
8056533842	8056533679	2769510641	805585525617	805594591478	150
2809915225	2809915428	1928510264	280826026063	280954043929	150
957826038	957826596	9149910000	95501902595	95618336129	150
5836877291	5836877102	7465510597	583554173661	583820898938	150
8042967168	8042967731	9789510847	804105174350	804359736239	150
9516481177	9516481079	5208410946	951078021123	951390339730	150
3589802920	3589802869	9839910000	358480935636	358419063751	150
9734299691	9734299267	3628510237	973091743903	973630968389	150

6675613578	6675613475	4073910000	667786919093	667096539863	150
1256500000	1256500872	1256500380	125687205638	125597889958	150
1811568778	1811568280	708510046	181740925617	181348686487	150
8487625852	8487625450	1229510195	848314000759	848943987791	150
6508725199	6508725889	6001610965	650012038492	650794783008	150
3734999619	3734999774	6171610661	373618055869	373033153927	150
5894573430	5894573593	4167510594	589399697442	589918625970	150
4457410000	4457410462	4457410467	445989446587	445622008157	150
3315546040	3315546273	5904510994	331140904391	331104449329	150
1503940725	1503940198	2087510780	150740547921	150030995177	150
8583005984	8583005141	7448510420	858140219558	858756064576	150
6989052634	6989052987	9648510442	698329919644	698980272957	150
9523570103	9523570398	48410318	952824118908	952934075744	150
5802418592	5802418060	4063510497	580087178098	580361400260	150
1880070538	1880070223	224510121	188141560757	188899428469	150
6265439458	6265439645	1586510829	626820054787	626640386914	150
3360416248	3360416582	8629410174	336916868530	336798824421	150
7980240710	7980240437	8535500201	798614365728	798474897301	150
2618299630	2618299907	842510366	261349448461	261843308520	150
7674603514	7674603349	8789410780	767724981938	767684001351	150
2727048719	2727048901	8647510450	272384832353	272048190412	150
6026294118	6026294916	7809410995	602838324214	602253837710	150
560473710	560473435	7469410551	56846705268	56175548502	150
6684625876	6684625210	3407410974	668625928417	668031736498	150
7400359661	7400359139	3800610049	740002082384	740820726791	150
3381930581	3381930838	477510718	338781875711	338267586211	150
9172133151	9172133433	5127510193	917491182477	917292357471	150
7769460792	7769460920	2811510068	776944852265	776461390887	150
2361840657	2361840989	7692510854	236707981503	236679377040	150
7723442566	7723442742	5912510080	772400072449	772224897929	150
6136700264	6136700257	8997410918	613047221318	613370862641	150
9173318476	9173318008	4420510138	917775920984	917424180806	150
4958510000	4958510391	4958510568	495294617553	495661631992	150
7806692201	7806692811	6215510041	780588172878	780651998348	150
9420173468	9420173737	2195500766	942268361570	942203338139	150
3890528455	3890528565	5026500064	389117953577	389857529782	150
8586676033	8586676721	5520510149	858189975628	858113725159	150
4515611476	4515611341	2734510275	451082472645	451713326424	150
8586410000	8586410432	8586410788	858530803213	858550533574	150
4926421580	4926421184	1708410992	492906302605	492530583182	150
6342397019	6342397146	6716410103	634971565399	634928303087	150
8293064254	8293064144	5426410172	829346026531	829402701104	150
3639495978	3639495453	8380510726	363709492590	363527929348	150
2396511559	2396511464	2709410981	239720379640	239008444512	150
8396395654	8396395176	6679510734	839641997361	839890596303	150
6865872377	6865872351	1118510086	686288349735	686714568512	150
3270124631	3270124639	2408410963	327827649614	327657266531	150

7008684484	7008684043	5757410498	700609559269	700794571223	150
2826713003	2826713841	4607510043	282458628578	282862496277	150
5026995080	5026995805	4381610779	502071898244	502728287275	150
9931079919	9931079335	345500272	993344139615	993886956361	150
4633019421	4633019918	7491512072	463414498591	463730202032	150
7139868534	7139868544	5615500007	713777062996	713909943674	150
1109873020	1109873027	2597410872	110832167782	110179970618	150
2843905199	2843905467	177410632	284339992822	284085209473	150
2481386219	2481386909	9788410789	248356572961	248279873365	150
9669401443	9669401442	815500024	966013667413	966260633937	150
8566559720	8566559971	2023510096	856194999267	856580769706	150
1468314114	1468314487	6915500041	146412752751	146084634825	150
1631254931	1631254285	8568410569	163871862633	163209182940	150
8577966475	8577966948	2359410437	857700270799	857513531203	150
6719624438	6719624620	1771510651	671263090617	671797491834	150
2789858472	2789858159	5667510644	278685549815	278628667324	150
7518063017	7518063350	2149410317	751517668942	751798038638	150
2152510000	2152510319	2152510398	215972623448	215016621800	150
4508785851	4508785230	5216500984	450616887721	450641663314	150
1740850122	1740850815	5206500883	174555781310	174147991865	150
1825432810	1825432262	8369410542	182659418636	182524499203	150
7966477277	7966477502	3295500779	796490445241	796399743078	150
9540425640	9540425800	2439410247	954179964644	954570694426	150
720788218	720788109	119910000	72174019611	72490115996	150
1230456975	1230456912	8908510073	123050470270	123927053984	150
1924486479	1924486938	7007510985	192591749048	192754146620	150
5684710606	5684710271	9484510760	568667970800	568211921890	150
2606410000	2606410577	2606410989	260131872607	260180548644	150
7281158549	7281158698	7927410230	728969390709	728282095663	150
1756389462	1756389370	435510264	175331386460	175192330562	150
4206133529	4206133170	4869410588	420756641393	420548991897	150
2285256237	2285256335	9636510344	228315692699	228109065899	150
3345456772	3345456690	1961610637	334548891717	334160336614	150
2171488761	2171488403	3269510593	217730996518	217757146541	150
7651316208	7651316749	1016510072	765006698429	765838250414	150
727965109	727965985	4874510695	72179692153	72034438848	150
4553866842	4553866677	6436510321	455077101335	455914293952	150
4379222765	4379222592	4358410449	437727625892	437456306888	150
791370134	791370411	5378510705	79787928544	79579205899	150
3123899592	3123899508	3780510760	312334024487	312820239273	150
4438155008	4438155743	5776410704	443791076463	443342696996	150
7266900507	7266900096	1880510768	726384110389	726862407691	150
7228475592	7228475476	4147510396	722538305864	722643496022	150
3628326303	3628326974	4471510624	362301525727	362177790508	150
621924247	621924353	4197410835	62727047778	62552350149	150
2922510000	2922510471	2922510176	292877321312	292624982168	150
4301753534	4301753474	6937410323	430145446937	430086491661	150

2546378053	2546378051	6219410034	254008831512	254360028643	150
7257588176	7257588674	4318510109	725990296952	725122701971	150
9580186386	9580186105	9451510428	958571226127	958939473237	150
8489829547	8489829373	7305510951	848032905415	848104864346	150
9537960125	9537960713	7168510590	953960937463	953589815302	150
7391506559	7391506269	9961510579	739698763100	739592845556	150
3945445277	3945445920	4178410624	394416047503	394020614758	150
5257815639	5257815814	4937510377	525949512111	525375347658	150
6906269077	6906269809	2581610797	690174164474	690565066210	150
4976525082	4976525713	4791610919	497973285579	497489811910	150
2560219053	2560219230	4761610620	256764706474	256763587928	150
9026511699	9026511185	7406410975	902205505647	902123344790	150
3627610000	3627610886	7130510211	362610236123	362083212187	150
8545538415	8545538316	1077410623	854005593034	854818896294	150
8215568273	8215568879	5640510357	821785043545	821659770267	150
2695667684	2695667794	688410769	269851472183	269752468553	150
5387599249	5387599228	9725500124	538369502697	538707837560	150
2798376205	2798376058	5476510722	279743606024	279420515749	150
4590367715	4590367255	1398410841	459479068401	459954620006	150
2184366760	2184366307	4089410707	218957805018	218632740262	150
979262040	979262311	4099510872	97130784325	97645809484	150
5950786963	5950786940	2777410693	595811645724	595769229647	150
3134212478	3134212130	4058510478	313022239602	313352444462	150
4058510000	4058510547	8489510816	405505365966	405080002916	150
5279895948	5279895841	336410258	527334654710	527983495906	150
8001320770	8001320038	2402610986	800078460647	800674210621	150
5285758217	5285758077	6767510655	528616404448	528217694204	150
339524100	339524186	2244510329	33256019503	33869047391	150
8707762638	8707762712	1680510748	870090218103	870780771810	150
7949317293	7949317149	5648410383	794229674265	794448040823	150
8402510000	8402510003	8402510929	840734336794	840686827825	150
5558170231	5558170271	9673510662	555192171928	555565221775	150
5687771312	5687771618	7919410104	568876821168	568525254775	150
1701117727	1701117302	29510174	170284468316	170619195598	150
2250522906	2250522572	5726410202	225182011499	225585473507	150
8776347244	8776347244	6909410004	877698663669	877321861665	150
2023956227	2023956402	835500223	202653094657	202549123067	150
4002190913	4002190627	8747410400	400229366343	400634610417	150
17871505	17871985	1847410403	1778093347	1503325188	150
3535432429	3535432110	2373510625	353410229055	353874859500	150
7473510000	7473510991	1267410544	747946124887	747739891640	150
9065215450	9065215907	7473510640	906400507342	906868622665	150
2051581668	2051581241	8469510617	205151710696	205605812109	150
7445632025	7445632115	1594510863	744618079600	744514603470	150
3762289272	3762289651	6939910000	376015894174	376220381657	150
904779400	904779545	9631610318	90827962832	90376494340	150
5639263313	5639263831	8209410937	563496799219	563709722100	150

17968589	17968140	8769410582	1809993208	1906659347	150
4458571545	4458571499	7502610001	445655215582	445352190720	150
4695086884	4695086975	1868410592	469801117976	469257927812	150
3817589078	3817589671	8947510479	381609621682	381061061867	150
7269323169	7269323565	3328510207	726578879120	726260950441	150
9731043140	9731043185	7723510172	973340356149	973280962792	150
3083663634	3083663049	4336510309	308910193489	308285484410	150
1252418636	1252418181	5006510975	125473159509	125947879189	150
8851654889	8851654690	8750510469	885173708305	885650673291	150
6888330557	6888330818	4395510904	688017758865	688355603485	150
6169694783	6169694492	3949410398	616889049910	616083019794	150
115426331	115426131	4867410607	11587859502	11137321265	150
1969462626	1969462934	3949510464	196507828141	196831420898	150
7077970190	7077970803	4056510477	707361068463	707212272516	150
8434989269	8434989303	5579410658	843184601257	843343765656	150
727610000	727610639	2588510823	72209831309	72226805045	150
7937950731	7937950966	7335500181	793907818095	793929469076	150
2003528789	2003528247	4680610824	200418845555	200043386716	150
4965865677	4965865404	7526410184	496525806794	496983346096	150
7783394796	7783394801	3727410205	778011516598	778970933277	150
8542645663	8542645294	5439410250	854963016470	854053277948	150
9779342311	9779342231	8706500936	977942389497	977544640723	150
3584875716	3584875670	5738410294	358757263425	358626336483	150
2243242666	2243242481	2368410544	224869233853	224162996221	150
9317441571	9317441864	4517510134	931625377439	931481224888	150
6127888303	6127888211	6169410520	612282057801	612723316229	150
2420568877	2420568414	5931510278	242518966177	242751720442	150
6914400870	6914400828	9349510410	691188424229	691213083279	150
6363487331	6363487600	7449410352	636550535448	636073550274	150
3507448522	3507448728	5106500874	350473613292	350573602664	150
1895364871	1895364693	4376510711	189010547008	189652652461	150
8612710483	8612710152	5151510394	861700150876	861911826075	150
7887332782	7887332735	3117410045	788284403255	788381652440	150
3994653248	3994653401	1423510136	399182509690	399134959185	150
3470595444	3470595814	6482510731	347752910489	347032435077	150
6261035748	6261035252	7433510241	626558977229	626855867839	150
8324925893	8324925476	8182510704	832291476724	832310924913	150
7457538582	7457538973	3939410298	745457853308	745756708006	150
16058323	16058665	5976510772	1835712451	1738506486	150
5924149408	5924149677	4825500129	592899598958	592737374577	150
9214444769	9214444412	1761510552	921828797962	921969089748	150
4271510000	4271510116	4271510603	427908858421	427165299433	150
9193915788	9193915568	9499410847	919622421133	919749208085	150
6337651011	6337651961	2198510883	633267253504	633395659855	150
3647564870	3647564632	2489410744	364754946852	364051987816	150
5100519112	5100519316	71610645	510622195396	510317094469	150
7381721349	7381721196	29410107	738858240973	738456591526	150

5408462230	5408462202	3497410863	540733987263	540941382958	150
8558919078	8558919567	3418410064	855643427032	855208145128	150
311610000	311610119	311610086	31579790330	31687346871	150
4565883892	4565883045	2763910000	456592913464	456484212143	150
2179264195	2179264670	6261610572	217854161558	217447355667	150
2954752815	2954752425	9168410531	295077203092	295716204987	150
4621656858	4621656277	2744510380	462511524310	462869308697	150
8785012539	8785012435	9315510055	878099180351	878968985237	150
5366467478	5366467441	9076410639	536642847649	536911623008	150
2639410000	2639410415	2639410267	263828218861	263945526645	150
960029792	960029759	6316500995	96939465252	96294998764	150
4466967988	4466967618	900510985	446990867095	446035417049	150
855910617	855910395	4898510955	85979324840	85232932482	150
6184807560	6184807090	1427510219	618040037946	618346819076	150
9138006190	9138006293	9726510253	913663046106	913806920035	150
3952034861	3952034117	6706410003	395190211701	395467319385	150
3870641090	3870641020	4410510039	387489374493	387571247276	150
5892626763	5892626900	4654510475	589006666749	589190560697	150
1127456011	1127456900	3441610391	112231962280	112905505381	150
884158503	884158753	2127410142	88564582604	88141992139	150
2463085906	2463085114	7139410223	246042209580	246511784669	150
6991171173	6991171656	247510402	699092864932	699261211983	150
7551006914	7551006588	9135500163	755921132847	755169878963	150
754034656	754034170	290610880	75576062889	75840053438	150
2273075581	2273075442	2357510513	227517432560	227704574643	150
7783609914	7783609376	6102510897	778678244342	778682090519	150
8759895438	8759895120	4288410733	875063276446	875376108420	150
3041754410	3041754042	6750610537	304278807241	304948551285	150
2700490432	2700490109	7972510682	270027164840	270032299590	150
9161343813	9161343112	7549410362	916192280849	916479330641	150
5423157360	5423157516	9061510489	542290516228	542586740918	150
6785986358	6785986536	2895510952	678826038031	678695568939	150
8126067700	8126067944	6831610335	812148450360	812575485911	150
1676938460	1676938839	5727410208	167986210910	167469921104	150
3827292612	3827292097	8400610014	382250549002	382527774788	150
2481584947	2481584740	1277410643	248261468509	248888142635	150
3636980459	3636980343	3978510763	363634415202	363274707790	150
5007553934	5007553165	6806500944	500164085873	500479537968	150
7255969178	7255969416	8291510808	725710164725	725578101729	150
7988784892	7988784601	5566500514	798797566533	798572883618	150
1011981351	1011981285	985500740	101715286520	101410962159	150
3850584546	3850584282	5768410586	385834991863	385540560358	150
4166115940	4166115080	5125500060	416232229867	416297274331	150
8383889219	8383889481	4876510761	838044250206	838702944784	150
979237264	979237450	9206510999	97937044176	97195435294	150
3472348084	3472348939	6294510838	347962794524	347891681645	150
4765244386	4765244778	7980610857	476692540676	476678683167	150

9690483314	9690483332	6613510060	969660484140	969096465540	150
1328238137	1328238382	4178510684	132920828610	132247250883	150
2616379200	2616379462	2424510143	261633675632	261731689220	150
2113571680	2113571503	5328410152	211852881208	211227027534	150
3325736365	3325736994	3577510731	332335873124	332579970031	150
8700107915	8700107752	9444510357	870868112552	870274237581	150
5153141460	5153141522	8394510850	515604120674	515044614867	150
3402156409	3402156322	7949510468	340437818664	340161686351	150
6669657932	6669657230	7527410188	666801323811	666395406116	150
2472030245	2472030950	7819410094	247735661299	247436141355	150
7431528861	7431528872	7149410322	743566674280	743878681407	150
3479613099	3479613249	3909410001	347085487611	347827661064	150
6395865386	6395865817	4087410725	639834315702	639947274672	150
2554627899	2554627399	7635500210	255225734846	255136443839	150
5556240662	5556240420	4235500168	555445491040	555526062924	150
461107816	461107979	987410810	46707684166	46198252262	150
9683788762	9683788781	5570610714	968405635533	968831197070	150
2484870275	2484870674	9251610475	248933719977	248873403490	150
5517593346	5517593876	919410097	551703146402	551601278592	150
5527235480	5527235146	987510867	552134556559	552544411873	150
4700165712	4700165894	227410151	470102785730	470042225447	150
8949064820	8949064131	101510894	894853079071	894619209257	150
4418803878	4418803316	6987410816	441381154024	441418274190	150
1603687221	1603687163	2707510051	160524327663	160472112570	150
3489048618	3489048254	3770510662	348632116209	348880638182	150
5367300733	5367300036	5690610924	536270848835	536265606833	150
8196359329	8196359143	8641610415	819553024922	819807782014	150
9118561750	9118561781	1079410605	911189168627	911418216432	150
6261138687	6261138105	4358510508	626357611527	626655615627	150
1901623417	1901623056	118410031	190138372490	190093383709	150
6185937891	6185937018	4755510514	618888856372	618949793420	150
3722197821	3722197175	7793510872	372052526994	372792407384	150
8202610651	8202610775	9585510828	820500649279	820915268971	150
8766672033	8766672469	2917410122	876259840747	876147428819	150
9840352274	9840352206	4269410528	984472079868	984175388240	150
6008812553	6008812302	279410624	600543139979	600477867388	150
4963471027	4963471883	3968510664	496248041898	496275017843	150
9842832612	9842832988	4219510097	984146169426	984501172455	150
4441106678	4441106318	7388410746	444063483966	444874725033	150
7917478128	7917478648	6458410461	791242490508	791134127207	150
1186893314	1186893202	689510828	118742118782	118495763392	150
6226399798	6226399289	5327510213	622939219134	622193231724	150
2457509925	2457509738	4823510179	245480062306	245766061131	150
9603325805	9603325809	3027410133	960126373958	960441059387	150
3685505684	3685505921	6596410886	368468362995	368305529429	150
901019797	901019749	6418510121	90397811394	90504462451	150
2625040240	2625040723	9291610874	262062217298	262622734230	150

2460509995	2460509821	6459410451	246978956799	246278281247	150
6983702586	6983702946	9577410680	698056592127	698398478637	150
9611084567	9611084171	57510481	961194700236	961052799006	150
5207689817	5207689939	1891510861	520817770652	520064288646	150
8091915664	8091915420	5079510673	809890071345	809207392325	150
5036505800	5036505377	969910000	503242005156	503692535544	150
6616012373	6616012395	4496410874	661538351554	661329917319	150
8796876228	8796876145	5345500277	879638829124	879051706135	150
1200030930	1200030460	632510246	120875522046	120898499333	150
6978940638	6978940449	6033510201	697178483225	697037546171	150
4582030350	4582030581	5517410087	458193514245	458422175557	150
7291910850	7291910094	8060510500	729668971267	729059851137	150
356993757	356993074	9985500751	35690531695	35490013211	150
1909468571	1909468009	382510716	190831229005	190987126595	150
8968944292	8968944893	9226410156	896660462903	896373567917	150
7665195965	7665195347	4629510237	766572314909	766162793587	150
3210018226	3210018893	1047410327	321923509235	321848401464	150
9582150864	9582150177	5875510748	958751355072	958556639842	150
2374306628	2374306201	8529410164	237950884319	237319411762	150
8590532982	8590532849	1236500180	859580837076	859018987763	150
3467489268	3467489744	7468410558	346477104590	346160236722	150
5169826463	5169826409	3478410653	516938629751	516679599116	150
6507173292	6507173105	3085500645	650331716626	650629412650	150
2426510000	2426510629	2426510215	242914111555	242968877411	150
355323211	355323987	1167410534	35252786034	35102836830	150
3091610000	3091610630	3091610848	309007003248	309853417462	150
4326939997	4326939815	9727410212	432449517774	432657521834	150
9645848981	9645848811	228410138	964463186930	964658379829	150
6876907924	6876907509	8054510417	687011032433	687360403045	150
5167571961	5167571648	7233500201	516675188210	516611506727	150
1095580099	1095580563	8463510540	109492720360	109340728341	150
1789430255	1789430678	3177510691	178488882446	178733513450	150
2128961053	2128961226	3871610728	212297805277	212985538433	150
7340969389	7340969001	5557410478	734826426971	734665397358	150
4428020784	4428020040	535500193	442424816244	442771090412	150
7105958982	7105958229	8390610898	710201581782	710244981787	150
2686043366	2686043416	3549410358	268483782896	268366444282	150
8406305483	8406305010	1445500283	840277457073	840768387073	150
3474317658	3474317202	3883510777	347951748489	347922245445	150
9721546662	9721546055	1727510249	972615081295	972800570089	150
2872014333	2872014951	3454510454	287862519116	287719455382	150
3103066205	3103066473	2129711369	310016128233	310494923071	150
1254606897	1254606084	539510322	125262147073	125395197472	150
3819781984	3819781404	8347510420	381636050289	381936072204	150
837285563	837285921	2955510534	83368757971	83985449781	150
8824686291	8824686316	3982510778	882572749609	882080589291	150
2853207581	2853207983	6881610831	285294655221	285640917504	150

138390290	138390245	5738510348	13949619635	13913180709	150
8109486712	8109486623	2667410586	810728888202	810228347354	150
2014069564	2014069355	6893510882	201703106802	201062588945	150
4343188805	4343188883	5116410043	434093782504	434151252514	150
5287368712	5287368588	9787410799	528398831644	528407945092	150
7718542976	7718542182	3379410637	771302886019	771871207472	150
596912131	596912679	6528410173	59461726184	59707735069	150
606653839	606653583	8817410118	60564155886	60227975786	150
3672202556	3672202589	8659510538	367813495723	367766771119	150
8944767079	8944767786	7135510241	894593152141	894041874401	150
9436018020	9436018755	2385810848	943162806812	943769137741	150
4970993333	4970993502	3327410164	497614972040	497932000349	150
9231010030	9231010315	2449410347	923062863582	923520597448	150
2145656424	2145656858	7598410866	214585596042	214962196629	150
2387998316	2387998875	4070610663	238072544863	238694690688	150
3790077792	3790077298	4101610973	379956791938	379221863490	150
5772727149	5772727672	8926500157	577910705206	577543115595	150
6039218534	6039218392	6537410286	603491453290	603609296331	150
18311356	18311505	4780610834	1364321933	1943396798	150
508848069	508848253	3722510157	50256207989	50203005468	150
5717666997	5717666756	110610076	571691899983	571977655395	150
7268303348	7268303681	9028410127	726892715572	726062616955	150
9710889237	9710889034	7846500346	971603070713	971507867156	150
4374558931	4374558605	951510470	437034748821	437554995739	150
2591276184	2591276114	9708410000	259785620486	259000133899	150
6783025132	6783025129	6287510804	678767246089	678012304297	150
1439278515	1439278648	1559410456	143353684787	143390263330	150
8398221665	8398141869	5218410047	839478999448	839856635144	150
4291664035	4296400043	4679910000	429656442803	429096436686	150
7194122753	7190991178	950510481	719152324833	719879965130	150
3413144161	3413144581	8894510900	341215173794	341571181477	150
2321132758	2321132487	9157410442	232155087490	232087767671	150
7296150747	7296150863	3446410371	729170724684	729397376002	150
7801893180	7807331467	5927410228	780221807377	780228649187	150
5991539734	5990084294	3369410537	599773717456	599593072677	150
4487031267	4487031772	7909510069	448104489099	448481650083	150
8993308382	8993308597	3081510683	899261129757	899216309866	150
6915935746	6919988657	9808410010	691078367408	691748397083	150
1936104503	1933155744	6923510191	193341446837	193836000243	150
5464338145	5463811782	5187410736	546519680683	546770282199	150
3778973022	3778647967	6690510851	377123874101	377446106590	150
8497631597	8498284303	5155510451	849271720908	849270724451	150
9383699130	9388288701	1738510343	938104724738	938422766590	150
3364515638	3366343301	5815500030	336960812377	336920083258	150
6945374978	6941034168	4229910000	694567579290	694751226802	150
2022945130	2027225393	3783510767	202328283487	202053927467	150
9778159845	9779559264	615510078	977828970892	977813702244	150

1002189678	1001440701	6151610463	100280680002	100852108233	150
6687155968	6680764453	5064510516	668675455545	668710903733	150
3860500316	3865408639	6505510970	386054651998	386064550327	150
5780215438	5787826527	1259910000	578248078540	578177677253	150
8078648935	8079424407	3614510065	807487457586	807255208176	150
9204127469	9209921559	9439410254	920583910488	920938365544	150
7499211063	7497602240	279510688	749170000578	749324800812	150
700686599	708629864	8828410206	70444463932	70930603269	150
6762950280	6766004994	5047510387	676413511150	676052092813	150
4937572902	4930585464	6036410234	493923317566	493890799365	150
8278739046	8273363861	9079410613	827995664479	827305601627	150
3266756797	3268861776	1718410091	326365560577	326335330258	150
4458134393	4454489473	818510155	445106381987	445578669597	150
6359495754	6353345205	2157510493	635418075483	635063591886	150
6474285568	6471726001	3611610119	647474120470	647461750425	150
9590958071	9595331016	953510483	959614921748	959577128848	150
305330259	300416237	830510272	30650832707	30014659960	150
2521102638	2520707736	4967510672	252400839320	252159708104	150
6512200606	6519615583	7701542012	651337686884	651213403884	150
2341462163	2347433916	1460510533	234633100881	234738614756	150
7676080961	7677295278	9890510874	767141940269	767741570749	150
3963512535	3960310327	8455510486	396379459228	396522392245	150
48510000	48510427	48510372	4854794961	4872840208	150
48510000	48510427	48510372	4854794961	4872840208	150
33500000	33500233	33500174	3213541132	3593476586	150
33500000	33500233	33500174	3213541132	3593476586	150
5510000	5510073	5510911	293596262	571983891	150
5510000	5510073	5510911	293596262	571983891	150
19410000	19410332	19410008	1419584480	1751926554	150
19410000	19410332	19410008	1419584480	1751926554	150
56500000	56500015	56500359	5468067472	5259153540	150
56500000	56500015	56500359	5468067472	5259153540	150
11610000	11610694	11610058	1934709878	1468968529	150
11610000	11610694	11610058	1934709878	1468968529	150
46500000	46500855	46500258	4311605243	4213592414	150
46500000	46500855	46500258	4311605243	4213592414	150
28510000	28510219	28510174	2030232413	2780503738	150
28510000	28510219	28510174	2030232413	2780503738	150
10610000	10610499	10610066	1578697980	1975703936	150
10610000	10610499	10610066	1578697980	1975703936	150
610000	610349	610966	881326666	663937142	150
610000	610349	610966	881326666	663937142	150
17410000	17410727	17410032	1983323529	1741666548	150
17410000	17410727	17410032	1983323529	1741666548	150
39510000	39510549	39510274	3717425476	3607750659	150
39510000	39510549	39510274	3717425476	3607750659	150
108410000	108410829	108410930	10602658879	10108452950	150

108410000	108410829	108410930	10602658879	10108452950	150
109410000	109410219	109410919	10713807315	10387827666	150
109410000	109410219	109410919	10713807315	10387827666	150
229410000	229410547	229410127	22355111872	22882911336	150
229410000	229410547	229410127	22355111872	22882911336	150
207410000	207410696	207410951	20049854586	20806614460	150
207410000	207410696	207410951	20049854586	20806614460	150
190610000	190610443	190610870	19563368595	19108094075	150
190610000	190610443	190610870	19563368595	19108094075	150
232510000	232510893	232510205	23688266809	23980450699	150
232510000	232510893	232510205	23688266809	23980450699	150
198410000	198410096	198410820	19435888099	19322198600	150
198410000	198410096	198410820	19435888099	19322198600	150
129410000	129410527	129410117	12637237857	12570662975	150
129410000	129410527	129410117	12637237857	12570662975	150
149410000	149410785	149410315	14048817564	14641572577	150
149410000	149410785	149410315	14048817564	14641572577	150
131510000	131510051	9031510194	13625216398	13789970394	150
131510000	131510051	9031510194	13625216398	13789970394	150
147410000	147410275	147410336	14963793358	14838651887	150
147410000	147410275	147410336	14963793358	14838651887	150
351510000	351510024	351510409	35847424204	35088500790	150
351510000	351510024	351510409	35847424204	35088500790	150
358410000	358410510	358410445	35207171834	35332479053	150
358410000	358410510	358410445	35207171834	35332479053	150
325510000	325510327	325510149	32110030708	32893057783	150
325510000	325510327	325510149	32110030708	32893057783	150
349410000	349410824	349410335	34944777746	34884797343	150
349410000	349410824	349410335	34944777746	34884797343	150
356510000	356510001	356510501	35766411019	35717254321	150
356510000	356510001	356510501	35766411019	35717254321	150
321610000	321610853	321610185	32930601473	32681211447	150
321610000	321610853	321610185	32930601473	32681211447	150
288410000	288410931	288410729	28965064502	28782840482	150
288410000	288410931	288410729	28965064502	28782840482	150
291610000	291610218	291610865	29068826839	29920332304	150
291610000	291610218	291610865	29068826839	29920332304	150
267510000	267510273	267510600	26193098037	26099402441	150
267510000	267510273	267510600	26193098037	26099402441	150
285500000	285500258	285500664	28216048688	28006516726	150
285500000	285500258	285500664	28216048688	28006516726	150
278410000	278410780	278410630	27498047775	27369887515	150
278410000	278410780	278410630	27498047775	27369887515	150
270510000	270510246	270510609	27551706363	27998896791	150
270510000	270510246	270510609	27551706363	27998896791	150
249410000	249410805	249410325	24035778828	24866352792	150
249410000	249410805	249410325	24035778828	24866352792	150

437410000	437410239	437410270	43856069403	43141738738	150
437410000	437410239	437410270	43856069403	43141738738	150
436410000	436410800	436410268	43735581155	43273936869	150
436410000	436410800	436410268	43735581155	43273936869	150
453510000	453510467	453510435	45031721403	45095366850	150
453510000	453510467	453510435	45031721403	45095366850	150
479510000	479510118	479510708	47532570546	47673535771	150
479510000	479510118	479510708	47532570546	47673535771	150
443510000	443510287	443510333	44339479030	44267828584	150
443510000	443510287	443510333	44339479030	44267828584	150
459510000	459510902	459510511	45786187140	45957687218	150
459510000	459510902	459510511	45786187140	45957687218	150
396510000	396510555	396510908	39791459848	39883492678	150
396510000	396510555	396510908	39791459848	39883492678	150
416510000	416510596	416510110	41861870945	41028811243	150
416510000	416510596	416510110	41861870945	41028811243	150
410610000	410610463	410610106	41664683952	41881200602	150
410610000	410610463	410610106	41664683952	41881200602	150
426500000	426500688	426500099	42506871498	42149923818	150
426500000	426500688	426500099	42506871498	42149923818	150
397410000	397410703	397410850	39623299944	39434344448	150
397410000	397410703	397410850	39623299944	39434344448	150
376410000	376410316	376410659	37253031335	37257628659	150
376410000	376410316	376410659	37253031335	37257628659	150
427410000	427410027	427410171	42098348093	42828063716	150
427410000	427410027	427410171	42098348093	42828063716	150
378410000	378410796	378410640	37452121805	37249142054	150
378410000	378410796	378410640	37452121805	37249142054	150
590610000	590610515	590610909	59563954424	59504390509	150
590610000	590610515	590610909	59563954424	59504390509	150
597410000	597410733	597410870	59837357007	59854010181	150
597410000	597410733	597410870	59837357007	59854010181	150
618410000	618410966	618410081	61204632258	61318468874	150
618410000	618410966	618410081	61204632258	61318468874	150
575510000	575510067	575510710	57862764081	57433448702	150
575510000	575510067	575510710	57862764081	57433448702	150
616410000	616410513	616410088	61219747533	61438707233	150
585500000	585500233	585500695	58648333455	58490600245	150
585500000	585500233	585500695	58648333455	58490600245	150
586410000	586410505	586410781	58615092156	58386736690	150
586410000	586410505	586410781	58615092156	58386736690	150
543510000	543510305	543510343	54205760039	54477782389	150
543510000	543510305	543510343	54205760039	54477782389	150
546500000	546500936	546500309	54745077846	54307412555	150
546500000	546500936	546500309	54745077846	54307412555	150
556500000	556500016	556500409	55016714682	55598762113	150
495510000	495510335	495510910	49304196392	49138270505	150

495510000	495510335	495510910	49304196392	49138270505	150
549510000	549510752	549510421	54762475849	54004778516	150
549510000	549510752	549510421	54762475849	54004778516	150
527510000	527510905	527510228	52853249105	52369592082	150
527510000	527510905	527510228	52853249105	52369592082	150
497510000	497510871	497510916	49746183483	49635493865	150
497510000	497510871	497510916	49746183483	49635493865	150
525500000	525500872	525500095	52503912591	52546547209	150
525500000	525500872	525500095	52503912591	52546547209	150
498410000	498410108	498410850	49714584585	49924371769	150
498410000	498410108	498410850	49714584585	49924371769	150
702510000	702510429	702510952	70892054440	70179348779	150
702510000	702510429	702510952	70892054440	70179348779	150
717410000	717410837	717410102	71549386163	71462397368	150
717410000	717410837	717410102	71549386163	71462397368	150
706500000	706500485	706500928	70975638667	70540182024	150
706500000	706500485	706500928	70975638667	70540182024	150
709510000	709510285	709510042	70304951694	70253838934	150
709510000	709510285	709510042	70304951694	70253838934	150
691610000	691610290	691610905	69721324902	69256221424	150
691610000	691610290	691610905	69721324902	69256221424	150
725510000	725510391	725510191	72220851482	72828394763	150
725510000	725510391	725510191	72220851482	72828394763	150
646500000	646500954	646500319	64758203437	64534490646	150
646500000	646500954	646500319	64758203437	64534490646	150
681610000	681610115	681610805	68651804240	68300642153	150
681610000	681610115	681610805	68651804240	68300642153	150
672510000	672510161	672510646	67375846779	67994479397	150
672510000	672510161	672510646	67375846779	67994479397	150
658410000	658410568	658410475	65674420652	65822466376	150
658410000	658410568	658410475	65674420652	65822466376	150
637410000	637410285	637410290	63934242423	63003858150	150
637410000	637410285	637410290	63934242423	63003858150	150
667410000	667410567	667410584	66307147403	66072811457	150
667410000	667410567	667410584	66307147403	66072811457	150
638510000	638510421	638510332	63832782576	63667866740	150
638510000	638510421	638510332	63832782576	63667866740	150
676510000	676510323	676510737	67792752242	67653235469	150
676510000	676510323	676510737	67792752242	67653235469	150
836500000	836500826	836500238	83186211799	83748465300	150
836500000	836500826	836500238	83186211799	83748465300	150
839510000	839510691	839510351	83870127751	83251715493	150
839510000	839510691	839510351	83870127751	83251715493	150
843510000	843510359	843510374	84220751822	84982730886	150
843510000	843510359	843510374	84220751822	84982730886	150
861610000	861610775	861610626	86227948977	86455275520	150
861610000	861610775	861610626	86227948977	86455275520	150

837410000	837410198	9737410308	83023791388	83637824353	150
837410000	837410198	9737410308	83023791388	83637824353	150
852510000	852510402	852510467	85025697303	85645595535	150
852510000	852510402	852510467	85025697303	85645595535	150
757510000	757510183	757510551	75748739291	75621376116	150
757510000	757510183	757510551	75748739291	75621376116	150
749410000	749410772	749410375	74268669724	74781623829	150
749410000	749410772	749410375	74268669724	74781623829	150
750510000	750510989	750510461	75729954109	75618180981	150
750510000	750510989	750510461	75729954109	75618180981	150
770610000	770610280	770610729	77122430551	77704956539	150
770610000	770610280	770610729	77122430551	77704956539	150
795510000	795510389	795510940	79114655760	79071727600	150
795510000	795510389	795510940	79114655760	79071727600	150
758410000	758410589	758410484	75219821894	75741449317	150
758410000	758410589	758410484	75219821894	75741449317	150
771610000	771610937	771610715	77913008942	77706506888	150
771610000	771610937	771610715	77913008942	77706506888	150
778410000	778410841	778410680	77942142688	77245087309	150
778410000	778410841	778410680	77942142688	77245087309	150
958410000	958410549	958410504	95859526902	95297681791	150
958410000	958410549	958410504	95859526902	95297681791	150
943510000	943510376	943510384	94936833506	94752542732	150
943510000	943510376	943510384	94936833506	94752542732	150
967510000	967510391	967510668	96965174529	96602927704	150
967510000	967510391	967510668	96965174529	96602927704	150
935510000	935510621	935510315	93016822457	93310602786	150
935510000	935510621	935510315	93016822457	93310602786	150
960610000	960610154	960610649	96484270061	96617156251	150
960610000	960610154	960610649	96484270061	96617156251	150
912510000	912510655	912510074	91383766059	91018431119	150
912510000	912510655	912510074	91383766059	91018431119	150
915510000	915510256	915510110	91327556372	91390994538	150
915510000	915510256	915510110	91327556372	91390994538	150
918410000	918410013	918410110	91675367602	91440663658	150
918410000	918410013	918410110	91675367602	91440663658	150
890510000	890510243	890510865	89302673881	89702084788	150
890510000	890510243	890510865	89302673881	89702084788	150
924510000	924510358	924510192	92172307970	92008798509	150
924510000	924510358	924510192	92172307970	92008798509	150
1095510000	1095510263	1095510870	109896774810	109052166551	150
1095510000	1095510263	1095510870	109896774810	109052166551	150
929410000	929410566	929410196	92170531837	92046334581	150
929410000	929410566	929410196	92170531837	92046334581	150
896510000	896510646	896510958	89990954243	89676957993	150
896510000	896510646	896510958	89990954243	89676957993	150
885510000	885510223	885510849	88413231286	88084057158	150

885510000	885510223	885510849	88413231286	88084057158	150
1107410000	1107410678	1107410941	110356568646	110758972668	150
1107410000	1107410678	1107410941	110356568646	110758972668	150
1080610000	1080610260	1080610761	108979935581	108592411401	150
1080610000	1080610260	1080610761	108979935581	108592411401	150
1059410000	1059410826	1059410406	105950265456	105547945153	150
1059410000	1059410826	1059410406	105950265456	105547945153	150
1103510000	1103510784	1103510901	110171705539	110692676743	150
1103510000	1103510784	1103510901	110171705539	110692676743	150
1117510000	1117510771	1117510090	111301434741	111500597261	150
1117510000	1117510771	1117510090	111301434741	111500597261	150
1016500000	1016500532	1016500960	101082699466	101609753492	150
1016500000	1016500532	1016500960	101082699466	101609753492	150
1050510000	1050510861	1050510392	105061489092	105489323362	150
1050510000	1050510861	1050510392	105061489092	105489323362	150
1018410000	1018410864	1018410022	101858400275	101840539244	150
1018410000	1018410864	1018410022	101858400275	101840539244	150
1025510000	1025510275	1025510121	102233778213	102869728937	150
1025510000	1025510275	1025510121	102233778213	102869728937	150
1039410000	1039410583	1039410207	103438245390	103580018333	150
1039410000	1039410583	1039410207	103438245390	103580018333	150
1055510000	1055510720	1055510437	105354614194	105880164452	150
1055510000	1055510720	1055510437	105354614194	105880164452	150
1027510000	1027510813	1027510179	102529719291	102926504240	150
1027510000	1027510813	1027510179	102529719291	102926504240	150
1211510000	1211510569	1211510007	121354372448	121162902609	150
1211510000	1211510569	1211510007	121354372448	121162902609	150
1193510000	1193510934	1193510806	119735309027	119896075862	150
1193510000	1193510934	1193510806	119735309027	119896075862	150
1217510000	1217510790	1217510101	121159824455	121037530256	150
1217510000	1217510790	1217510101	121159824455	121037530256	150
1187410000	1187410666	1187410732	118522816918	118350314821	150
1187410000	1187410666	1187410732	118522816918	118350314821	150
1189510000	1189510151	1189510779	118523185371	118795900393	150
1189510000	1189510151	1189510779	118523185371	118795900393	150
1239510000	1239510587	1239510294	123402495824	123130059708	150
1239510000	1239510587	1239510294	123402495824	123130059708	150
1183510000	1183510770	1183510703	118061012902	118597458225	150
1183510000	1183510770	1183510703	118061012902	118597458225	150
1197510000	1197510817	1197510888	119515320882	119364492676	150
1197510000	1197510817	1197510888	119515320882	119364492676	150
1209510000	1209510200	1209510992	120313682416	120497573553	150
1209510000	1209510200	1209510992	120313682416	120497573553	150
1216410000	1216410453	1216410049	121224146380	121603907147	150
1216410000	1216410453	1216410049	121224146380	121603907147	150
1241610000	1241610284	1241610369	124083492075	124670214488	150
1241610000	1241610284	1241610369	124083492075	124670214488	150

1186410000	1186410446	1186410742	118531861526	118272716244	150
1186410000	1186410446	1186410742	118531861526	118272716244	150
1139410000	1139410599	1139410217	113305675035	113941569008	150
1139410000	1139410599	1139410217	113305675035	113941569008	150
1142510000	1142510901	1142510296	114502008889	114658956076	150
1142510000	1142510901	1142510296	114502008889	114658956076	150
1346410000	1346410942	1346410359	134883047911	134261546249	150
1346410000	1346410942	1346410359	134883047911	134261546249	150
1126500000	1126500645	1126500070	112633306731	112478552873	150
1126500000	1126500645	1126500070	112633306731	112478552873	150
1159410000	1159410844	1159410416	115637538482	115205204813	150
1159410000	1159410844	1159410416	115637538482	115205204813	150
1146410000	1146410911	1146410339	114476269436	114751129357	150
1146410000	1146410911	1146410339	114476269436	114751129357	150
1127510000	1127510833	1127510188	112141878157	112808204334	150
1127510000	1127510833	1127510188	112141878157	112808204334	150
1135510000	1135510488	1135510235	113213667577	113597698326	150
1135510000	1135510488	1135510235	113213667577	113597698326	150
1309410000	1309410258	1309410940	130769920850	130997887114	150
1309410000	1309410258	1309410940	130769920850	130997887114	150
1347510000	1347510088	1347510413	134015299905	134540420923	150
1347510000	1347510088	1347510413	134015299905	134540420923	150
1326510000	1326510667	1326510203	132914784121	132174871431	150
1326510000	1326510667	1326510203	132914784121	132174871431	150
1335510000	1335510526	1335510256	133096058244	133055857905	150
1335510000	1335510526	1335510256	133096058244	133055857905	150
1332510000	1332510913	1332510216	133957889644	133967247862	150
1332510000	1332510913	1332510216	133957889644	133967247862	150
1270610000	1270610204	1270610680	127081963964	127568979794	150
1270610000	1270610204	1270610680	127081963964	127568979794	150
1298410000	1298410115	1298410831	129229849629	129902818820	150
1298410000	1298410115	1298410831	129229849629	129902818820	150
1283510000	1283510786	1283510713	128708711699	128293098118	150
1283510000	1283510786	1283510713	128708711699	128293098118	150
1263510000	1263510482	1263510513	126793093351	126509148869	150
1263510000	1263510482	1263510513	126793093351	126509148869	150
1254510000	1254510645	1254510431	125348043598	125509174103	150
1254510000	1254510645	1254510431	125348043598	125509174103	150
1435500000	1435500837	1435500184	143953599856	143511862293	150
1435500000	1435500837	1435500184	143953599856	143511862293	150
1487410000	1487410717	1487410762	148623483885	148846227804	150
1487410000	1487410717	1487410762	148623483885	148846227804	150
1441510000	1441510747	1441510322	144900569658	144152970191	150
1441510000	1441510747	1441510322	144900569658	144152970191	150
1438410000	1438410208	1438410259	143529878270	143649128812	150
1438410000	1438410208	1438410259	143529878270	143649128812	150
1476410000	1476410332	1476410670	147243898535	147450358997	150

1476410000	1476410332	1476410670	147243898535	147450358997	150
1485500000	1485500218	1485500687	148409971394	148948960917	150
1485500000	1485500218	1485500687	148409971394	148948960917	150
1446500000	1446500922	1446500300	144563880005	144275355951	150
1446500000	1446500922	1446500300	144563880005	144275355951	150
1446510000	1446510913	1446510415	144996442072	144651059154	150
1446510000	1446510913	1446510415	144996442072	144651059154	150
1405510000	1405510140	1405510955	140657647896	140111930212	150
1405510000	1405510140	1405510955	140657647896	140111930212	150
1387410000	1387410699	1387410752	138239455615	138254577024	150
1425500000	1425500858	1425500086	142368784752	142505883205	150
1425500000	1425500858	1425500086	142368784752	142505883205	150
1591510000	1591510696	1591510831	159754407286	159804505361	150
1591510000	1591510696	1591510831	159754407286	159804505361	150
1606500000	1606500472	1606500919	160141675902	160010141333	150
1606500000	1606500472	1606500919	160141675902	160010141333	150
1608510000	1608510973	1608510037	160794655478	160649417777	150
1608510000	1608510973	1608510037	160794655478	160649417777	150
1595500000	1595500391	1595500808	159720440397	159661416203	150
1595500000	1595500391	1595500808	159720440397	159661416203	150
1616500000	1616500627	1616500020	161439115132	161933856842	150
1616500000	1616500627	1616500020	161439115132	161933856842	150
1579410000	1579410164	1579410654	157689525351	157226078506	150
1579410000	1579410164	1579410654	157689525351	157226078506	150
1596510000	1596510594	1596510929	159337258479	159510775309	150
1596510000	1596510594	1596510929	159337258479	159510775309	150
1569410000	1569410972	1569410555	156728296145	156779149009	150
1569410000	1569410972	1569410555	156728296145	156779149009	150
1496510000	1496510575	1496510919	149723244018	149172951001	150
1496510000	1496510575	1496510919	149723244018	149172951001	150
1509410000	1509410295	1509410960	150902203194	150913369004	150
1509410000	1509410295	1509410960	150902203194	150913369004	150
1510610000	1510610482	1510610117	151537266324	151030549373	150
1510610000	1510610482	1510610117	151537266324	151030549373	150
1537510000	1537510070	1537510330	153585276633	153456468696	150
1537510000	1537510070	1537510330	153585276633	153456468696	150
1699510000	1699510287	1699510927	169768222554	169365545758	150
1699510000	1699510287	1699510927	169768222554	169365545758	150
1715500000	1715500740	1715500014	171528898530	171625943663	150
1715500000	1715500740	1715500014	171528898530	171625943663	150
1730510000	1730510798	1730510263	173232803549	173391916429	150
1730510000	1730510798	1730510263	173232803549	173391916429	150
1716510000	1716510564	1716510143	171577557164	171430712820	150
1716510000	1716510564	1716510143	171577557164	171430712820	150
1703510000	1703510799	1703510963	170486634116	170566154964	150
1703510000	1703510799	1703510963	170486634116	170566154964	150
1725500000	1725500906	1725500116	172127818649	172806107419	150

1725500000	1725500906	1725500116	172127818649	172806107419	150
1698510000	1698510101	1698510932	169205744306	169277461936	150
1698510000	1698510101	1698510932	169205744306	169277461936	150
1710510000	1710510612	1710510066	171366823792	171071438377	150
1710510000	1710510612	1710510066	171366823792	171071438377	150
1728410000	1728410093	1728410188	172199212328	172822872117	150
1728410000	1728410093	1728410188	172199212328	172822872117	150
1693510000	1693510954	1693510855	169797225630	169448738728	150
1693510000	1693510954	1693510855	169797225630	169448738728	150
1638410000	1638410245	1638410280	163455117614	163613336813	150
1638410000	1638410245	1638410280	163455117614	163613336813	150
1622510000	1622510789	1622510146	162340889758	162775823994	150
1622510000	1622510789	1622510146	162340889758	162775823994	150
1671510000	1671510317	1671510641	167699542531	167383329694	150
1671510000	1671510317	1671510641	167699542531	167383329694	150
1662510000	1662510553	1662510548	166048542614	166625079327	150
1662510000	1662510553	1662510548	166048542614	166625079327	150
1647410000	1647410389	1647410383	164360262471	164499485747	150
1647410000	1647410389	1647410383	164360262471	164499485747	150
1858410000	1858410532	1858410495	185562272776	185036660066	150
1858410000	1858410532	1858410495	185562272776	185036660066	150
1863500000	1863500544	1863500548	186501752357	186093369380	150
1863500000	1863500544	1863500548	186501752357	186093369380	150
1803510000	1803510818	1803510973	180639817537	180501862389	150
1803510000	1803510818	1803510973	180639817537	180501862389	150
1786410000	1786410470	1786410800	178290724490	178421100418	150
1786410000	1786410470	1786410800	178290724490	178421100418	150
1802510000	1802510453	1802510963	180744141527	180282261829	150
1802510000	1802510453	1802510963	180744141527	180282261829	150
1756500000	1756500051	1756500430	175858350443	175223278848	150
1756500000	1756500051	1756500430	175858350443	175223278848	150
1772510000	1772510183	1772510657	177013716033	177409351622	150
1772510000	1772510183	1772510657	177013716033	177409351622	150
1786510000	1786510449	1786510849	178735392694	178615267176	150
1786510000	1786510449	1786510849	178735392694	178615267176	150
1773500000	1773500804	1773500636	177210670941	177629463086	150
1773500000	1773500804	1773500636	177210670941	177629463086	150
1968410000	1968410731	1968410602	196149563091	196366265743	150
1968410000	1968410731	1968410602	196149563091	196366265743	150
1914600000	1914600132	1914600056	191104274323	191103479840	150
1914600000	1914600132	1914600056	191104274323	191103479840	150
1887410000	1887410786	1887410801	188929775247	188571389698	150
1887410000	1887410786	1887410801	188929775247	188571389698	150
1873510000	1873510719	1873510673	187860335815	187807338473	150
1873510000	1873510719	1873510673	187860335815	187807338473	150
1889510000	1889510262	1889510849	188360613500	188878378254	150
1889510000	1889510262	1889510849	188360613500	188878378254	150

1926500000	1926500768	1926500150	192566821833	192665259061	150
1926500000	1926500768	1926500150	192566821833	192665259061	150
1890610000	1890610489	1890610940	189958961304	189043731897	150
1890610000	1890610489	1890610940	189958961304	189043731897	150
1879410000	1879410217	1879410684	187785470166	187758806868	150
1879410000	1879410217	1879410684	187785470166	187758806868	150
2077510000	2077510276	2077510680	207481364328	207512277412	150
2077510000	2077510276	2077510680	207481364328	207512277412	150
2086510000	2086510396	2086510779	208968423413	208821519236	150
2086510000	2086510396	2086510779	208968423413	208821519236	150
2088410000	2088410900	2088410711	208058170673	208363941743	150
2088410000	2088410900	2088410711	208058170673	208363941743	150
2090510000	2090510087	2090510789	209886805217	209283601789	150
2090510000	2090510087	2090510789	209886805217	209283601789	150
2084510000	2084510870	2084510713	208908631785	208404708485	150
2084510000	2084510870	2084510713	208908631785	208404708485	150
2067510000	2067510238	2067510583	206650802567	206399740014	150
2067510000	2067510238	2067510583	206650802567	206399740014	150
2092510000	2092510585	2092510787	209409615079	209439694397	150
2092510000	2092510585	2092510787	209409615079	209439694397	150
2098410000	2098410082	2098410812	209874325185	209369228397	150
2098410000	2098410082	2098410812	209874325185	209369228397	150
2068410000	2068410569	2068410515	206821482002	206107856216	150
2068410000	2068410569	2068410515	206821482002	206107856216	150
2049410000	2049410770	2049410307	204293315534	204288418405	150
2049410000	2049410770	2049410307	204293315534	204288418405	150
1991510000	1991510767	1991510872	199257965497	199022444416	150
1991510000	1991510767	1991510872	199257965497	199022444416	150
1996510000	1996510662	1996510969	199816591765	199308698662	150
1996510000	1996510662	1996510969	199816591765	199308698662	150
2041510000	2041510666	2041510285	204499453308	204180503416	150
2041510000	2041510666	2041510285	204499453308	204180503416	150
2022510000	2022510678	2022510087	202149003879	202882313498	150
2022510000	2022510678	2022510087	202149003879	202882313498	150
2191510000	2191510623	2191510792	219894983744	219242058281	150
2191510000	2191510623	2191510792	219894983744	219242058281	150
2209410000	2209410239	2209410931	220257736593	220060821226	150
2209410000	2209410239	2209410931	220257736593	220060821226	150
2186510000	2186510415	2186510790	218620693399	218699732234	150
2186510000	2186510415	2186510790	218620693399	218699732234	150
2218510000	2218510082	2218510097	221188503027	221662680872	150
2218510000	2218510082	2218510097	221188503027	221662680872	150
2179510000	2179510076	2179510680	217110044641	217364698669	150
2179510000	2179510076	2179510680	217110044641	217364698669	150
2235500000	2235500807	2235500166	223873589260	223577345949	150
2235500000	2235500807	2235500166	223873589260	223577345949	150
2168410000	2168410587	2168410525	216203975465	216084554149	150

2168410000	2168410587	2168410525	216203975465	216084554149	150
2137410000	2137410178	2137410244	213066314391	213144416119	150
2137410000	2137410178	2137410244	213066314391	213144416119	150
2339410000	2339410636	2339410237	233376250887	233585096532	150
2339410000	2339410636	2339410237	233376250887	233585096532	150
2132510000	2132510878	2132510197	213156971545	213264523432	150
2132510000	2132510878	2132510197	213156971545	213264523432	150
2158410000	2158410476	2158410428	215751758569	215402817471	150
2158410000	2158410476	2158410428	215751758569	215402817471	150
2161610000	2161610133	2161610558	216856916516	216615551653	150
2161610000	2161610133	2161610558	216856916516	216615551653	150
2164510000	2164510677	2164510523	216596359534	216773372397	150
2164510000	2164510677	2164510523	216596359534	216773372397	150
2156500000	2156500033	2156500371	215695972104	215001677106	150
2156500000	2156500033	2156500371	215695972104	215001677106	150
2348510000	2348510482	2348510405	234944685485	234276833242	150
2348510000	2348510482	2348510405	234944685485	234276833242	150
2312510000	2312510544	2312510014	231795280445	231426180269	150
2312510000	2312510544	2312510014	231795280445	231426180269	150
2316410000	2316410471	2316410060	231602742132	231989795121	150
2316410000	2316410471	2316410060	231602742132	231989795121	150
2357410000	2357410508	2357410455	235184710329	235365695072	150
2357410000	2357410508	2357410455	235184710329	235365695072	150
2329410000	2329410571	2329410139	232563099488	232048816756	150
2329410000	2329410571	2329410139	232563099488	232048816756	150
2329510000	2329510509	2329510206	232796481717	232840828637	150
2329510000	2329510509	2329510206	232796481717	232840828637	150
2290510000	2290510125	2290510807	229126424192	229630752963	150
2290510000	2290510125	2290510807	229126424192	229630752963	150
2258410000	2258410495	2258410437	225125425090	225941547501	150
2258410000	2258410495	2258410437	225125425090	225941547501	150
2291510000	2291510642	2291510802	229679448389	229164320825	150
2291510000	2291510642	2291510802	229679448389	229164320825	150
2293510000	2293510886	2293510817	229468217572	229687823967	150
2293510000	2293510886	2293510817	229468217572	229687823967	150
2271610000	2271610851	2271610667	227618699614	227800312013	150
2271610000	2271610851	2271610667	227618699614	227800312013	150
2285500000	2285500261	2285500666	228950821226	228616134763	150
2285500000	2285500261	2285500666	228950821226	228616134763	150
2285510000	2285510125	2285510790	228096766887	228316516172	150
2285510000	2285510125	2285510790	228096766887	228316516172	150
2250510000	2250510899	2250510413	225210242624	225742257074	150
2250510000	2250510899	2250510413	225210242624	225742257074	150
2280610000	2280610297	2280610782	228802268605	228556426292	150
2280610000	2280610297	2280610782	228802268605	228556426292	150
2456500000	2456500004	2456500401	245131047772	245512248435	150
2456500000	2456500004	2456500401	245131047772	245512248435	150

2438510000	2438510392	2438510314	243092024198	243267341870	150
2438510000	2438510392	2438510314	243092024198	243267341870	150
2479410000	2479410148	2479410645	247280450075	247983165437	150
2479410000	2479410148	2479410645	247280450075	247983165437	150
2467510000	2467510309	2467510622	246008046754	246219777456	150
2467510000	2467510309	2467510622	246008046754	246219777456	150
2489510000	2489510197	2489510810	248691235217	248108271973	150
2489510000	2489510197	2489510810	248691235217	248108271973	150
2428510000	2428510214	2428510216	242127186929	242288880988	150
2428510000	2428510214	2428510216	242127186929	242288880988	150
2442510000	2442510955	2442510328	244464673361	244024394728	150
2442510000	2442510955	2442510328	244464673361	244024394728	150
2470610000	2470610234	2470610701	247017567703	247828633784	150
2470610000	2470610234	2470610701	247017567703	247828633784	150
2458510000	2458510666	2458510516	245716776551	245634588250	150
2458510000	2458510666	2458510516	245716776551	245634588250	150
2468510000	2468510760	2468510615	246849567697	246037002137	150
2468510000	2468510760	2468510615	246849567697	246037002137	150
2488410000	2488410972	2488410751	248739372155	248511378133	150
2488410000	2488410972	2488410751	248739372155	248511378133	150
2371510000	2371510259	2371510611	237656509786	237669741163	150
2371510000	2371510259	2371510611	237656509786	237669741163	150
2363510000	2363510503	2363510524	236187660055	236069184144	150
2363510000	2363510503	2363510524	236187660055	236069184144	150
2395500000	2395500361	2395500788	239919138679	239530748023	150
2395500000	2395500361	2395500788	239919138679	239530748023	150
2377510000	2377510324	2377510710	237866627706	237833549105	150
2377510000	2377510324	2377510710	237866627706	237833549105	150
2579510000	2579510137	2579510720	257574545291	257670949361	150
2579510000	2579510137	2579510720	257574545291	257670949361	150
2597510000	2597510892	2597510928	259198456527	259898655717	150
2597510000	2597510892	2597510928	259198456527	259898655717	150
2595510000	2595510358	2595510922	259956596325	259350868374	150
2595510000	2595510358	2595510922	259956596325	259350868374	150
2555510000	2555510805	2555510491	255978191511	255428842871	150
2555510000	2555510805	2555510491	255978191511	255428842871	150
2608410000	2608410909	2608410983	260589854606	260067203019	150
2608410000	2608410909	2608410983	260589854606	260067203019	150
2580610000	2580610340	2580610812	258984199353	258607392736	150
2580610000	2580610340	2580610812	258984199353	258607392736	150
2578410000	2578410806	2578410662	257885088871	257275976758	150
2578410000	2578410806	2578410662	257885088871	257275976758	150
2591610000	2591610275	2591610897	259681760956	259334801411	150
2591610000	2591610275	2591610897	259681760956	259334801411	150
2508410000	2508410893	2508410973	250506592085	250494611776	150
2508410000	2508410893	2508410973	250506592085	250494611776	150
2532510000	2532510951	2532510238	253170709462	253840254964	150

2532510000	2532510951	2532510238	253170709462	253840254964	150
2538410000	2538410227	2538410271	253620945577	253157515244	150
2538410000	2538410227	2538410271	253620945577	253157515244	150
2491510000	2491510679	2491510822	249465719041	249356334254	150
2491510000	2491510679	2491510822	249465719041	249356334254	150
2519410000	2519410429	2519410059	251571067742	251957679223	150
2519410000	2519410429	2519410059	251571067742	251957679223	150
2533510000	2533510223	2533510246	253093573877	253591576420	150
2533510000	2533510223	2533510246	253093573877	253591576420	150
2548410000	2548410361	2548410370	254048167376	254435289034	150
2548410000	2548410361	2548410370	254048167376	254435289034	150
2539410000	2539410678	2539410257	253141732552	253154460874	150
2539410000	2539410678	2539410257	253141732552	253154460874	150
2702610000	2702610022	2702610016	270832186929	270335769838	150
2702610000	2702610022	2702610016	270832186929	270335769838	150
2684510000	2684510973	2684510773	268416970904	268332600572	150
2684510000	2684510973	2684510773	268416970904	268332600572	150
2718410000	2718410986	2718410092	271201794769	271957677296	150
2718410000	2718410986	2718410092	271201794769	271957677296	150
2697410000	2697410753	2697410882	269074602902	269555210177	150
2697410000	2697410753	2697410882	269074602902	269555210177	150
2676410000	2676410364	2676410691	267848933659	267862901953	150
2676410000	2676410364	2676410691	267848933659	267862901953	150
2641610000	2641610358	2641610409	264189511622	264616042419	150
2641610000	2641610358	2641610409	264189511622	264616042419	150
2658510000	2658510620	2658510536	265251618260	265047858041	150
2658510000	2658510620	2658510536	265251618260	265047858041	150
2668410000	2668410682	2668410573	266163683557	266630255581	150
2668410000	2668410682	2668410573	266163683557	266630255581	150
2619410000	2619410444	2619410069	261381960407	261655880188	150
2619410000	2619410444	2619410069	261381960407	261655880188	150
2656500000	2656500037	2656500421	265406549410	265909706024	150
2656500000	2656500037	2656500421	265406549410	265909706024	150
2624510000	2624510308	2624510163	262384195726	262228175224	150
2624510000	2624510308	2624510163	262384195726	262228175224	150
2627510000	2627510925	2627510240	262711757148	262076454428	150
2627510000	2627510925	2627510240	262711757148	262076454428	150
2669410000	2669410991	2669410566	266869541682	266795976683	150
2669410000	2669410991	2669410566	266869541682	266795976683	150
2805510000	2805510207	2805510996	280809259037	280564368809	150
2805510000	2805510207	2805510996	280809259037	280564368809	150
2807510000	2807510721	2807510061	280241527381	280156126347	150
2807510000	2807510721	2807510061	280241527381	280156126347	150
2818410000	2818410000	2818410102	281356860039	281013968520	150
2818410000	2818410000	2818410102	281356860039	281013968520	150
2812510000	2812510637	2812510066	281856748738	281546648180	150
2812510000	2812510637	2812510066	281856748738	281546648180	150

2816500000	2816500602	2816500041	281335402058	281612056727	150
2816500000	2816500602	2816500041	281335402058	281612056727	150
2829410000	2829410553	2829410188	282642977356	282979297549	150
2829410000	2829410553	2829410188	282642977356	282979297549	150
2834510000	2834510513	2834510286	283632801945	283646508654	150
2834510000	2834510513	2834510286	283632801945	283646508654	150
2825500000	2825500927	2825500127	282986526457	282988494375	150
2825500000	2825500927	2825500127	282986526457	282988494375	150
2763510000	2763510574	2763510564	276819607794	276216480828	150
2763510000	2763510574	2763510564	276819607794	276216480828	150
2756510000	2756510073	2756510545	275771089240	275707529788	150
2756510000	2756510073	2756510545	275771089240	275707529788	150
2748510000	2748510548	2748510445	274886130054	274961967675	150
2748510000	2748510548	2748510445	274886130054	274961967675	150
2794510000	2794510023	2794510884	279170277752	279033643720	150
2794510000	2794510023	2794510884	279170277752	279033643720	150
2765510000	2765510923	2765510624	276029362757	276704578677	150
2765510000	2765510923	2765510624	276029362757	276704578677	150
2788510000	2788510038	2788510843	278894895188	278556536093	150
2788510000	2788510038	2788510843	278894895188	278556536093	150
2766410000	2766410303	2766410601	276647985919	276310992488	150
2766410000	2766410303	2766410601	276647985919	276310992488	150
2973510000	2973510740	2973510684	297726588456	297151200523	150
2973510000	2973510740	2973510684	297726588456	297151200523	150
2979410000	2979410058	2979410695	297492790730	297853525387	150
2979410000	2979410058	2979410695	297492790730	297853525387	150
2946510000	2946510936	2946510465	294512072737	294259774707	150
2946510000	2946510936	2946510465	294512072737	294259774707	150
2935500000	2935500919	2935500235	293577208773	293880022728	150
2935500000	2935500919	2935500235	293577208773	293880022728	150
2925500000	2925500945	2925500137	292299989147	292218312391	150
2925500000	2925500945	2925500137	292299989147	292218312391	150
2891610000	2891610329	2891610927	289129997947	289033491521	150
2891610000	2891610329	2891610927	289129997947	289033491521	150
2898410000	2898410177	2898410891	289052678834	289528796555	150
2898410000	2898410177	2898410891	289052678834	289528796555	150
2900610000	2900610488	2900610058	290966052779	290169688547	150
2900610000	2900610488	2900610058	290966052779	290169688547	150
2915500000	2915500774	2915500037	291014578354	291334427129	150
2915500000	2915500774	2915500037	291014578354	291334427129	150
2919410000	2919410493	2919410099	291083044150	291597318096	150
2919410000	2919410493	2919410099	291083044150	291597318096	150
2872510000	2872510207	2872510667	287084558703	287440570387	150
2872510000	2872510207	2872510667	287084558703	287440570387	150
2911510000	2911510813	2911510078	291655775844	291329927355	150
2911510000	2911510813	2911510078	291655775844	291329927355	150
2876410000	2876410395	2876410711	287075745482	287243824476	150

2876410000	2876410395	2876410711	287075745482	287243824476	150
3057410000	3057410463	3057410426	305865402235	305910992168	150
3057410000	3057410463	3057410426	305865402235	305910992168	150
3075510000	3075510981	3075510658	307205669537	307847966669	150
3075510000	3075510981	3075510658	307205669537	307847966669	150
3078410000	3078410754	3078410613	307199407814	307105947687	150
3078410000	3078410754	3078410613	307199407814	307105947687	150
3081610000	3081610993	3081610748	308610870861	308455921120	150
3081610000	3081610993	3081610748	308610870861	308455921120	150
3051510000	3051510868	3051510382	305099647092	305008341668	150
3051510000	3051510868	3051510382	305099647092	305008341668	150
3051610000	3051610944	3051610450	305120936471	305500388363	150
3051610000	3051610944	3051610450	305120936471	305500388363	150
3069500000	3069500608	3069500487	306649649980	306934982568	150
3069500000	3069500608	3069500487	306649649980	306934982568	150
3091510000	3091510607	3091510783	309798141714	309960065418	150
3091510000	3091510607	3091510783	309798141714	309960065418	150
3074510000	3074510832	3074510614	307870626413	307503606002	150
3074510000	3074510832	3074510614	307870626413	307503606002	150
3032510000	3032510862	3032510188	303385420605	303603035114	150
3032510000	3032510862	3032510188	303385420605	303603035114	150
3035500000	3035500778	3035500148	303076062391	303874012799	150
3035500000	3035500778	3035500148	303076062391	303874012799	150
3045500000	3045500939	3045500246	304918650460	304888149301	150
3045500000	3045500939	3045500246	304918650460	304888149301	150
2984510000	2984510021	2984510803	298856913146	298528430473	150
2984510000	2984510021	2984510803	298856913146	298528430473	150
3025500000	3025500794	3025500048	302840488747	302669204166	150
3025500000	3025500794	3025500048	302840488747	302669204166	150
3028410000	3028410034	2028410122	302801208014	302554349213	150
3028410000	3028410034	2028410122	302801208014	302554349213	150
3026510000	3026510618	3026510175	302388557998	302077797542	150
3026510000	3026510618	3026510175	302388557998	302077797542	150
2997510000	2997510962	2997510968	299562430942	299731982551	150
2997510000	2997510962	2997510968	299562430942	299731982551	150
3003510000	3003510770	3003510891	300191206679	300609542266	150
3003510000	3003510770	3003510891	300191206679	300609542266	150
3013510000	3013510864	3013510997	301659260163	301448863162	150
3013510000	3013510864	3013510997	301659260163	301448863162	150
3191610000	3191610204	3191610858	319479317941	319877818063	150
3191610000	3191610204	3191610858	319479317941	319877818063	150
3222510000	3222510717	3222510107	322935913120	322383471752	150
3222510000	3222510717	3222510107	322935913120	322383471752	150
3223510000	3223510093	3223510117	322234822252	322847604338	150
3223510000	3223510093	3223510117	322234822252	322847604338	150
3177410000	3177410653	3177410635	317558219550	317919629774	150
3177410000	3177410653	3177410635	317558219550	317919629774	150

3219410000	3219410374	3219410031	321311570314	321499662432	150
3219410000	3219410374	3219410031	321311570314	321499662432	150
3227410000	3227410999	3227410154	322346398184	322005431903	150
3227410000	3227410999	3227410154	322346398184	322005431903	150
3187510000	3187510455	3187510791	318964237958	318856721582	150
3187510000	3187510455	3187510791	318964237958	318856721582	150
3150510000	3150510882	3150510404	315913124697	315780824972	150
3150510000	3150510882	3150510404	315913124697	315780824972	150
3144510000	3144510567	3144510320	314510714240	314807534504	150
3144510000	3144510567	3144510320	314510714240	314807534504	150
3119410000	3119410355	3119410021	311920742471	311152452042	150
3119410000	3119410355	3119410021	311920742471	311152452042	150
3116510000	3116510550	3116510084	311116193097	311957041027	150
3116510000	3116510550	3116510084	311116193097	311957041027	150
3136410000	3136410759	3136410241	313376109686	313141520870	150
3136410000	3136410759	3136410241	313376109686	313141520870	150
3133500000	3133500259	3133500187	313002330847	313272383309	150
3133500000	3133500259	3133500187	313002330847	313272383309	150
3158510000	3158510616	3158510487	315435656107	315844348203	150
3158510000	3158510616	3158510487	315435656107	315844348203	150
3118410000	3118410885	3118410034	311806555030	311529530544	150
3118410000	3118410885	3118410034	311806555030	311529530544	150
3338510000	3338510377	3338510305	333290278866	333213710227	150
3338510000	3338510377	3338510305	333290278866	333213710227	150
3319410000	3319410393	3319410041	331026376541	331061733723	150
3319410000	3319410393	3319410041	331026376541	331061733723	150
3354510000	3354510664	3354510443	335502088472	335198580061	150
3354510000	3354510664	3354510443	335502088472	335198580061	150
3300610000	3300610399	3300610999	330068416272	330925532259	150
3300610000	3300610399	3300610999	330068416272	330925532259	150
3252510000	3252510107	3252510409	325150057522	325383410750	150
3252510000	3252510107	3252510409	325150057522	325383410750	150
3286510000	3286510433	3286510801	328193310632	328683053745	150
3286510000	3286510433	3286510801	328193310632	328683053745	150
3236510000	3236510702	3236510298	323725935547	323176940867	150
3236510000	3236510702	3236510298	323725935547	323176940867	150
3273510000	3273510665	3273510616	327021505812	327375293495	150
3273510000	3273510665	3273510616	327021505812	327375293495	150
3258410000	3258410497	3258410438	325402222264	325526098459	150
3258410000	3258410497	3258410438	325402222264	325526098459	150
3245500000	3245500971	3245500265	324595612382	324998057307	150
3245500000	3245500971	3245500265	324595612382	324998057307	150
3448410000	3448410344	3448410361	344962061876	344869763524	150
3448410000	3448410344	3448410361	344962061876	344869763524	150
3470510000	3470510292	3470510632	347479618803	347604494313	150
3470510000	3470510292	3470510632	347479618803	347604494313	150
3428410000	3428410047	3428410161	342532836335	342437981946	150

3428410000	3428410047	3428410161	342532836335	342437981946	150
3429410000	3429410592	3429410149	342758657014	342249901698	150
3429410000	3429410592	3429410149	342758657014	342249901698	150
3461510000	3461510239	3461510524	346768249985	346778506238	150
3461510000	3461510239	3461510524	346768249985	346778506238	150
3461610000	3461610189	3461610589	346855699887	346447826480	150
3461610000	3461610189	3461610589	346855699887	346447826480	150
3439510000	3439510627	3439510315	343045899556	343246383170	150
3439510000	3439510627	3439510315	343045899556	343246383170	150
3478510000	3478510848	3478510713	347125598982	347824477729	150
3478510000	3478510848	3478510713	347125598982	347824477729	150
3435500000	3435500841	3435500186	343744075440	343081282575	150
3435500000	3435500841	3435500186	343744075440	343081282575	150
3401510000	3401510406	3401510929	340605618992	340024951911	150
3401510000	3401510406	3401510929	340605618992	340024951911	150
3378410000	3378410802	3378410643	337232870120	337386763955	150
3378410000	3378410802	3378410643	337232870120	337386763955	150
3375510000	3375510035	3375510692	337332740309	337532648347	150
3375510000	3375510035	3375510692	337332740309	337532648347	150
3392510000	3392510642	3392510819	339409899634	339717179054	150
3392510000	3392510642	3392510819	339409899634	339717179054	150
3406500000	3406500444	3406500901	340037628205	340844289055	150
3406500000	3406500444	3406500901	340037628205	340844289055	150
3387410000	3387410703	3387410754	338452105318	338874596967	150
3387410000	3387410703	3387410754	338452105318	338874596967	150
3383510000	3383510807	3383510727	338333750990	338129792792	150
3383510000	3383510807	3383510727	338333750990	338129792792	150
3416500000	3416500598	3416500002	341452723084	341432846953	150
3416500000	3416500598	3416500002	341452723084	341432846953	150
3552510000	3552510348	3552510440	355559357106	355346674990	150
3552510000	3552510348	3552510440	355559357106	355346674990	150
3600610000	3600610444	3600610029	360716072074	360337687126	150
3600610000	3600610444	3600610029	360716072074	360337687126	150
3581510000	3581510514	3581510733	358964296688	358468227650	150
3581510000	3581510514	3581510733	358964296688	358468227650	150
3550510000	3550510955	3550510444	355467639366	355735301617	150
3550510000	3550510955	3550510444	355467639366	355735301617	150
3547410000	3547410374	3547410376	354961524743	354709936163	150
3547410000	3547410374	3547410376	354961524743	354709936163	150
3506500000	3506500461	3506500911	350307756417	350298366291	150
3506500000	3506500461	3506500911	350307756417	350298366291	150
3512510000	3512510582	3512510036	351467481466	351176097965	150
3512510000	3512510582	3512510036	351467481466	351176097965	150
3515510000	3515510194	3515510071	351061871734	351290895234	150
3515510000	3515510194	3515510071	351061871734	351290895234	150
3529410000	3529410609	3529410159	352323012213	352492174135	150
3529410000	3529410609	3529410159	352323012213	352492174135	150

3486410000	3486410494	3486410774	348906210490	348151685507	150
3486410000	3486410494	3486410774	348906210490	348151685507	150
3545500000	3545500022	3545500295	354665238714	354556292157	150
3545500000	3545500022	3545500295	354665238714	354556292157	150
3729410000	3729410536	3729410179	372681489603	372834787142	150
3729410000	3729410536	3729410179	372681489603	372834787142	150
3712510000	3712510619	3712510056	371004357260	371945045515	150
3712510000	3712510619	3712510056	371004357260	371945045515	150
3700610000	3700610459	3700610039	370207002964	370676917938	150
3700610000	3700610459	3700610039	370207002964	370676917938	150
3657510000	3657510170	3657510544	365275072928	365673877092	150
3657510000	3657510170	3657510544	365275072928	365673877092	150
3660510000	3660510131	3660510554	366562613384	366439284346	150
3660510000	3660510131	3660510554	366562613384	366439284346	150
3664510000	3664510765	3664510575	366231945046	366788997012	150
3664510000	3664510765	3664510575	366231945046	366788997012	150
3609410000	3609410315	3609410972	360964346494	360758411658	150
3609410000	3609410315	3609410972	360964346494	360758411658	150
3658410000	3658410575	3658410478	365246878127	365609819818	150
3658410000	3658410575	3658410478	365246878127	365609819818	150
3612510000	3612510602	3612510046	361355997630	361343931187	150
3612510000	3612510602	3612510046	361355997630	361343931187	150
3625500000	3625500892	3625500108	362512487121	362361963772	150
3625500000	3625500892	3625500108	362512487121	362361963772	150
3666500000	3666500197	3666500522	366299613067	366913279726	150
3666500000	3666500197	3666500522	366299613067	366913279726	150
3659410000	3659410942	3659410467	365081427312	365823219027	150
3659410000	3659410942	3659410467	365081427312	365823219027	150
3817510000	3817510780	3817510161	381062975445	381698997883	150
3817510000	3817510780	3817510161	381062975445	381698997883	150
3801610000	3801610665	3801610041	380606632182	380631853963	150
3801610000	3801610665	3801610041	380606632182	380631853963	150
3819410000	3819410480	3819410090	381122359049	381350421327	150
3819410000	3819410480	3819410090	381122359049	381350421327	150
3804510000	3804510157	3804510982	380961156011	380778720613	150
3804510000	3804510157	3804510982	380961156011	380778720613	150
3808410000	3808410837	3808410004	380651093438	380675218244	150
3808410000	3808410837	3808410004	380651093438	380675218244	150
3797410000	3797410768	3797410893	379997091727	379105679077	150
3797410000	3797410768	3797410893	379997091727	379105679077	150
3837510000	3837510008	3837510366	383872671826	383747420939	150
3837510000	3837510008	3837510366	383872671826	383747420939	150
3769410000	3769410011	3769410577	376411521820	376593175506	150
3769410000	3769410011	3769410577	376411521820	376593175506	150
3757410000	3757410421	3757410496	375983772339	375252339865	150
3757410000	3757410421	3757410496	375983772339	375252339865	150
3767410000	3767410590	3767410596	376530588461	376824513580	150

3767410000	3767410590	3767410596	376530588461	376824513580	150
3969410000	3969410053	3969410597	396061243095	396310517078	150
3969410000	3969410053	3969410597	396061243095	396310517078	150
3939510000	3939510716	3939510364	393187293509	393877335263	150
3939510000	3939510716	3939510364	393187293509	393877335263	150
3927510000	3927510979	3927510272	392319841814	392251930577	150
3927510000	3927510979	3927510272	392319841814	392251930577	150
3860510000	3860510169	3860510573	386386109679	386171870113	150
3860510000	3860510169	3860510573	386386109679	386171870113	150
3881610000	3881610151	3881610828	388007954612	388443031916	150
3881610000	3881610151	3881610828	388007954612	388443031916	150
3882510000	3882510544	3882510768	388789686997	388361490218	150
3882510000	3882510544	3882510768	388789686997	388361490218	150
3916500000	3916500616	3916500052	391703771505	391809968407	150
3916500000	3916500616	3916500052	391703771505	391809968407	150
3888410000	3888410047	3888410793	388109682228	388506936146	150
3888410000	3888410047	3888410793	388109682228	388506936146	150
3918410000	3918410017	3918410113	391472250102	391132793160	150
3918410000	3918410017	3918410113	391472250102	391132793160	150
3895500000	3895500437	3895500841	389457790070	389540341182	150
3895500000	3895500437	3895500841	389457790070	389540341182	150
4058410000	4058410462	4058410420	405084561434	405282806382	150
4058410000	4058410462	4058410420	405084561434	405282806382	150
4042510000	4042510887	4042510289	404494101548	404694312100	150
4042510000	4042510887	4042510289	404494101548	404694312100	150
4036500000	4036500787	4036500163	403401759113	403693466064	150
4036500000	4036500787	4036500163	403401759113	403693466064	150
4090610000	4090610433	4090610864	409237770779	409693298432	150
4090610000	4090610433	4090610864	409237770779	409693298432	150
4078510000	4078510861	4078510675	407551675069	407079548796	150
4078510000	4078510861	4078510675	407551675069	407079548796	150
4065510000	4065510890	4065510548	406907749927	406467436284	150
4065510000	4065510890	4065510548	406907749927	406467436284	150
4066500000	4066500103	4066500463	406414385983	406709820489	150
4066500000	4066500103	4066500463	406414385983	406709820489	150
4069410000	4069410019	4069410508	406314582411	406550142816	150
4069410000	4069410019	4069410508	406314582411	406550142816	150
4076510000	4076510226	4076510679	407839427300	407782353811	150
4076510000	4076510226	4076510679	407839427300	407782353811	150
4049410000	4049410773	4049410309	404532503093	404271025285	150
4049410000	4049410773	4049410309	404532503093	404271025285	150
4011610000	4011610703	4011610061	401762861552	401944494368	150
4011610000	4011610703	4011610061	401762861552	401944494368	150
4021510000	4021510839	4021510090	402822071570	402576595954	150
4021510000	4021510839	4021510090	402822071570	402576595954	150
4006500000	4006500466	4006500864	400014599076	400527977755	150
4006500000	4006500466	4006500864	400014599076	400527977755	150

4008410000	4008410817	4008410924	400842142641	400545123624	150
4008410000	4008410817	4008410924	400842142641	400545123624	150
3995510000	3995510337	3995510963	399827798378	399444018942	150
3995510000	3995510337	3995510963	399827798378	399444018942	150
3998410000	3998410194	3998410902	399669391316	399292507311	150
3998410000	3998410194	3998410902	399669391316	399292507311	150
3996410000	3996410647	3996410923	399343324871	399024115784	150
3996410000	3996410647	3996410923	399343324871	399024115784	150
4002610000	4002610898	4002610949	400301734325	400312017654	150
4002610000	4002610898	4002610949	400301734325	400312017654	150
4201510000	4201510368	4201510909	420695371150	420748312331	150
4201510000	4201510368	4201510909	420695371150	420748312331	150
4165510000	4165510908	4165510560	416861531446	416704086248	150
4165510000	4165510908	4165510560	416861531446	416704086248	150
4166500000	4166500120	4166500473	416843927497	416721603995	150
4166500000	4166500120	4166500473	416843927497	416721603995	150
4189410000	4189410099	4189410717	418173794906	418494533418	150
4189410000	4189410099	4189410717	418173794906	418494533418	150
4202510000	4202510346	4202510905	420517350508	420070048394	150
4202510000	4202510346	4202510905	420517350508	420070048394	150
4175510000	4175510004	4175510671	417070258943	417008294421	150
4175510000	4175510004	4175510671	417070258943	417008294421	150
4133510000	4133510154	4133510208	413083052573	413143250691	150
4133510000	4133510154	4133510208	413083052573	413143250691	150
4136500000	4136500803	4136500173	413771352955	413742096727	150
4136500000	4136500803	4136500173	413771352955	413742096727	150
4105510000	4105510097	4105510925	410161467552	410015477680	150
4105510000	4105510097	4105510925	410161467552	410015477680	150
4123510000	4123510075	4123510108	412871667096	412006484488	150
4123510000	4123510075	4123510108	412871667096	412006484488	150
4129410000	4129410535	4129410121	412605727871	412881506777	150
4129410000	4129410535	4129410121	412605727871	412881506777	150
4112510000	4112510513	4112510995	411940356177	411259956922	150
4112510000	4112510513	4112510995	411940356177	411259956922	150
4115510000	4115510262	4115510029	411046806302	411181391918	150
4115510000	4115510262	4115510029	411046806302	411181391918	150
4125510000	4125510300	4125510133	412575385377	412804886734	150
4125510000	4125510300	4125510133	412575385377	412804886734	150
4141610000	4141610273	4141610362	414158686725	414607876484	150
4141610000	4141610273	4141610362	414158686725	414607876484	150
4318410000	4318410927	4318410055	431825089699	431062194989	150
4318410000	4318410927	4318410055	431825089699	431062194989	150
4325500000	4325500844	4325500079	432380370721	432887465856	150
4325500000	4325500844	4325500079	432380370721	432887465856	150
4306500000	4306500430	4306500892	430121847493	430496956539	150
4306500000	4306500430	4306500892	430121847493	430496956539	150
4337510000	4337510045	4337510312	433343744627	433745560852	150

4337510000	4337510045	4337510312	433343744627	433745560852	150
4290610000	4290610469	4290610884	429124422409	429079031164	150
4290610000	4290610469	4290610884	429124422409	429079031164	150
4284510000	4284510906	4284510735	428500342797	428503491162	150
4284510000	4284510906	4284510735	428500342797	428503491162	150
4342510000	4342510942	4342510319	434358714453	434475372730	150
4342510000	4342510942	4342510319	434358714453	434475372730	150
4302610000	4302610950	4302610978	430709275643	430803974017	150
4302610000	4302610950	4302610978	430709275643	430803974017	150
4272510000	4272510096	4272510613	427508947023	427900515469	150
4272510000	4272510096	4272510613	427508947023	427900515469	150
4242510000	4242510923	4242510309	424129881004	424623319764	150
4242510000	4242510923	4242510309	424129881004	424623319764	150
4258510000	4258510636	4258510498	425536530952	425972413642	150
4258510000	4258510636	4258510498	425536530952	425972413642	150
4445510000	4445510722	4445510374	444501263719	444046510287	150
4445510000	4445510722	4445510374	444501263719	444046510287	150
4267410000	4267410507	4267410547	426037014675	426206857143	150
4267410000	4267410507	4267410547	426037014675	426206857143	150
4239410000	4239410623	4239410230	423142415403	423854220087	150
4239410000	4239410623	4239410230	423142415403	423854220087	150
4268410000	4268410610	4268410536	426207973681	426905558798	150
4268410000	4268410610	4268410536	426207973681	426905558798	150
4225510000	4225510317	4225510143	422963459078	422951856730	150
4225510000	4225510317	4225510143	422963459078	422951856730	150
4246510000	4246510881	4246510399	424353258211	424672132161	150
4246510000	4246510881	4246510399	424353258211	424672132161	150
4237410000	4237410208	4237410255	423290498456	423568089072	150
4237410000	4237410208	4237410255	423290498456	423568089072	150
4417510000	4417510828	4417510124	441336168410	441997239702	150
4417510000	4417510828	4417510124	441336168410	441997239702	150
4427410000	4427410034	4427410175	442150933928	442902362523	150
4427410000	4427410034	4427410175	442150933928	442902362523	150
4407510000	4407510655	4407510023	440812301047	440773883153	150
4407510000	4407510655	4407510023	440812301047	440773883153	150
4425500000	4425500862	4425500089	442370295349	442705198130	150
4425500000	4425500862	4425500089	442370295349	442705198130	150
4425510000	4425510349	4425510164	442941440796	442906832114	150
4425510000	4425510349	4425510164	442941440796	442906832114	150
4409510000	4409510239	4409510015	440279127470	440915876843	150
4409510000	4409510239	4409510015	440279127470	440915876843	150
4346500000	4346500913	4346500293	434573398603	434501355054	150
4346500000	4346500913	4346500293	434573398603	434501355054	150
4401610000	4401610598	4401610003	440206256626	440914474261	150
4401610000	4401610598	4401610003	440206256626	440914474261	150
4361610000	4361610171	4361610580	436640457804	436994927175	150
4361610000	4361610171	4361610580	436640457804	436994927175	150

4393510000	4393510906	4393510830	439917507405	439119884283	150
4393510000	4393510906	4393510830	439917507405	439119884283	150
4380610000	4380610313	4380610794	438054626528	438410931703	150
4380610000	4380610313	4380610794	438054626528	438410931703	150
4374510000	4374510885	4374510644	437206517804	437625306794	150
4374510000	4374510885	4374510644	437206517804	437625306794	150
4404510000	4404510092	4404510941	440738347186	440098075703	150
4404510000	4404510092	4404510941	440738347186	440098075703	150
4564510000	4564510747	4564510565	456167465600	456299298057	150
4564510000	4564510747	4564510565	456167465600	456299298057	150
4571610000	4571610909	4571610699	457742607873	457830548220	150
4571610000	4571610909	4571610699	457742607873	457830548220	150
4551510000	4551510068	4551510433	455659690600	455114864693	150
4551510000	4551510068	4551510433	455659690600	455114864693	150
4590510000	4590510186	4590510839	459662853983	459588187059	150
4590510000	4590510186	4590510839	459662853983	459588187059	150
4587410000	4587410743	4587410775	458633194835	458510602805	150
4587410000	4587410743	4587410775	458633194835	458510602805	150
4557510000	4557510154	4557510535	455663287950	455390430336	150
4557510000	4557510154	4557510535	455663287950	455390430336	150
4506410000	4506410345	4506410981	450371538151	450518161684	150
4506410000	4506410345	4506410981	450371538151	450518161684	150
4477410000	4477410557	4477410666	447643645224	447321934214	150
4477410000	4477410557	4477410666	447643645224	447321934214	150
4511510000	4511510637	4511510040	451865080199	451729507469	150
4511510000	4511510637	4511510040	451865080199	451729507469	150
4531610000	4531610163	4531610303	453842492331	453187760451	150
4531610000	4531610163	4531610303	453842492331	453187760451	150
4483510000	4483510827	4483510738	448051470730	448206439911	150
4483510000	4483510827	4483510738	448051470730	448206439911	150
4711610000	4711610750	4711610129	471202098576	471518288823	150
4711610000	4711610750	4711610129	471202098576	471518288823	150
4682510000	4682510420	4682510749	468516879808	468843470097	150
4682510000	4682510420	4682510749	468516879808	468843470097	150
4716500000	4716500646	4716500033	471404767258	471190286505	150
4716500000	4716500646	4716500033	471404767258	471190286505	150
4601510000	4601510449	4601510950	460818589928	460788877321	150
4601510000	4601510449	4601510950	460818589928	460788877321	150
4616510000	4616510550	4616510134	461804145270	461622870535	150
4616510000	4616510550	4616510134	461804145270	461622870535	150
4601610000	4601610634	4601610023	460899369331	460662641923	150
4601610000	4601610634	4601610023	460899369331	460662641923	150
4633510000	4633510245	4633510259	463344457764	463627806389	150
4633510000	4633510245	4633510259	463344457764	463627806389	150
4621610000	4621610912	4621610217	462820541632	462047059398	150
4621610000	4621610912	4621610217	462820541632	462047059398	150
4602610000	4602610008	4602610008	460117426888	460319397689	150

4602610000	4602610008	4602610008	460117426888	460319397689	150
4623510000	4623510066	4623510158	462766540837	462894872978	150
4623510000	4623510066	4623510158	462766540837	462894872978	150
4792510000	4792510719	4792510861	479712044903	479511892711	150
4792510000	4792510719	4792510861	479712044903	479511892711	150
4801510000	4801510493	4801510970	480585576965	480799834358	150
4801510000	4801510493	4801510970	480585576965	480799834358	150
4822510000	4822510830	4822510168	482314007166	482823349490	150
4822510000	4822510830	4822510168	482314007166	482823349490	150
4825510000	4825510415	4825510207	482583638670	482555792343	150
4825510000	4825510415	4825510207	482583638670	482555792343	150
4798510000	4798510121	4798510945	479235661505	479583736593	150
4798510000	4798510121	4798510945	479235661505	479583736593	150
4823500000	4823500204	4823500158	482595286918	482081229605	150
4823500000	4823500204	4823500158	482595286918	482081229605	150
4747510000	4747510155	4747510456	474841033754	474499981271	150
4747510000	4747510155	4747510456	474841033754	474499981271	150
4724510000	4724510328	4724510175	472495298703	472897869767	150
4724510000	4724510328	4724510175	472495298703	472897869767	150
4741510000	4741510813	4741510354	474659183196	474654999232	150
4741510000	4741510813	4741510354	474659183196	474654999232	150
4777510000	4777510394	4777510752	477747641218	477591323237	150
4777510000	4777510394	4777510752	477747641218	477591323237	150
4719410000	4719410464	4719410081	471853529913	471511217594	150
4719410000	4719410464	4719410081	471853529913	471511217594	150
4719510000	4719510403	4719510148	471374831353	471399123171	150
4719510000	4719510403	4719510148	471374831353	471399123171	150
4759410000	4759410962	4759410478	475370769064	475881148063	150
4759410000	4759410962	4759410478	475370769064	475881148063	150
4778510000	4778510892	4778510744	477047374904	477413921864	150
4778510000	4778510892	4778510744	477047374904	477413921864	150
4733510000	4733510262	3733510268	473916598540	473784455347	150
4733510000	4733510262	3733510268	473916598540	473784455347	150
4737510000	4737510993	4737510357	473296552330	473585408465	150
4737510000	4737510993	4737510357	473296552330	473585408465	150
4776510000	4776510346	4776510751	477112773809	477381761540	150
4776510000	4776510346	4776510751	477112773809	477381761540	150
4948510000	4948510584	4948510468	494398067893	494947560806	150
4948510000	4948510584	4948510468	494398067893	494947560806	150
4952510000	4952510428	4952510481	495692094292	495465310675	150
4952510000	4952510428	4952510481	495692094292	495465310675	150
4938510000	4938510416	4938510366	493868934460	493551963200	150
4938510000	4938510416	4938510366	493868934460	493551963200	150
4957410000	4957410457	4957410517	495949420156	495775735294	150
4957410000	4957410457	4957410517	495949420156	495775735294	150
4863510000	4863510593	4863510576	486800829636	486944156710	150
4863510000	4863510593	4863510576	486800829636	486944156710	150

4865510000	4865510946	4865510637	486186057881	486133353185	150
4865510000	4865510946	4865510637	486186057881	486133353185	150
4870610000	4870610304	4870610744	487134080279	487550832491	150
4870610000	4870610304	4870610744	487134080279	487550832491	150
4859410000	4859410982	4859410488	485918436267	485750548507	150
4859410000	4859410982	4859410488	485918436267	485750548507	150
4885500000	4885500286	4885500733	488728857466	488457316429	150
4885500000	4885500286	4885500733	488728857466	488457316429	150
4866410000	4866410320	4866410613	486562085943	486625287512	150
4866410000	4866410320	4866410613	486562085943	486625287512	150
4857410000	4857410438	4857410507	485856352900	485114401118	150
4857410000	4857410438	4857410507	485856352900	485114401118	150
4857510000	4857510208	4857510565	485999418950	485779959024	150
4857510000	4857510208	4857510565	485999418950	485779959024	150
4870510000	4870510369	4870510673	487464675376	487477429976	150
4870510000	4870510369	4870510673	487464675376	487477429976	150
5029410000	5029410519	5029410112	502839288124	502373510967	150
5029410000	5029410519	5029410112	502839288124	502373510967	150
5085510000	5085510096	5085510770	508292646610	508504822847	150
5085510000	5085510096	5085510770	508292646610	508504822847	150
5039410000	5039410590	5039410211	503728348778	503946052395	150
5039410000	5039410590	5039410211	503728348778	503946052395	150
5024510000	5024510294	5024510106	502558765621	502448942568	150
5024510000	5024510294	5024510106	502558765621	502448942568	150
5068510000	5068510694	5068510578	506244630141	506961400592	150
5068510000	5068510694	5068510578	506244630141	506961400592	150
5043510000	5043510225	5043510299	504944836807	504604000952	150
5043510000	5043510225	5043510299	504944836807	504604000952	150
4986510000	4986510490	4986510872	498493357271	498355108448	150
4986510000	4986510490	4986510872	498493357271	498355108448	150
4980510000	4980510071	4980510781	498988192457	498345991064	150
4980510000	4980510071	4980510781	498988192457	498345991064	150
5009410000	5009410211	5009410914	500560360342	500471970693	150
5009410000	5009410211	5009410914	500560360342	500471970693	150
4962510000	4962510618	4962510583	496272076748	496890996148	150
4962510000	4962510618	4962510583	496272076748	496890996148	150
5019410000	5019410342	5019410013	501674936952	501175271678	150
5019410000	5019410342	5019410013	501674936952	501175271678	150
4988510000	4988510068	4988510865	498166279718	498045666733	150
4988510000	4988510068	4988510865	498166279718	498045666733	150
4992510000	4992510753	4992510881	499185630996	499472324560	150
4992510000	4992510753	4992510881	499185630996	499472324560	150
4995500000	4995500452	4995500853	499777323913	499123058114	150
4995500000	4995500452	4995500853	499777323913	499123058114	150
5173510000	5173510652	5173510608	517257834065	517069824038	150
5173510000	5173510652	5173510608	517257834065	517069824038	150
5194510000	5194510057	5194510827	519327056982	519396454786	150

5194510000	5194510057	5194510827	519327056982	519396454786	150
5184510000	5184510890	5184510726	518772256535	518832389457	150
5184510000	5184510890	5184510726	518772256535	518832389457	150
5207510000	5207510622	5207510004	520694059712	520447151504	150
5207510000	5207510622	5207510004	520694059712	520447151504	150
5157410000	5157410482	5157410438	515384164584	515136657233	150
5157410000	5157410482	5157410438	515384164584	515136657233	150
5157510000	5157510230	5157510496	515523917532	515942883178	150
5157510000	5157510230	5157510496	515523917532	515942883178	150
5196410000	5196410536	5196410845	519056717499	519745261162	150
5196410000	5196410536	5196410845	519056717499	519745261162	150
5094510000	5094510039	5094510817	509501153743	509558020876	150
5094510000	5094510039	5094510817	509501153743	509558020876	150
5097510000	5097510808	5097510882	509696386805	509952512195	150
5097510000	5097510808	5097510882	509696386805	509952512195	150
5089510000	5089510142	5089510773	508312985722	508454581215	150
5089510000	5089510142	5089510773	508312985722	508454581215	150
5106510000	5106510375	5106510985	510480726290	510717666231	150
5106510000	5106510375	5106510985	510480726290	510717666231	150
5135500000	5135500796	5135500159	513133010525	513908609880	150
5135500000	5135500796	5135500159	513133010525	513908609880	150
5138510000	5138510344	5138510288	513092388085	513935126706	150
5138510000	5138510344	5138510288	513092388085	513935126706	150
5104510000	5104510049	5104510910	510198888312	510716174080	150
5104510000	5104510049	5104510910	510198888312	510716174080	150
5136510000	5136510813	5136510290	513348902897	513153489168	150
5136510000	5136510813	5136510290	513348902897	513153489168	150
5298410000	5298410080	5298410835	529709037844	529223242897	150
5298410000	5298410080	5298410835	529709037844	529223242897	150
5278410000	5278410789	5278410635	527986965530	527758886362	150
5278410000	5278410789	5278410635	527986965530	527758886362	150
5309510000	5309510225	5309510006	530372464872	530267082101	150
5309510000	5309510225	5309510006	530372464872	530267082101	150
5326410000	5326410627	5326410162	532083029842	532265134861	150
5326410000	5326410627	5326410162	532083029842	532265134861	150
5326500000	5326500681	5326500094	532463170660	532841294235	150
5326500000	5326500681	5326500094	532463170660	532841294235	150
5296410000	5296410551	5296410855	529311779263	529651259747	150
5296410000	5296410551	5296410855	529311779263	529651259747	150
5303510000	5303510824	5303510927	530317785820	530084388209	150
5303510000	5303510824	5303510927	530317785820	530084388209	150
5321610000	5321610862	5321610190	532267528663	532703629031	150
5321610000	5321610862	5321610190	532267528663	532703629031	150
5289510000	5289510172	5289510793	528413865744	528905837860	150
5289510000	5289510172	5289510793	528413865744	528905837860	150
5226500000	5226500665	5226500084	522310091575	522986697044	150
5226500000	5226500665	5226500084	522310091575	522986697044	150

5229410000	5229410556	5229410132	522119938936	522391710742	150
5229410000	5229410556	5229410132	522119938936	522391710742	150
5262510000	5262510484	5262510512	526449252544	526341469630	150
5262510000	5262510484	5262510512	526449252544	526341469630	150
5231510000	5231510082	5231510209	523033710337	523435292288	150
5231510000	5231510082	5231510209	523033710337	523435292288	150
5264510000	5264510700	5264510536	526470783300	526025684243	150
5264510000	5264510700	5264510536	526470783300	526025684243	150
5237510000	5237510030	5237510303	523528364515	523428096956	150
5237510000	5237510030	5237510303	523528364515	523428096956	150
5225500000	5225500830	5225500070	522993830801	522304858126	150
5225500000	5225500830	5225500070	522993830801	522304858126	150
5238410000	5238410184	5238410243	523170742355	523890246772	150
5238410000	5238410184	5238410243	523170742355	523890246772	150
5421510000	5421510919	5421510131	542153568652	542494478752	150
5421510000	5421510919	5421510131	542153568652	542494478752	150
5456510000	5456510026	5456510516	545666559058	545593272340	150
5456510000	5456510026	5456510516	545666559058	545593272340	150
5416410000	5416410489	5416410073	541504322356	541603931230	150
5416410000	5416410489	5416410073	541504322356	541603931230	150
5429510000	5429510454	5429510218	542344046714	542039170759	150
5429510000	5429510454	5429510218	542344046714	542039170759	150
5365510000	5365510859	5365510583	536083636182	536285270333	150
5365510000	5365510859	5365510583	536083636182	536285270333	150
5385500000	5385500209	5385500681	538157704070	538917114409	150
5385500000	5385500209	5385500681	538157704070	538917114409	150
5385510000	5385510147	5385510804	538218429448	538875841321	150
5385510000	5385510147	5385510804	538218429448	538875841321	150
5360510000	5360510116	5360510527	536804861863	536809329074	150
5360510000	5360510116	5360510527	536804861863	536809329074	150
5548510000	5548510520	5548510428	554813035795	554076358157	150
5548510000	5548510520	5548510428	554813035795	554076358157	150
5554510000	5554510700	5554510466	555381608036	555931607647	150
5554510000	5554510700	5554510466	555381608036	555931607647	150
5527510000	5527510913	5527510233	552540835701	552675800945	150
5527510000	5527510913	5527510233	552540835701	552675800945	150
5558410000	5558410559	5558410470	555898318956	555663466179	150
5558410000	5558410559	5558410470	555898318956	555663466179	150
5580510000	5580510991	5580510742	558806145724	558457895092	150
5580510000	5580510991	5580510742	558806145724	558457895092	150
5540510000	5540510955	5540510347	554877520040	554343710599	150
5556510000	5556510045	5556510526	555562807060	555507490305	150
5556510000	5556510045	5556510526	555562807060	555507490305	150
5525510000	5525510368	5525510176	552082687576	552594103781	150
5525510000	5525510368	5525510176	552082687576	552594103781	150
5535510000	5535510563	5535510278	553294467056	553863388961	150
5535510000	5535510563	5535510278	553294467056	553863388961	150

5466500000	5466500169	5466500504	546260744290	546746722060	150
5466500000	5466500169	5466500504	546260744290	546746722060	150
5498410000	5498410117	5498410855	549355499354	549606550900	150
5498410000	5498410117	5498410855	549355499354	549606550900	150
5501510000	5501510432	5501510941	550115418715	550451046471	150
5501510000	5501510432	5501510941	550115418715	550451046471	150
5501610000	5501610616	5501610014	550972962659	550394191790	150
5501610000	5501610616	5501610014	550972962659	550394191790	150
5696410000	5696410605	5696410895	569040799396	569927695727	150
5696410000	5696410605	5696410895	569040799396	569927695727	150
5699410000	5699410337	5699410863	569471779984	569055115328	150
5699410000	5699410337	5699410863	569471779984	569055115328	150
5701510000	5701510473	5701510961	570533358489	570162649620	150
5701510000	5701510473	5701510961	570533358489	570162649620	150
5666510000	5666510161	5666510639	566291392705	566641166957	150
5666510000	5666510161	5666510639	566291392705	566641166957	150
5652510000	5652510373	5652510452	565440819061	565969178813	150
5652510000	5652510373	5652510452	565440819061	565969178813	150
5585500000	5585500241	5585500700	558228092793	558807184859	150
5588410000	5588410996	5588410764	558773409750	558944739887	150
5588410000	5588410996	5588410764	558773409750	558944739887	150
5642510000	5642510999	5642510351	564818582583	564441368686	150
5642510000	5642510999	5642510351	564818582583	564441368686	150
5626410000	5626410679	5626410192	562897843758	562223109316	150
5626410000	5626410679	5626410192	562897843758	562223109316	150
5811610000	5811610770	5811610140	581432966232	581444151512	150
5811610000	5811610770	5811610140	581432966232	581444151512	150
5784510000	5784510994	5784510786	578951068643	578089234627	150
5784510000	5784510994	5784510786	578951068643	578089234627	150
5809510000	5809510252	5809510057	580796793194	580713704261	150
5809510000	5809510252	5809510057	580796793194	580713704261	150
5816510000	5816510585	5816510158	581906352809	581021463019	150
5816510000	5816510585	5816510158	581906352809	581021463019	150
5782510000	5782510441	5782510760	578145627395	578495506577	150
5782510000	5782510441	5782510760	578145627395	578495506577	150
5775510000	5775510114	5775510737	577119622636	577388089715	150
5775510000	5775510114	5775510737	577119622636	577388089715	150
5746510000	5746510975	5746510447	574723506310	574830821589	150
5746510000	5746510975	5746510447	574723506310	574830821589	150
5731510000	5731510613	5731510259	573102019423	573346340840	150
5731510000	5731510613	5731510259	573102019423	573346340840	150
5741610000	5741610381	5741610422	574496620313	574007278980	150
5741610000	5741610381	5741610422	574496620313	574007278980	150
5721510000	5721510977	5721510161	572849560877	572373348597	150
5721510000	5721510977	5721510161	572849560877	572373348597	150
5719510000	5719510405	5719510149	571989101640	571239221765	150
5719510000	5719510405	5719510149	571989101640	571239221765	150

5725510000	5725510400	5725510197	572899202942	572733738207	150
5725510000	5725510400	5725510197	572899202942	572733738207	150
5726500000	5726500741	5726500134	572431312825	572093152768	150
5726500000	5726500741	5726500134	572431312825	572093152768	150
5933510000	5933510301	5933510289	593092867105	593772094294	150
5933510000	5933510301	5933510289	593092867105	593772094294	150
5925510000	5925510462	5925510218	592840301083	592100809468	150
5925510000	5925510462	5925510218	592840301083	592100809468	150
5901510000	5901510517	5901510981	590825655505	590132973145	150
5901510000	5901510517	5901510981	590825655505	590132973145	150
5936510000	5936510828	5936510371	593189674526	593271821201	150
5936510000	5936510828	5936510371	593189674526	593271821201	150
5879510000	5879510106	5879510753	587494961279	587573897924	150
5879510000	5879510106	5879510753	587494961279	587573897924	150
5829510000	5829510525	5829510259	582699795472	582376182995	150
5829510000	5829510525	5829510259	582699795472	582376182995	150
5835500000	5835500908	5835500228	583750995931	583153799671	150
5835500000	5835500908	5835500228	583750995931	583153799671	150
5869410000	5869410034	5869410589	586543881432	586935354699	150
5869410000	5869410034	5869410589	586543881432	586935354699	150
5844510000	5844510589	5844510393	584963682473	584289696588	150
5844510000	5844510589	5844510393	584963682473	584289696588	150
5839410000	5839410736	5839410291	583458718173	583871737939	150
5839410000	5839410736	5839410291	583458718173	583871737939	150
5877410000	5877410625	5877410706	587208622070	587018832435	150
5877410000	5877410625	5877410706	587208622070	587018832435	150
5859510000	5859510971	5859510555	585667073185	585518642834	150
5859510000	5859510971	5859510555	585667073185	585518642834	150
6040510000	6040510863	6040510298	604325320480	604539983944	150
6040510000	6040510863	6040510298	604325320480	604539983944	150
6057410000	6057410468	6057410429	605698314859	605945706553	150
6057410000	6057410468	6057410429	605698314859	605945706553	150
6049510000	6049510737	6049510377	604910792108	604407016802	150
6049510000	6049510737	6049510377	604910792108	604407016802	150
6037410000	6037410168	6037410238	603859512037	603419692047	150
6037410000	6037410168	6037410238	603859512037	603419692047	150
6067410000	6067410477	6067410529	606391930452	606660930077	150
6067410000	6067410477	6067410529	606391930452	606660930077	150
6026410000	6026410578	6026410133	602430226170	602480592009	150
6026410000	6026410578	6026410133	602430226170	602480592009	150
6015510000	6015510246	6015510021	601409681977	601236065811	150
6015510000	6015510246	6015510021	601409681977	601236065811	150
6019410000	6019410344	6019410014	601327321400	601797330223	150
6019410000	6019410344	6019410014	601327321400	601797330223	150
5957510000	5957510226	5957510576	595257062647	595808388579	150
5957510000	5957510226	5957510576	595257062647	595808388579	150
5979510000	5979510124	5979510764	597336049523	597599143198	150

5979510000	5979510124	5979510764	597336049523	597599143198	150
5985500000	5985500301	5985500746	598215579152	598713075923	150
5985500000	5985500301	5985500746	598215579152	598713075923	150
5951610000	5951610103	5951610541	595374823666	595280528123	150
5951610000	5951610103	5951610541	595374823666	595280528123	150
5977410000	5977410641	5977410716	597062516039	597241043048	150
5977410000	5977410641	5977410716	597062516039	597241043048	150
5981610000	5981610172	5981610840	598065621742	598957993549	150
5981610000	5981610172	5981610840	598065621742	598957993549	150
5988410000	5988410069	5988410805	598678847542	598068671215	150
5988410000	5988410069	5988410805	598678847542	598068671215	150
6160510000	6160510081	6160510508	616117173735	616162741344	150
6160510000	6160510081	6160510508	616117173735	616162741344	150
6145500000	6145500959	6145500258	614044031203	614764803012	150
6145500000	6145500959	6145500258	614044031203	614764803012	150
6148410000	6148410297	6148410334	614562407244	614912380059	150
6148410000	6148410297	6148410334	614562407244	614912380059	150
6138410000	6138410168	6138410234	613977149584	613166750680	150
6138410000	6138410168	6138410234	613977149584	613166750680	150
6147410000	6147410307	6147410341	614645528162	614363924913	150
6147410000	6147410307	6147410341	614645528162	614363924913	150
6096410000	6096410522	6096410836	609473361351	609991476895	150
6096410000	6096410522	6096410836	609473361351	609991476895	150
6086500000	6086500359	6086500664	608710250753	608612073601	150
6086500000	6086500359	6086500664	608710250753	608612073601	150
6109410000	6109410230	6109410925	610898966345	610331504313	150
6109410000	6109410230	6109410925	610898966345	610331504313	150
6314510000	6314510181	6314510036	631287172825	631391191111	150
6314510000	6314510181	6314510036	631287172825	631391191111	150
6311510000	6311510601	6311510022	631010653978	631451174377	150
6311510000	6311510601	6311510022	631010653978	631451174377	150
6281510000	6281510445	6281510706	628978595398	628809404985	150
6281510000	6281510445	6281510706	628978595398	628809404985	150
6281610000	6281610052	6281610771	628792159217	628532309870	150
6281610000	6281610052	6281610771	628792159217	628532309870	150
6319510000	6319510338	6319510109	631221977082	631706344584	150
6319510000	6319510338	6319510109	631221977082	631706344584	150
6279410000	6279410106	6279410630	627997268343	627883385708	150
6279410000	6279410106	6279410630	627997268343	627883385708	150
6266500000	6266500140	6266500485	626565983582	626411750489	150
6266500000	6266500140	6266500485	626565983582	626411750489	150
6266510000	6266510164	6266510600	626940461534	626126082067	150
6266510000	6266510164	6266510600	626940461534	626126082067	150
6240510000	6240510898	6240510318	624654118274	624428118748	150
6240510000	6240510898	6240510318	624654118274	624428118748	150
6229510000	6229510497	6229510200	622171169858	622821028980	150
6229510000	6229510497	6229510200	622171169858	622821028980	150

6235500000	6235500815	6235500170	623757587755	623485844948	150
6235500000	6235500815	6235500170	623757587755	623485844948	150
6200510000	6200510448	6200510923	620987865681	620609326150	150
6200510000	6200510448	6200510923	620987865681	620609326150	150
6214510000	6214510163	6214510026	621803400030	621970966216	150
6214510000	6214510163	6214510026	621803400030	621970966216	150
6259410000	6259410872	6259410431	625140267518	625208919079	150
6259410000	6259410872	6259410431	625140267518	625208919079	150
6247510000	6247510080	6247510408	624180084912	624344475421	150
6260610000	6260610054	6260610585	626962411792	626079057354	150
6260610000	6260610054	6260610585	626962411792	626079057354	150
6212510000	6212510533	6212510008	621897888901	621228821916	150
6212510000	6212510533	6212510008	621897888901	621228821916	150
6417410000	6417410803	6417410078	641129693696	641561737922	150
6417410000	6417410803	6417410078	641129693696	641561737922	150
6395500000	6395500366	6395500793	639381766851	639113319453	150
6395500000	6395500366	6395500793	639381766851	639113319453	150
6388510000	6388510983	6388510807	638931853647	638210250816	150
6388510000	6388510983	6388510807	638931853647	638210250816	150
6403510000	6403510844	6403510938	640864200765	640907256001	150
6403510000	6403510844	6403510938	640864200765	640907256001	150
6419410000	6419410418	6419410053	641851799418	641179977236	150
6419410000	6419410418	6419410053	641851799418	641179977236	150
6392510000	6392510648	6392510822	639586432018	639757744407	150
6392510000	6392510648	6392510822	639586432018	639757744407	150
6345510000	6345510709	6345510365	634886640338	634886998857	150
6345510000	6345510709	6345510365	634886640338	634886998857	150
6362510000	6362510505	6362510523	636702647182	636685192346	150
6362510000	6362510505	6362510523	636702647182	636685192346	150
6337410000	6337410232	6337410266	633964979508	633841464349	150
6337410000	6337410232	6337410266	633964979508	633841464349	150
6369510000	6369510960	6369510605	636999069123	636273034347	150
6369510000	6369510960	6369510605	636999069123	636273034347	150
6349410000	6349410836	6349410341	634334925640	634840590414	150
6349410000	6349410836	6349410341	634334925640	634840590414	150
6366500000	6366500153	6366500495	636235945821	636001042644	150
6366500000	6366500153	6366500495	636235945821	636001042644	150
6359510000	6359510895	6359510507	635797304252	635981539266	150
6359510000	6359510895	6359510507	635797304252	635981539266	150
6350510000	6350510923	6350510427	635889721933	635182390289	150
6350510000	6350510923	6350510427	635889721933	635182390289	150
6386510000	6386510382	6386510814	638450708394	638467957617	150
6386510000	6386510382	6386510814	638450708394	638467957617	150
6344510000	6344510503	6344510343	634728260499	634906554352	150
6344510000	6344510503	6344510343	634728260499	634906554352	150
6367410000	6367410526	6367410560	636548839407	636825444959	150
6367410000	6367410526	6367410560	636548839407	636825444959	150

6374510000	6374510889	6374510646	637673745131	637783517693	150
6374510000	6374510889	6374510646	637673745131	637783517693	150
6553510000	6553510495	6553510449	655313274851	655601832619	150
6553510000	6553510495	6553510449	655313274851	655601832619	150
6527410000	6527410054	6527410187	652137009557	652871884409	150
6527410000	6527410054	6527410187	652137009557	652871884409	150
6545500000	6545500027	6545500298	654953175969	654479097758	150
6545500000	6545500027	6545500298	654953175969	654479097758	150
6525500000	6525500881	6525500101	652965607176	652090218123	150
6525500000	6525500881	6525500101	652965607176	652090218123	150
6565510000	6565510897	6565510607	656176272656	656570437191	150
6565510000	6565510897	6565510607	656176272656	656570437191	150
6509510000	6509510261	6509510028	650541411621	650695219939	150
6509510000	6509510261	6509510028	650541411621	650695219939	150
6462510000	6462510525	6462510533	646123414375	646596857341	150
6462510000	6462510525	6462510533	646123414375	646596857341	150
6451610000	6451610016	6451610492	645792340815	645030509111	150
6451610000	6451610016	6451610492	645792340815	645030509111	150
6467410000	6467410544	6467410570	646178668802	646528009085	150
6467410000	6467410544	6467410570	646178668802	646528009085	150
6485500000	6485500227	5485500691	648771434222	648249919857	150
6485500000	6485500227	5485500691	648771434222	648249919857	150
6489410000	6489410158	6489410748	648914007132	648831086641	150
6489410000	6489410158	6489410748	648914007132	648831086641	150
6457510000	6457510141	6457510527	645976181921	645900302269	150
6457510000	6457510141	6457510527	645976181921	645900302269	150
6502510000	6502510404	6502510938	650592046489	650109364656	150
6502510000	6502510404	6502510938	650592046489	650109364656	150
6474510000	6474510907	6474510656	647735952938	647435242499	150
6474510000	6474510907	6474510656	647735952938	647435242499	150
6661610000	6661610753	6661610612	666414528454	666104695012	150
6661610000	6661610753	6661610612	666414528454	666104695012	150
6649410000	6649410764	6649410371	664554656856	664058964669	150
6649410000	6649410764	6649410371	664554656856	664058964669	150
6681610000	6681610124	6681610811	668104926803	668372471223	150
6681610000	6681610124	6681610811	668104926803	668372471223	150
6647410000	6647410397	6647410388	664059663126	664927602723	150
6647410000	6647410397	6647410388	664059663126	664927602723	150
6653510000	6653510512	6653510459	665033651417	665797476298	150
6653510000	6653510512	6653510459	665033651417	665797476298	150
6572510000	6572510153	6572510644	657932072097	657174479828	150
6572510000	6572510153	6572510644	657932072097	657174479828	150
6583510000	6583510847	6583510750	658000679652	658925219086	150
6583510000	6583510847	6583510750	658000679652	658925219086	150
6586510000	6586510422	6586510834	658363534069	658246345065	150
6586510000	6586510422	6586510834	658363534069	658246345065	150
6618510000	6618510157	6618510141	661061929602	661347538374	150

6618510000	6618510157	6618510141	661061929602	661347538374	150
6764510000	6764510789	6764510588	676545372215	676849994122	150
6764510000	6764510789	6764510588	676545372215	676849994122	150
6790610000	6790610480	6790610935	679613826677	679401861579	150
6790610000	6790610480	6790610935	679613826677	679401861579	150
6797410000	6797410772	6797410896	679543480036	679281655326	150
6797410000	6797410772	6797410896	679543480036	679281655326	150
6798410000	6798410169	6798410885	679485648405	679359041421	150
6798410000	6798410169	6798410885	679485648405	679359041421	150
6768510000	6768510818	6768510648	676255822408	676766015758	150
6768510000	6768510818	6768510648	676255822408	676766015758	150
6755510000	6755510843	6755510516	675912052414	675083827479	150
6739410000	6739410719	6739410282	673565630969	673043316221	150
6739410000	6739410719	6739410282	673565630969	673043316221	150
6717410000	6717410851	6717410107	671240011909	671182507514	150
6717410000	6717410851	6717410107	671240011909	671182507514	150
6691510000	6691510725	6691510846	669155712442	669044363662	150
6691510000	6691510725	6691510846	669155712442	669044363662	150
6721610000	6721610932	6721610229	672476396552	672928417004	150
6721610000	6721610932	6721610229	672476396552	672928417004	150
6715510000	6715510233	6715510095	671754856993	671473139453	150
6715510000	6715510233	6715510095	671754856993	671473139453	150
6694510000	6694510013	6694510878	669833362623	669039883068	150
6694510000	6694510013	6694510878	669833362623	669039883068	150
6751510000	6751510110	6751510456	675886019133	675746712954	150
6751510000	6751510110	6751510456	675886019133	675746712954	150
6751610000	6751610068	6751610522	675396083591	675887372906	150
6751610000	6751610068	6751610522	675396083591	675887372906	150
6695500000	6695500412	6695500823	669473068338	669382199163	150
6695500000	6695500412	6695500823	669473068338	669382199163	150
6921510000	6921510025	6921510182	692088040572	692400999698	150
6921510000	6921510025	6921510182	692088040572	692400999698	150
6892510000	6892510738	6892510873	689258187037	689996786459	150
6892510000	6892510738	6892510873	689258187037	689996786459	150
6925500000	6925500950	6925500141	692507629869	692459053704	150
6925500000	6925500950	6925500141	692507629869	692459053704	150
6899510000	6899510329	6899510952	689277895789	689163452513	150
6899510000	6899510329	6899510952	689277895789	689163452513	150
6878410000	6878410874	6878410695	687012604287	687204236061	150
6878410000	6878410874	6878410695	687012604287	687204236061	150
6868410000	6868410724	6868410597	686827872278	686623830729	150
6868410000	6868410724	6868410597	686827872278	686623830729	150
6826410000	6826410714	6826410213	682496779323	682964978245	150
6826410000	6826410714	6826410213	682496779323	682964978245	150
6841610000	6841610910	6841610433	684447552337	684544767436	150
6841610000	6841610910	6841610433	684447552337	684544767436	150
6860510000	6860510174	6860510576	686658034747	686178683362	150

6860510000	6860510174	6860510576	686658034747	686178683362	150
6827510000	6827510967	6827510264	682196317234	682096750482	150
6827510000	6827510967	6827510264	682196317234	682096750482	150
6861510000	6861510167	6861510566	686449396501	686635386837	150
6861510000	6861510167	6861510566	686449396501	686635386837	150
6828510000	6828510293	6828510259	682634187127	682874424872	150
6828510000	6828510293	6828510259	682634187127	682874424872	150
6850610000	6850610011	6850610547	685344200880	685745870435	150
6850610000	6850610011	6850610547	685344200880	685745870435	150
6840510000	6840510832	6840510377	684773478980	684051070762	150
6840510000	6840510832	6840510377	684773478980	684051070762	150
6857410000	6857410441	6857410509	685404229316	685854805654	150
6857410000	6857410441	6857410509	685404229316	685854805654	150
6816410000	6816410543	6816410113	681600889503	681479492270	150
6816410000	6816410543	6816410113	681600889503	681479492270	150
7023510000	7023510061	7023510101	702068853800	702980581422	150
7023510000	7023510061	7023510101	702068853800	702980581422	150
7045510000	7045510655	7045510333	704349173488	704275251475	150
7045510000	7045510655	7045510333	704349173488	704275251475	150
7016500000	7016500540	7016500966	701397968694	701914988537	150
7016500000	7016500540	7016500966	701397968694	701914988537	150
7031610000	7031610992	7031610260	703410801702	703953637762	150
7031610000	7031610992	7031610260	703410801702	703953637762	150
7037510000	7037510004	7037510286	703328744516	703268540565	150
7037510000	7037510004	7037510286	703328744516	703268540565	150
7007410000	7007410671	7007410937	700168384366	700055899469	150
7007410000	7007410671	7007410937	700168384366	700055899469	150
6996510000	6996510672	6996510974	699681930945	699123706412	150
6996510000	6996510672	6996510974	699681930945	699123706412	150
7011510000	7011510540	7011510993	701916974006	701608371416	150
7011510000	7011510540	7011510993	701916974006	701608371416	150
6991610000	6991610879	6991610941	699739445917	699092499045	150
6991610000	6991610879	6991610941	699739445917	699092499045	150
6969410000	6969410057	6969410600	696118311723	696954409578	150
6969410000	6969410057	6969410600	696118311723	696954409578	150
6939410000	6939410759	6939410301	693800445637	693002704506	150
6939410000	6939410759	6939410301	693800445637	693002704506	150
6958410000	6958410560	6958410509	695013754905	695192996370	150
6958410000	6958410560	6958410509	695013754905	695192996370	150
6959410000	6959410004	6959410500	695979654712	695293496874	150
6959410000	6959410004	6959410500	695979654712	695293496874	150
6956500000	6956500091	6956500455	695810133494	695837357060	150
6956500000	6956500091	6956500455	695810133494	695837357060	150
6990610000	6990610516	6990610955	699707224384	699924066485	150
6990610000	6990610516	6990610955	699707224384	699924066485	150
6993510000	6993510014	6993510892	699388080678	699491495214	150
6993510000	6993510014	6993510892	699388080678	699491495214	150

6950610000	6950610027	6950610557	695280844653	695906978540	150
6950610000	6950610027	6950610557	695280844653	695906978540	150
7169510000	7169510932	7169510587	716883041065	716829886086	150
7169510000	7169510932	7169510587	716883041065	716829886086	150
7156510000	7156510979	7156510489	715360612613	715488395899	150
7156510000	7156510979	7156510489	715360612613	715488395899	150
7141510000	7141510695	7141510299	714757107270	714312584181	150
7141510000	7141510695	7141510299	714757107270	714312584181	150
7149510000	7149510695	7149510388	714471107645	714961990401	150
7149510000	7149510695	7149510388	714471107645	714961990401	150
7128410000	7128410057	7128410135	712845070000	712199135728	150
7128410000	7128410057	7128410135	712845070000	712199135728	150
7176410000	7176410292	7176410647	717804302196	717776055414	150
7176410000	7176410292	7176410647	717804302196	717776055414	150
7095500000	7095500320	7095500760	709075371517	709896942530	150
7095500000	7095500320	7095500760	709075371517	709896942530	150
7071610000	7071610824	7071610652	707386569946	707354254248	150
7071610000	7071610824	7071610652	707386569946	707354254248	150
7097410000	7097410666	7097410828	709845065162	709798540088	150
7097410000	7097410666	7097410828	709845065162	709798540088	150
7113510000	7113510890	7113510010	711657621748	711644589147	150
7113510000	7113510890	7113510010	711657621748	711644589147	150
7088510000	7088510939	7088510777	708521423565	708630324325	150
7088510000	7088510939	7088510777	708521423565	708630324325	150
7107510000	7107510609	7107510995	710111493494	710480829334	150
7107510000	7107510609	7107510995	710111493494	710480829334	150
7082510000	7082510251	7082510693	708660229908	708655265236	150
7082510000	7082510251	7082510693	708660229908	708655265236	150
7114510000	7114510149	7114510017	711584014017	711845452932	150
7114510000	7114510149	7114510017	711584014017	711845452932	150
7086410000	7086410440	7086410738	708810625424	708605284100	150
7086410000	7086410440	7086410738	708810625424	708605284100	150
7108410000	7108410840	7108410937	710578732095	710900685636	150
7108410000	7108410840	7108410937	710578732095	710900685636	150
7288510000	7288510971	7288510798	728010745743	728497402817	150
7288510000	7288510971	7288510798	728010745743	728497402817	150
7249410000	7249410818	7249410332	724736295445	724364258519	150
7249410000	7249410818	7249410332	724736295445	724364258519	150
7280510000	7280510937	7280510715	728448449402	728484545760	150
7280510000	7280510937	7280510715	728448449402	728484545760	150
7269410000	7269410926	7269410531	726240111268	726269425530	150
7269410000	7269410926	7269410531	726240111268	726269425530	150
7287410000	7287410694	7287410748	728204161524	728152686839	150
7287410000	7287410694	7287410748	728204161524	728152686839	150
7248510000	7248510475	7248510400	724245635593	724513654058	150
7248510000	7248510475	7248510400	724245635593	724513654058	150
7216510000	7216510572	7216510098	721841438976	721531515565	150

7216510000	7216510572	7216510098	721841438976	721531515565	150
7181610000	7181610017	7181610762	718500127305	718351981570	150
7181610000	7181610017	7181610762	718500127305	718351981570	150
7203510000	7203510811	7203510917	720861949123	720777892853	150
7203510000	7203510811	7203510917	720861949123	720777892853	150
7237410000	7237410212	7237410258	723482807954	723959647945	150
7237410000	7237410212	7237410258	723482807954	723959647945	150
7196510000	7196510530	7196510895	719289923371	719645520512	150
7196510000	7196510530	7196510895	719289923371	719645520512	150
7199510000	7199510315	7199510884	719970681709	719216274323	150
7199510000	7199510315	7199510884	719970681709	719216274323	150
7208510000	7208510019	7208510003	720574152161	720720055528	150
7208510000	7208510019	7208510003	720574152161	720720055528	150
7227510000	7227510864	7227510205	722035313414	722136959996	150
7227510000	7227510864	7227510205	722035313414	722136959996	150
7222510000	7222510725	7222510111	722401738354	722654967371	150
7222510000	7222510725	7222510111	722401738354	722654967371	150
7197410000	7197410683	7197410838	719534767968	719339435740	150
7197410000	7197410683	7197410838	719534767968	719339435740	150
7200610000	7200610389	7200610993	720027014685	720004825899	150
7200610000	7200610389	7200610993	720027014685	720004825899	150
7411610000	7411610702	7411610103	741938891347	741679679689	150
7411610000	7411610702	7411610103	741938891347	741679679689	150
7402610000	7402610976	7402610991	740164300274	740314306159	150
7402610000	7402610976	7402610991	740164300274	740314306159	150
7372510000	7372510122	7372510625	737197590480	737428978451	150
7372510000	7372510122	7372510625	737197590480	737428978451	150
7409410000	7409410288	7409410956	740992102073	740462742243	150
7409410000	7409410288	7409410956	740992102073	740462742243	150
7412510000	7412510570	7412510029	741217282336	741548421661	150
7412510000	7412510570	7412510029	741217282336	741548421661	150
7428410000	7428410053	7428410165	742713930044	742332825549	150
7428410000	7428410053	7428410165	742713930044	742332825549	150
7406510000	7406510433	7406510018	740795771290	740469609636	150
7406510000	7406510433	7406510018	740795771290	740469609636	150
7397410000	7397410713	7397410857	739482801383	739787571915	150
7397410000	7397410713	7397410857	739482801383	739787571915	150
7359410000	7359410891	7359410442	735697876645	735566939781	150
7359410000	7359410891	7359410442	735697876645	735566939781	150
7312510000	7312510553	7312510019	731640790509	731643180773	150
7312510000	7312510553	7312510019	731640790509	731643180773	150
7351610000	7351610003	7351610483	735828448176	735721218527	150
7351610000	7351610003	7351610483	735828448176	735721218527	150
7519410000	7519410437	7519410064	751670651660	751352237875	150
7519410000	7519410437	7519410064	751670651660	751352237875	150
7498510000	7498510080	7498510918	749775461693	749846535794	150
7498510000	7498510080	7498510918	749775461693	749846535794	150

7530510000	7530510774	7530510249	753552085324	753454711791	150
7530510000	7530510774	7530510249	753552085324	753454711791	150
7531510000	7531510582	7531510241	753461926555	753549449155	150
7531510000	7531510582	7531510241	753461926555	753549449155	150
7500510000	7500510512	7500510953	750297549378	750309452519	150
7500510000	7500510512	7500510953	750297549378	750309452519	150
7500610000	7500610435	7500610023	750506054913	750976255568	150
7500610000	7500610435	7500610023	750506054913	750976255568	150
7526500000	7526500715	7526500116	752863359165	752248795027	150
7526500000	7526500715	7526500116	752863359165	752248795027	150
7536410000	7536410818	7536410285	753776875729	753800223732	150
7536410000	7536410818	7536410285	753776875729	753800223732	150
7536500000	7536500867	7536500216	753006826723	753662214074	150
7536500000	7536500867	7536500216	753006826723	753662214074	150
7536510000	7536510762	7536510332	753584887572	753860678893	150
7536510000	7536510762	7536510332	753584887572	753860678893	150
7507510000	7507510679	7507510036	750109631445	750130110409	150
7507510000	7507510679	7507510036	750109631445	750130110409	150
7492510000	7492510668	7492510833	749991602929	749581217749	150
7492510000	7492510668	7492510833	749991602929	749581217749	150
7436500000	7436500852	7436500206	743996424741	743323776167	150
7436500000	7436500852	7436500206	743996424741	743323776167	150
7477410000	7477410563	7477410669	747651848093	747853510861	150
7477410000	7477410563	7477410669	747651848093	747853510861	150
7432510000	7432510945	7432510233	743830060848	743893157078	150
7432510000	7432510945	7432510233	743830060848	743893157078	150
7481610000	7481610093	7481610792	748579891172	748779989229	150
7481610000	7481610093	7481610792	748579891172	748779989229	150
7459510000	7459510914	7459510518	745484509555	745133389908	150
7459510000	7459510914	7459510518	745484509555	745133389908	150
7649510000	7649510780	7649510438	764223109063	764213737014	150
7649510000	7649510780	7649510438	764223109063	764213737014	150
7646500000	7646500962	7646500326	764274851610	764912924868	150
7646500000	7646500962	7646500326	764274851610	764912924868	150
7637510000	7637510980	7637510348	763438793677	763715850526	150
7637510000	7637510980	7637510348	763438793677	763715850526	150
7569410000	7569410981	7569410561	756172950202	756674193354	150
7569410000	7569410981	7569410561	756172950202	756674193354	150
7560510000	7560510119	7560510548	756188695135	756557799913	150
7560510000	7560510119	7560510548	756188695135	756557799913	150
7578410000	7578410817	7578410667	757206844132	757637705602	150
7578410000	7578410817	7578410667	757206844132	757637705602	150
7568510000	7568510785	7568510630	756404879352	756950518275	150
7568510000	7568510785	7568510630	756404879352	756950518275	150
7574510000	7574510926	7574510667	757668972682	757492773594	150
7574510000	7574510926	7574510667	757668972682	757492773594	150
7767410000	7767410596	7767410600	776946783684	776496828750	150

7767410000	7767410596	7767410600	776946783684	776496828750	150
7754510000	7754510738	7754510488	775990411637	775054130901	150
7754510000	7754510738	7754510488	775990411637	775054130901	150
7771510000	7771510348	7771510657	777175866855	777318758888	150
7771510000	7771510348	7771510657	777175866855	777318758888	150
7771610000	7771610949	7771610722	777899114049	777672155336	150
7771610000	7771610949	7771610722	777899114049	777672155336	150
7759510000	7759510959	7759510547	775727956128	775797283017	150
7759510000	7759510959	7759510547	775727956128	775797283017	150
7774510000	7774510826	7774510688	777733781095	777214996444	150
7774510000	7774510826	7774510688	777733781095	777214996444	150
7728410000	7728410103	7728410194	772863655855	772467066864	150
7728410000	7728410103	7728410194	772863655855	772467066864	150
7728510000	7728510275	7728510250	772250389843	772507078231	150
7728510000	7728510275	7728510250	772250389843	772507078231	150
7675510000	7675510096	7675510728	767383683051	767835048274	150
7675510000	7675510096	7675510728	767383683051	767835048274	150
7691610000	7691610304	7691610912	769988733679	769661558177	150
7691610000	7691610304	7691610912	769988733679	769661558177	150
7676410000	7676410373	7676410696	767766004954	767470909531	150
7676410000	7676410373	7676410696	767766004954	767470909531	150
7708510000	7708510000	7708510053	770078727149	770798636103	150
7708510000	7708510000	7708510053	770078727149	770798636103	150
7687410000	7687410764	7687410787	768172541131	768700770003	150
7687410000	7687410764	7687410787	768172541131	768700770003	150
7729510000	7729510513	7729510250	772261195117	772564507162	150
7729510000	7729510513	7729510250	772261195117	772564507162	150
7719410000	7719410468	7719410084	771073989705	771807447393	150
7719410000	7719410468	7719410084	771073989705	771807447393	150
7668410000	7668410691	7668410578	766584351222	766142971823	150
7668410000	7668410691	7668410578	766584351222	766142971823	150
7697510000	7697510917	7697510943	769815610990	769002135680	150
7697510000	7697510917	7697510943	769815610990	769002135680	150
7698410000	7698410156	7698410876	769473709721	769089173396	150
7698410000	7698410156	7698410876	769473709721	769089173396	150
7845510000	7845510690	7845510422	784647500241	784239934025	150
7845510000	7845510690	7845510422	784647500241	784239934025	150
7859410000	7859410987	7859410491	785332364064	785780943049	150
7859410000	7859410987	7859410491	785332364064	785780943049	150
7805510000	7805510215	7805510001	780876200023	780539814022	150
7805510000	7805510215	7805510001	780876200023	780539814022	150
7811600000	7811600608	7811600063	781354859094	781884134966	150
7811600000	7811600608	7811600063	781354859094	781884134966	150
7827410000	7827410109	7827410220	782100530206	782183862970	150
7827410000	7827410109	7827410220	782100530206	782183862970	150
7836510000	7836510813	7836510363	783878981243	783290413566	150
7836510000	7836510813	7836510363	783878981243	783290413566	150

7796410000	7796410623	7796410907	779360741513	779259671280	150
7796410000	7796410623	7796410907	779360741513	779259671280	150
7907510000	7907510748	7907510076	790020146463	790143294666	150
7907510000	7907510748	7907510076	790020146463	790143294666	150
7851610000	7851610086	7851610533	785558253664	785477516535	150
7851610000	7851610086	7851610533	785558253664	785477516535	150
7911610000	7911610789	7911610152	791900262230	791563322949	150
7911610000	7911610789	7911610152	791900262230	791563322949	150
7871510000	7871510367	7871510667	787145147325	787333104693	150
7871510000	7871510367	7871510667	787145147325	787333104693	150
7833510000	7833510286	7833510281	783954261440	783654507510	150
7833510000	7833510286	7833510281	783954261440	783654507510	150
7990510000	7990510308	7990510882	799466027664	799545698602	150
7990510000	7990510308	7990510882	799466027664	799545698602	150
7929410000	7929410577	7929410203	792181587177	792092825022	150
7929410000	7929410577	7929410203	792181587177	792092825022	150
7963510000	7963510619	7963510589	796520538380	796065037255	150
7963510000	7963510619	7963510589	796520538380	796065037255	150
8022510000	8022510690	8022510092	802754642370	802617883103	150
8022510000	8022510690	8022510092	802754642370	802617883103	150
7921610000	7921610973	7921610250	792557222857	792668664092	150
7921610000	7921610973	7921610250	792557222857	792668664092	150
8025500000	8025500800	8025500053	802371329513	802771200594	150
8025500000	8025500800	8025500053	802371329513	802771200594	150
7999410000	7999410395	7999410895	799408203044	799513305286	150
7999410000	7999410395	7999410895	799408203044	799513305286	150
7941610000	7941610934	7941610444	794302584253	794057962407	150
7941610000	7941610934	7941610444	794302584253	794057962407	150
7957410000	7957410462	7957410520	795760234575	795924265302	150
7957410000	7957410462	7957410520	795760234575	795924265302	150
7931610000	7931610242	7931610345	793012080306	793885552987	150
7931610000	7931610242	7931610345	793012080306	793885552987	150
8019510000	8019510292	8019510080	801068903264	801025132343	150
8019510000	8019510292	8019510080	801068903264	801025132343	150
7944510000	7944510608	7944510406	794344312118	794909176495	150
7944510000	7944510608	7944510406	794344312118	794909176495	150
7978410000	7978410893	7978410706	797012091534	797541205580	150
7978410000	7978410893	7978410706	797012091534	797541205580	150
8035500000	8035500785	8035500153	803613636752	803019766377	150
8035500000	8035500785	8035500153	803613636752	803019766377	150
7966410000	7966410257	7966410626	796589575689	796828999577	150
7966410000	7966410257	7966410626	796589575689	796828999577	150
7966510000	7966510213	7966510671	796389951566	796401923652	150
7966510000	7966510213	7966510671	796389951566	796401923652	150
7926410000	7926410734	7926410225	792223626178	792669218403	150
7926410000	7926410734	7926410225	792223626178	792669218403	150
7916500000	7916500622	7916500056	791526164566	791966209246	150

7916500000	7916500622	7916500056	791526164566	791966209246	150
7956510000	7956510116	7956510570	795350581666	795562524198	150
7956510000	7956510116	7956510570	795350581666	795562524198	150
8000510000	8000510415	8000510906	800758358951	800482918333	150
8000510000	8000510415	8000510906	800758358951	800482918333	150
8002510000	8002510798	8002510889	800968153993	800879972606	150
8002510000	8002510798	8002510889	800968153993	800879972606	150
8159410000	8159410857	8159410423	815419105668	815879873303	150
8159410000	8159410857	8159410423	815419105668	815879873303	150
8121510000	8121510868	8121510103	812567331721	812447857227	150
8121510000	8121510868	8121510103	812567331721	812447857227	150
8095510000	8095510276	8095510877	809806308045	809190354128	150
8095510000	8095510276	8095510877	809806308045	809190354128	150
8134510000	8134510404	8134510221	813360681037	813901953387	150
8134510000	8134510404	8134510221	813360681037	813901953387	150
8153510000	8153510428	8153510413	815248562782	815099704346	150
8153510000	8153510428	8153510413	815248562782	815099704346	150
8102610000	8102610922	8102610963	810809227255	810814969124	150
8102610000	8102610922	8102610963	810809227255	810814969124	150
8131610000	8131610095	8131610271	813148686981	813161851518	150
8131610000	8131610095	8131610271	813148686981	813161851518	150
8092510000	8092510596	8092510793	809377772543	809493993599	150
8092510000	8092510596	8092510793	809377772543	809493993599	150
8162510000	8162510470	8162510505	816539880169	816945470825	150
8162510000	8162510470	8162510505	816539880169	816945470825	150
8148510000	8148510460	8148510390	814986625565	814589660636	150
8148510000	8148510460	8148510390	814986625565	814589660636	150
8108510000	8108510004	8108510994	810880227352	810724437742	150
8108510000	8108510004	8108510994	810880227352	810724437742	150
8110510000	8110510617	8110510013	811477251066	811137122625	150
8110510000	8110510617	8110510013	811477251066	811137122625	150
8126500000	8126500656	8126500077	812313748758	812203724880	150
8126500000	8126500656	8126500077	812313748758	812203724880	150
8285500000	8285500199	8285500674	828921478668	828887919061	150
8285500000	8285500199	8285500674	828921478668	828887919061	150
8228410000	8228410075	8228410146	822204825831	822937126739	150
8228410000	8228410075	8228410146	822204825831	822937126739	150
8201610000	8201610575	8201610987	820729301943	820082088878	150
8201610000	8201610575	8201610987	820729301943	820082088878	150
8179410000	8179410094	8179410622	817435519413	817194920081	150
8179410000	8179410094	8179410622	817435519413	817194920081	150
8339510000	8339510618	8339510310	833572075725	833502149556	150
8339510000	8339510618	8339510310	833572075725	833502149556	150
8218410000	8218410915	8218410050	821601893475	821678000965	150
8218410000	8218410915	8218410050	821601893475	821678000965	150
8234510000	8234510421	8234510231	823578296779	823805831371	150
8234510000	8234510421	8234510231	823578296779	823805831371	150

8224510000	8224510332	8224510129	822226867906	822954600962	150
8224510000	8224510332	8224510129	822226867906	822954600962	150
8174510000	8174510858	8174510628	817777037189	817091169607	150
8174510000	8174510858	8174510628	817777037189	817091169607	150
8217410000	8217410777	8217410060	821533329016	821394555373	150
8217410000	8217410777	8217410060	821533329016	821394555373	150
8202610000	8202610938	8202610972	820354139340	820876801228	150
8202610000	8202610938	8202610972	820354139340	820876801228	150
8176510000	8176510252	8176510694	817448426706	817170048839	150
8176510000	8176510252	8176510694	817448426706	817170048839	150
8247410000	8247410326	8247410353	824449583493	824816541995	150
8247410000	8247410326	8247410353	824449583493	824816541995	150
8261510000	8261510206	8261510509	826947398259	826913223850	150
8261510000	8261510206	8261510509	826947398259	826913223850	150
8277410000	8277410532	8277410650	827023139418	827653807416	150
8277410000	8277410532	8277410650	827023139418	827653807416	150
8195500000	8195500336	8195500773	819448907100	819412654110	150
8195500000	8195500336	8195500773	819448907100	819412654110	150
8169410000	8169410909	8169410522	816451712570	816015026802	150
8169410000	8169410909	8169410522	816451712570	816015026802	150
8253510000	8253510444	8253510423	825736640037	825275091277	150
8253510000	8253510444	8253510423	825736640037	825275091277	150
8227410000	8227410008	8227410159	822008391095	822480799014	150
8227410000	8227410008	8227410159	822008391095	822480799014	150
8418410000	8418410949	8418410069	841571902284	841635215426	150
8418410000	8418410949	8418410069	841571902284	841635215426	150
8309410000	8309410272	8309410947	830276289637	830139899997	150
8309410000	8309410272	8309410947	830276289637	830139899997	150
8322510000	8322510744	8322510123	832345884148	832391998642	150
8322510000	8322510744	8322510123	832345884148	832391998642	150
8297410000	8297410700	8297410848	829629535189	829700289232	150
8297410000	8297410700	8297410848	829629535189	829700289232	150
8297510000	8297510849	8297510905	829001565337	829216688428	150
8297510000	8297510849	8297510905	829001565337	829216688428	150
8340510000	8340510923	8340510330	834799817293	834181401069	150
8340510000	8340510923	8340510330	834799817293	834181401069	150
8299510000	8299510333	8299510894	829700660311	829882379743	150
8299510000	8299510333	8299510894	829700660311	829882379743	150
8329410000	8329410580	8329410144	832176013311	832550854934	150
8329410000	8329410580	8329410144	832176013311	832550854934	150
8391610000	8391610248	8391610883	839941921858	839034348393	150
8391610000	8391610248	8391610883	839941921858	839034348393	150
8307510000	8307510644	8307510017	830490656540	830347019224	150
8307510000	8307510644	8307510017	830490656540	830347019224	150
8537510000	8537510966	8537510338	853867258725	853858165831	150
8537510000	8537510966	8537510338	853867258725	853858165831	150
8529510000	8529510475	8529510231	852626072799	852398682575	150

8529510000	8529510475	8529510231	852626072799	852398682575	150
8543510000	8543510320	8543510351	854054873885	854830268189	150
8543510000	8543510320	8543510351	854054873885	854830268189	150
8467410000	8467410547	8467410572	846568833039	846215523589	150
8467410000	8467410547	8467410572	846568833039	846215523589	150
8467510000	8467510319	8467510628	846061962833	846013601743	150
8467510000	8467510319	8467510628	846061962833	846013601743	150
8426500000	8426500701	8426500107	842633437421	842813142286	150
8426500000	8426500701	8426500107	842633437421	842813142286	150
8539410000	8539410691	8539410263	853609593247	853818691009	150
8539410000	8539410691	8539410263	853609593247	853818691009	150
8487410000	8487410731	8487410769	848350432355	848422681120	150
8487410000	8487410731	8487410769	848350432355	848422681120	150
8487510000	8487510514	8487510826	848896698546	848728522832	150
8487510000	8487510514	8487510826	848896698546	848728522832	150
8518410000	8518410962	8518410079	851134323082	851737365961	150
8518410000	8518410962	8518410079	851134323082	851737365961	150
8430510000	8430510756	8430510240	843823107368	843155504498	150
8430510000	8430510756	8430510240	843823107368	843155504498	150
8447410000	8447410366	8447410371	844445905218	844496180133	150
8447410000	8447410366	8447410371	844445905218	844496180133	150
8447510000	8447510113	8447510429	844376200678	844319813066	150
8447510000	8447510113	8447510429	844376200678	844319813066	150
8477410000	8477410565	8477410670	847984009715	847058034417	150
8477410000	8477410565	8477410670	847984009715	847058034417	150
8493510000	8493510930	8493510843	849455454044	849661149483	150
8493510000	8493510930	8493510843	849455454044	849661149483	150
8504510000	8504510119	8504510957	850415813812	850284749284	150
8504510000	8504510119	8504510957	850415813812	850284749284	150
8490510000	8490510173	8490510833	849566513531	849206513487	150
8490510000	8490510173	8490510833	849566513531	849206513487	150
8460610000	8460610089	8460610607	846813886179	846289578368	150
8460610000	8460610089	8460610607	846813886179	846289578368	150
8521510000	8521510946	8521510144	852523873999	852663280132	150
8521510000	8521510946	8521510144	852523873999	852663280132	150
8545510000	8545510743	8545510389	854969663373	854869735049	150
8545510000	8545510743	8545510389	854969663373	854869735049	150
8422510000	8422510764	8422510133	842945698172	842569799275	150
8422510000	8422510764	8422510133	842945698172	842569799275	150
8531610000	8531610171	8531610307	853947177783	853114856149	150
8531610000	8531610171	8531610307	853947177783	853114856149	150
8645510000	8645510658	8645510400	864908481414	864141812290	150
8645510000	8645510658	8645510400	864908481414	864141812290	150
8631600000	8631600824	8631600249	863528242774	863476864692	150
8635510000	8635510584	8635510291	863920018434	863090332513	150
8635510000	8635510584	8635510291	863920018434	863090332513	150
8570510000	8570510317	8570510647	857563408298	857436260593	150

8570510000	8570510317	8570510647	857563408298	857436260593	150
8658510000	8658510630	8658510542	865705751400	865145805772	150
8658510000	8658510630	8658510542	865705751400	865145805772	150
8549510000	8549510765	8549510429	854156167609	854545833911	150
8549510000	8549510765	8549510429	854156167609	854545833911	150
8665510000	8665510917	8665510620	866881723367	866718546858	150
8665510000	8665510917	8665510620	866881723367	866718546858	150
8557410000	8557410398	8557410481	855691312275	855663584067	150
8557410000	8557410398	8557410481	855691312275	855663584067	150
8571610000	8571610916	8571610703	857206586721	857306453724	150
8571610000	8571610916	8571610703	857206586721	857306453724	150
8639510000	8639510670	8639510340	863303910861	863754318279	150
8639510000	8639510670	8639510340	863303910861	863754318279	150
8687510000	8687510747	8687510845	868035111381	868243142933	150
8687510000	8687510747	8687510845	868035111381	868243142933	150
8731610000	8731610207	8731610327	873306179821	873970728211	150
8731610000	8731610207	8731610327	873306179821	873970728211	150
8714510000	8714510251	8714510080	871226801490	871461502587	150
8714510000	8714510251	8714510080	871226801490	871461502587	150
8732510000	8732510839	8732510264	873149777756	873232677883	150
8732510000	8732510839	8732510264	873149777756	873232677883	150
8709410000	8709410340	8709410987	870361749290	870333731163	150
8709410000	8709410340	8709410987	870361749290	870333731163	150
8748410000	8748410416	8748410395	874936475653	874685702204	150
8748410000	8748410416	8748410395	874936475653	874685702204	150
8797510000	8797510936	8797510954	879294447867	879712866356	150
8797510000	8797510936	8797510954	879294447867	879712866356	150
8697410000	8697410760	8697410888	869756384497	869650757531	150
8697410000	8697410760	8697410888	869756384497	869650757531	150
8786410000	8786410482	8786410808	878569972996	878855568789	150
8786410000	8786410482	8786410808	878569972996	878855568789	150
8688410000	8688410020	8688410777	868234381016	868011256246	150
8688410000	8688410020	8688410777	868234381016	868011256246	150
8678510000	8678510884	8678510738	867193773958	867910148471	150
8678510000	8678510884	8678510738	867193773958	867910148471	150
8679410000	8679410194	8679410671	867602927991	867286704200	150
8679410000	8679410194	8679410671	867602927991	867286704200	150
8778410000	8778410858	8778410687	877553856470	877389046567	150
8778410000	8778410858	8778410687	877553856470	877389046567	150
8753510000	8753510407	8753510470	875448773609	875570672985	150
8753510000	8753510407	8753510470	875448773609	875570672985	150
8749410000	8749410787	8749410383	874783419483	874782114070	150
8749410000	8749410787	8749410383	874783419483	874782114070	150
8749510000	8749510799	8749510449	874418507638	874993943052	150
8749510000	8749510799	8749510449	874418507638	874993943052	150
8729410000	8729410545	8729410184	872378865563	872430470160	150
8729410000	8729410545	8729410184	872378865563	872430470160	150

8897410000	8897410790	8897410908	889008829806	889075029527	150
8897410000	8897410790	8897410908	889008829806	889075029527	150
8877510000	8877510415	8877510766	887576869389	887997934914	150
8877510000	8877510415	8877510766	887576869389	887997934914	150
8847410000	8847410436	8847410410	884576973543	884364106558	150
8847410000	8847410436	8847410410	884576973543	884364106558	150
8836410000	8836410871	8836410316	883787065199	883467395444	150
8836410000	8836410871	8836410316	883787065199	883467395444	150
8881510000	8881510578	8881510768	888333490145	888608937310	150
8881510000	8881510578	8881510768	888333490145	888608937310	150
8867410000	8867410614	8867410611	886616625443	886053193681	150
8867410000	8867410614	8867410611	886616625443	886053193681	150
8813510000	8813510024	8813510082	881373704003	881565760350	150
8813510000	8813510024	8813510082	881373704003	881565760350	150
8898410000	8898410187	8898410897	889391802724	889470324025	150
8898410000	8898410187	8898410897	889391802724	889470324025	150
8858510000	8858510663	8858510563	885756446150	885848802324	150
8858510000	8858510663	8858510563	885756446150	885848802324	150
8816500000	8816500609	8816500047	881771240592	881574899471	150
8816500000	8816500609	8816500047	881771240592	881574899471	150
8808410000	8808410845	8808410009	880220314879	880125206146	150
8808410000	8808410845	8808410009	880220314879	880125206146	150
8879410000	8879410051	8879410691	887231902560	887366829394	150
8879410000	8879410051	8879410691	887231902560	887366829394	150
9028510000	9028510240	9028510183	902448569208	902594360132	150
9028510000	9028510240	9028510183	902448569208	902594360132	150
9048410000	9048410283	9048410327	904908263256	904727599468	150
9048410000	9048410283	9048410327	904908263256	904727599468	150
8991510000	8991510780	8991510879	899640010237	899624111140	150
8991510000	8991510780	8991510879	899640010237	899624111140	150
9046500000	9046500871	9046500267	904910794256	904902524428	150
9046500000	9046500871	9046500267	904910794256	904902524428	150
8928410000	8928410138	8928410216	892399961805	892576403102	150
8928410000	8928410138	8928410216	892399961805	892576403102	150
8983510000	8983510914	8983510793	898312513342	898296325827	150
8983510000	8983510914	8983510793	898312513342	898296325827	150
8959410000	8959410007	8959410502	895758692885	895077165263	150
8959410000	8959410007	8959410502	895758692885	895077165263	150
9045500000	9045500948	9045500251	904623602064	904827407481	150
9045500000	9045500948	9045500251	904623602064	904827407481	150
8970510000	8970510396	8970510687	897853839148	897105982045	150
8970510000	8970510396	8970510687	897853839148	897105982045	150
9002610000	9002610905	9002610954	900891190901	900459042833	150
9002610000	9002610905	9002610954	900891190901	900459042833	150
9038410000	9038410156	9038410227	903518187909	903913714793	150
9038410000	9038410156	9038410227	903518187909	903913714793	150
8967410000	8967410630	8967410620	896181514032	896628409314	150

8967410000	8967410630	8967410620	896181514032	896628409314	150
9068410000	9068410581	9068410522	906045361855	906434571816	150
9068410000	9068410581	9068410522	906045361855	906434571816	150
9099410000	9099410264	9099410808	909732624660	909946115969	150
9166510000	9166510148	9166510594	916353928875	916200299266	150
9166510000	9166510148	9166510594	916353928875	916200299266	150
9080510000	9080510416	9080510697	908171149089	908913878244	150
9080510000	9080510416	9080510697	908171149089	908913878244	150
9080610000	9080610275	9080610769	908153079239	908381705202	150
9080610000	9080610275	9080610769	908153079239	908381705202	150
9085500000	9085500243	9085500651	908708897511	908722051425	150
9085500000	9085500243	9085500651	908708897511	908722051425	150
9072510000	9072510065	9072510598	907120777463	907325027188	150
9072510000	9072510065	9072510598	907120777463	907325027188	150
9110610000	9110610427	9110610085	911571674842	911467131890	150
9110610000	9110610427	9110610085	911571674842	911467131890	150
9118410000	9118410897	9118410040	911145270960	911187963138	150
9118410000	9118410897	9118410040	911145270960	911187963138	150
9159510000	9159510866	9159510490	915475276440	915881023420	150
9159510000	9159510866	9159510490	915475276440	915881023420	150
9069410000	9069410028	9069410513	906005550099	906861653336	150
9069410000	9069410028	9069410513	906005550099	906861653336	150
9125500000	9125500820	9125500064	912992040067	912623197798	150
9125500000	9125500820	9125500064	912992040067	912623197798	150
9088410000	9088410912	9088410718	908051335097	908991594537	150
9088410000	9088410912	9088410718	908051335097	908991594537	150
9062510000	9062510456	9062510496	906418471309	906783653071	150
9062510000	9062510456	9062510496	906418471309	906783653071	150
9245510000	9245510696	9245510357	924201183906	924745260866	150
9245510000	9245510696	9245510357	924201183906	924745260866	150
9233510000	9233510182	9233510223	923758694160	923456445991	150
9233510000	9233510182	9233510223	923758694160	923456445991	150
9248410000	9248410321	9248410347	924733094268	924494228645	150
9248410000	9248410321	9248410347	924733094268	924494228645	150
9221510000	9221510887	9221510115	922234801972	922403464440	150
9221510000	9221510887	9221510115	922234801972	922403464440	150
9235500000	9235500819	9235500173	923349901101	923636749503	150
9235500000	9235500819	9235500173	923349901101	923636749503	150
9236500000	9236500826	9236500188	923121704296	923648566880	150
9236500000	9236500826	9236500188	923121704296	923648566880	150
9225500000	9225500837	9225500074	922456594868	922672314107	150
9225500000	9225500837	9225500074	922456594868	922672314107	150
9197510000	9197510832	9197510896	919435484954	919542295417	150
9197510000	9197510832	9197510896	919435484954	919542295417	150
9286410000	9286410472	9286410760	928502016653	928546087907	150
9286410000	9286410472	9286410760	928502016653	928546087907	150
9204510000	9204510068	9204510925	920225356984	920229917146	150

9204510000	9204510068	9204510925	920225356984	920229917146	150
9249510000	9249510715	9249510400	924077134347	924679179215	150
9249510000	9249510715	9249510400	924077134347	924679179215	150
9220510000	9220510719	9220510123	922676540521	922274060556	150
9220510000	9220510719	9220510123	922676540521	922274060556	150
9268510000	9268510737	9268510602	926098762648	926621685758	150
9268510000	9268510737	9268510602	926098762648	926621685758	150
9213510000	9213510912	9213510023	921248002016	921428517187	150
9213510000	9213510912	9213510023	921248002016	921428517187	150
9256500000	9256500059	9256500388	925665930945	925571678594	150
9256500000	9256500059	9256500388	925665930945	925571678594	150
9243510000	9243510267	9243510322	924430713593	924757532884	150
9243510000	9243510267	9243510322	924430713593	924757532884	150
9384510000	9384510935	9384510750	938796977635	938374150127	150
9384510000	9384510935	9384510750	938796977635	938374150127	150
9358410000	9358410527	9358410454	935800271247	935460472573	150
9358410000	9358410527	9358410454	935800271247	935460472573	150
9302510000	9302510372	9302510920	930650926336	930534094357	150
9302510000	9302510372	9302510920	930650926336	930534094357	150
9375510000	9375510047	9375510698	937495802288	937439635746	150
9375510000	9375510047	9375510698	937495802288	937439635746	150
9304510000	9304510084	9304510936	930991167157	930006153802	150
9304510000	9304510084	9304510936	930991167157	930006153802	150
9336500000	9336500840	9336500198	933292050944	933597354915	150
9336500000	9336500840	9336500198	933292050944	933597354915	150
9306510000	9306510416	9306510009	930960723109	930712349371	150
9306510000	9306510416	9306510009	930960723109	930712349371	150
9419510000	9419510360	9419510122	941159604582	941495400615	150
9419510000	9419510360	9419510122	941159604582	941495400615	150
9408510000	9408510957	9408510025	940515432992	940636500269	150
9408510000	9408510957	9408510025	940515432992	940636500269	150
9380610000	9380610322	9380610799	938870884415	938462277583	150
9380610000	9380610322	9380610799	938870884415	938462277583	150
9352510000	9352510323	9352510425	935781124836	935847427253	150
9352510000	9352510323	9352510425	935781124836	935847427253	150
9424510000	9424510368	9424510150	942180365506	942040649673	150
9424510000	9424510368	9424510150	942180365506	942040649673	150
9381610000	9381610077	9381610784	938200016113	938662300797	150
9381610000	9381610077	9381610784	938200016113	938662300797	150
9399410000	9399410318	9399410837	939848765801	939239545080	150
9399410000	9399410318	9399410837	939848765801	939239545080	150
9414510000	9414510201	9414510049	941138511082	941806494423	150
9414510000	9414510201	9414510049	941138511082	941806494423	150
9373500000	9373500752	9373500606	937694562916	937811782101	150
9373500000	9373500752	9373500606	937694562916	937811782101	150
9307410000	9307410637	9307410970	930048112750	930753278171	150
9307410000	9307410637	9307410970	930048112750	930753278171	150

9364510000	9364510720	9364510550	936570657955	936559837968	150
9364510000	9364510720	9364510550	936570657955	936559837968	150
9518510000	9518510143	9518510134	951988051298	951314705276	150
9518510000	9518510143	9518510134	951988051298	951314705276	150
9476410000	9476410344	9476410678	947753331213	947221893454	150
9476410000	9476410344	9476410678	947753331213	947221893454	150
9513510000	9513510968	9513510054	951315564349	951958887924	150
9513510000	9513510968	9513510054	951315564349	951958887924	150
9499510000	9499510269	9499510915	949522524133	949699246895	150
9499510000	9499510269	9499510915	949522524133	949699246895	150
9517410000	9517410823	9517410091	951168566677	951662557263	150
9517410000	9517410823	9517410091	951168566677	951662557263	150
9503510000	9503510776	9503510951	950736216037	950401418427	150
9503510000	9503510776	9503510951	950736216037	950401418427	150
9461610000	9461610202	9461610595	946525151032	946430359322	150
9461610000	9461610202	9461610595	946525151032	946430359322	150
9468410000	9468410658	9468410560	946541582119	946381546724	150
9468410000	9468410658	9468410560	946541582119	946381546724	150
9566510000	9566510220	8566510633	956609778064	956851300933	150
9566510000	9566510220	8566510633	956609778064	956851300933	150
9676510000	9676510336	9676510746	967375474866	967994783272	150
9676510000	9676510336	9676510746	967375474866	967994783272	150
9559410000	9559410934	9559410464	955181308869	955091609358	150
9559410000	9559410934	9559410464	955181308869	955091609358	150
9560610000	9560610108	9560610618	956789257360	956026387455	150
9560610000	9560610108	9560610618	956789257360	956026387455	150
9619410000	9619410455	9619410076	961790661430	961715543269	150
9619410000	9619410455	9619410076	961790661430	961715543269	150
9609410000	9609410325	9609410978	960139618951	960407307537	150
9609410000	9609410325	9609410978	960139618951	960407307537	150
9595500000	9595500403	9595500816	959680826299	959191726395	150
9595500000	9595500403	9595500816	959680826299	959191726395	150
9679410000	9679410196	9679410672	967747750540	967302781664	150
9679410000	9679410196	9679410672	967747750540	967302781664	150
9561610000	9561610739	9561610605	956097472140	956355458382	150
9561610000	9561610739	9561610605	956097472140	956355458382	150
9643510000	9643510339	9643510363	964440117730	964669829917	150
9643510000	9643510339	9643510363	964440117730	964669829917	150
9659410000	9659410954	9659410473	965422465208	965774972314	150
9659410000	9659410954	9659410473	965422465208	965774972314	150
9616500000	9616500638	9616500028	961410473373	961924337432	150
9616500000	9616500638	9616500028	961410473373	961924337432	150
9604510000	9604510136	9604510968	960699202612	960643754170	150
9604510000	9604510136	9604510968	960699202612	960643754170	150
9563510000	9563510553	9563510551	956426573095	956700354130	150
9563510000	9563510553	9563510551	956426573095	956700354130	150
9614510000	9614510234	9614510071	961908919335	961537800806	150

9614510000	9614510234	9614510071	961908919335	961537800806	150
9592510000	9592510689	9592510846	959847566748	959301720522	150
9592510000	9592510689	9592510846	959847566748	959301720522	150
9636410000	9636410838	9636410297	963964882275	963473006977	150
9636410000	9636410838	9636410297	963964882275	963473006977	150
9636500000	9636500810	9636500228	963893554519	963763710838	150
9636500000	9636500810	9636500228	963893554519	963763710838	150
9681510000	9681510545	9681510748	968873018767	968029650831	150
9681510000	9681510545	9681510748	968873018767	968029650831	150
9756500000	9756500065	9756500438	975516511913	975779599670	150
9756500000	9756500065	9756500438	975516511913	975779599670	150
9713510000	9713510006	9713510073	971926024029	971558270660	150
9713510000	9713510006	9713510073	971926024029	971558270660	150
9849410000	9849410805	9849410394	984973386981	984103687062	150
9849410000	9849410805	9849410394	984973386981	984103687062	150
9706410000	9706410383	9706410006	970995232980	970185624187	150
9706410000	9706410383	9706410006	970995232980	970185624187	150
9806410000	9806410400	9806410017	980518851373	980911771161	150
9806410000	9806410400	9806410017	980518851373	980911771161	150
9806510000	9806510505	9806510060	980666054083	980720042624	150
9806510000	9806510505	9806510060	980666054083	980720042624	150
9785500000	9785500278	9785500727	978611622434	978440064778	150
9785500000	9785500278	9785500727	978611622434	978440064778	150
9688510000	9688510033	9688510840	968427378064	968652491412	150
9688510000	9688510033	9688510840	968427378064	968652491412	150
9727510000	9727510956	9727510257	972366947059	972933278929	150
9727510000	9727510956	9727510257	972366947059	972933278929	150
9762510000	9762510589	9762510568	976981568229	976075964120	150
9762510000	9762510589	9762510568	976981568229	976075964120	150
9720510000	9720510809	9720510173	972088156247	972695777051	150
9720510000	9720510809	9720510173	972088156247	972695777051	150
9736410000	9736410857	9736410307	973107782450	973848001389	150
9736410000	9736410857	9736410307	973107782450	973848001389	150
9819510000	9819510428	9819510163	981808606810	981662762389	150
9819510000	9819510428	9819510163	981808606810	981662762389	150
9888410000	9888410059	9888410799	988136539191	988744254877	150
9888410000	9888410059	9888410799	988136539191	988744254877	150
9888510000	9888510060	9888510860	988336951903	988003271199	150
9888510000	9888510060	9888510860	988336951903	988003271199	150
9876410000	9876410407	9876410720	987742975525	987128452675	150
9876410000	9876410407	9876410720	987742975525	987128452675	150
9836500000	9836500839	9836500247	983685042725	983377159219	150
9836500000	9836500839	9836500247	983685042725	983377159219	150
9864510000	9864510810	9864510601	986347800369	986724736637	150
9864510000	9864510810	9864510601	986347800369	986724736637	150
9820610000	9820610564	9820610254	982148548299	982711269308	150
9820610000	9820610564	9820610254	982148548299	982711269308	150

9832510000	9832510861	9832510274	983936852571	983085141272	150
9832510000	9832510861	9832510274	983936852571	983085141272	150
9835510000	9835510619	9835510314	983379135935	983275648713	150
9835510000	9835510619	9835510314	983379135935	983275648713	150
9924510000	9924510373	9924510201	992520011657	992961889355	150
9924510000	9924510373	9924510201	992520011657	992961889355	150
9927510000	9927510991	9927510278	992899972138	992078460948	150
9927510000	9927510991	9927510278	992899972138	992078460948	150
9858410000	9858410547	9858410503	985117312481	985961638638	150
9858410000	9858410547	9858410503	985117312481	985961638638	150
9950510000	9950510046	9950510491	995891948399	995268460273	150
9950510000	9950510046	9950510491	995891948399	995268460273	150
9960610000	9960610169	9960610658	996129052415	996468484032	150
9960610000	9960610169	9960610658	996129052415	996468484032	150
9997510000	9997510975	9997510975	999069243601	999030538902	150
9997510000	9997510975	9997510975	999069243601	999030538902	150
5354647273	5354647057	7118410038	535816204811	535064875403	150
5354647273	5354647057	7118410038	535816204811	535064875403	150
8801716781	8801716545	9510510054	880587838364	880408242646	150
8801716781	8801716545	9510510054	880587838364	880408242646	150
1875336811	1875336810	1129910000	187826513034	187079238400	150
1875336811	1875336810	1129910000	187826513034	187079238400	150
9490909798	9490909412	7619910000	949459534626	949443068321	150
9490909798	9490909412	7619910000	949459534626	949443068321	150
8302720957	8302720615	2171510592	830303184173	830775306482	150
8302720957	8302720615	2171510592	830303184173	830775306482	150
4681427780	4681427241	4413510039	468475623714	468920833589	150
4681427780	4681427241	4413510039	468475623714	468920833589	150
5342577954	5342577610	7896410917	534662584923	534089225001	150
5342577954	5342577610	7896410917	534662584923	534089225001	150
2228963763	2228963146	1379510699	222676592628	222938839394	150
2228963763	2228963146	1379510699	222676592628	222938839394	150
5123185307	5123185444	6145510343	512696155136	512152645380	150
5123185307	5123185444	6145510343	512696155136	512152645380	150
3452509666	3452509417	8360610597	345661832362	345559945006	150
3452509666	3452509417	8360610597	345661832362	345559945006	150
4109220903	4109220985	9241510311	410778371958	410384774837	150
4109220903	4109220985	9241510311	410778371958	410384774837	150
3043228004	3043228517	2886510860	304406342838	304157090355	150
3043228004	3043228517	2886510860	304406342838	304157090355	150
6774914563	6774914696	5010510000	677938396320	677566102832	150
6774914563	6774914696	5010510000	677938396320	677566102832	150
8081118587	8081118260	3471610688	808258922682	808502241604	150
8081118587	8081118260	3471610688	808258922682	808502241604	150
8058065423	8058065675	228510194	805846811636	805256862707	150
8058065423	8058065675	228510194	805846811636	805256862707	150
2588979099	2588979492	1331610284	258004487944	258840261413	150

2588979099	2588979492	1331610284	258004487944	258840261413	150
5604540380	5604540531	4357410457	560575112909	560648275521	150
5604540380	5604540531	4357410457	560575112909	560648275521	150
1083891348	1083891632	4709910000	108596778030	108958781534	150
1083891348	1083891632	4709910000	108596778030	108958781534	150
7471637814	7471637809	5869510654	747437496630	747955710859	150
7471637814	7471637809	5869510654	747437496630	747955710859	150
8886129383	8886129469	9268410541	888480792438	888091243249	150
8886129383	8886129469	9268410541	888480792438	888091243249	150
6176560985	6176560442	1459410446	617465370975	617900029496	150
6176560985	6176560442	1459410446	617465370975	617900029496	150
3554927675	3554927768	546510424	355642479484	355670386467	150
3554927675	3554927768	546510424	355642479484	355670386467	150
476628282	476628952	2318410054	47477894461	47730199685	150
476628282	476628952	2318410054	47477894461	47730199685	150
6405586272	6405586191	9230510223	640153066090	640075745302	150
6405586272	6405586191	9230510223	640153066090	640075745302	150
241494042	241494876	6746500335	24756721573	24448256310	150
241494042	241494876	6746500335	24756721573	24448256310	150
5650757018	5650757169	3495500800	565971635037	565615577183	150
5650757018	5650757169	3495500800	565971635037	565615577183	150
2188886171	2188886722	5038510278	218987189573	218573516804	150
2188886171	2188886722	5038510278	218987189573	218573516804	150
64072665	64072670	9698910000	6716034850	6079150264	150
64072665	64072670	9698910000	6716034850	6079150264	150
6402503600	6402503773	5246500284	640488819373	640964983328	150
6402503600	6402503773	5246500284	640488819373	640964983328	150
3047181379	3047181754	2848510456	304985322871	304478644108	150
3047181379	3047181754	2848510456	304985322871	304478644108	150
6711757141	6711757229	6541510337	671196438349	671884930718	150
6711757141	6711757229	6541510337	671196438349	671884930718	150
2262965109	2262965837	7526510231	226964879866	226132540139	150
2262965109	2262965837	7526510231	226964879866	226132540139	150
8745470735	8745470230	5795500833	874928001371	874697853699	150
8745470735	8745470230	5795500833	874928001371	874697853699	150
6797472436	6797472763	7371610682	679261179592	679352705170	150
6797472436	6797472763	7371610682	679261179592	679352705170	150
7118410000	7118410498	679510728	711551804699	711925791304	150
7118410000	7118410498	679510728	711551804699	711925791304	150
6051724678	6051724616	2866401658	605988000543	605415392736	150
6051724678	6051724616	2866401658	605988000543	605415392736	150
766470926	766470565	6826500145	76363961842	76776808854	150
766470926	766470565	6826500145	76363961842	76776808854	150
9606790034	9606790900	4211610081	960969106920	960263020189	150
9606790034	9606790900	4211610081	960969106920	960263020189	150
7598612947	7598612454	1919910000	759933011492	759627071291	150
7598612947	7598612454	1919910000	759933011492	759627071291	150

9212167685	9212167095	9978510769	921970266609	921583040940	150
9212167685	9212167095	9978510769	921970266609	921583040940	150
6069828130	6069828778	2558510526	606601924423	606674799823	150
6069828130	6069828778	2558510526	606601924423	606674799823	150
974684683	974684531	6445500288	97926257379	97849709281	150
974684683	974684531	6445500288	97926257379	97849709281	150
5052634177	5052634805	4277510702	505154581332	505786110705	150
5052634177	5052634805	4277510702	505154581332	505786110705	150
1433570742	1433570415	698410869	143573789781	143003359497	150
1433570742	1433570415	698410869	143573789781	143003359497	150
3742561212	3742561348	1798410880	374656430945	374139928825	150
3742561212	3742561348	1798410880	374656430945	374139928825	150
2046410000	2046410662	2046410330	204779771559	204895655211	150
2046410000	2046410662	2046410330	204779771559	204895655211	150
6261893545	6261893755	6238510299	626322601432	626776868458	150
6261893545	6261893755	6238510299	626322601432	626776868458	150
8121779812	8121779776	216500979	812079693041	812627598654	150
8121779812	8121779776	216500979	812079693041	812627598654	150
6135161732	6135161268	9009510980	613945562586	613658118340	150
6135161732	6135161268	9009510980	613945562586	613658118340	150
2698310221	2698310155	9534510261	269257930049	269886043365	150
2698310221	2698310155	9534510261	269257930049	269886043365	150
9939351783	9939351934	1173500578	993797226463	993392889091	150
9939351783	9939351934	1173500578	993797226463	993392889091	150
8132346632	8132346959	1388410740	813877145383	813862090953	150
8132346632	8132346959	1388410740	813877145383	813862090953	150
5172820910	5172820021	9669510638	517919190778	517334114574	150
5172820910	5172820021	9669510638	517919190778	517334114574	150
9766087515	9766087589	809410989	976239791894	976227626632	150
9766087515	9766087589	809410989	976239791894	976227626632	150
1434905399	1434905130	4678410674	143341218904	143633251100	150
1434905399	1434905130	4678410674	143341218904	143633251100	150
8294381324	8294381677	7146500275	829199247234	829308815604	150
8294381324	8294381677	7146500275	829199247234	829308815604	150
6916432063	6916432621	5434510248	691297847148	691982820259	150
6916432063	6916432621	5434510248	691297847148	691982820259	150
3378157923	3378157093	7856510560	337184778577	337883594590	150
3378157923	3378157093	7856510560	337184778577	337883594590	150
2786854709	2786854348	8366510612	278416910600	278336188933	150
2786854709	2786854348	8366510612	278416910600	278336188933	150
8755341100	8755341236	4626500123	875271356103	875066513044	150
8755341100	8755341236	4626500123	875271356103	875066513044	150
9508076760	9508076589	2259410427	950008533284	950915453202	150
9508076760	9508076589	2259410427	950008533284	950915453202	150
2945636298	2945636403	636410288	294129887994	294585062539	150
2945636298	2945636403	636410288	294129887994	294585062539	150
7150367029	7150367299	9528410176	715940016379	715510270515	150

7150367029	7150367299	9528410176	715940016379	715510270515	150
5678365775	5678365264	4507410985	567140973374	567402555625	150
5678365775	5678365264	4507410985	567140973374	567402555625	150
9079239523	9079239144	1086410732	907415343685	907064341080	150
9079239523	9079239144	1086410732	907415343685	907064341080	150
4922140549	4922140133	8916410126	492676148225	492007891293	150
4922140549	4922140133	8916410126	492676148225	492007891293	150
3771694888	3771694032	8787510855	377523693091	377966606507	150
3771694888	3771694032	8787510855	377523693091	377966606507	150
3645829046	3645829492	8740510370	364101407991	364945689081	150
3645829046	3645829492	8740510370	364101407991	364945689081	150
5272047182	5272047302	2918510166	527040591425	527276635447	150
5272047182	5272047302	2918510166	527040591425	527276635447	150
4487510000	4487510820	8597510934	448781222251	448531027561	150
4487510000	4487510820	8597510934	448781222251	448531027561	150
5860432019	5860432647	685500705	586790491309	586788066027	150
5860432019	5860432647	685500705	586790491309	586788066027	150
7059410000	7059410532	7059410412	705124552153	705733520453	150
7059410000	7059410532	7059410412	705124552153	705733520453	150
6492577798	6492577973	7677410688	649630347651	649226349687	150
6492577798	6492577973	7677410688	649630347651	649226349687	150
5105176345	5105176517	8620510162	510705465579	510986501752	150
5105176345	5105176517	8620510162	510705465579	510986501752	150
9807727787	9807727524	3700510968	980676822554	980481978562	150
9807727787	9807727524	3700510968	980676822554	980481978562	150
9327273927	9327273029	8782994765	932333857015	932024397263	150
9327273927	9327273029	8782994765	932333857015	932024397263	150
8042967168	8042967096	9789510847	804798164488	804359736239	150
8042967168	8042967096	9789510847	804798164488	804359736239	150
5836877291	5836877770	7465510597	583455446972	583820898938	150
5836877291	5836877770	7465510597	583455446972	583820898938	150
9734299691	9734299942	3628510237	973987313365	973630968389	150
9734299691	9734299942	3628510237	973987313365	973630968389	150
1020510000	1020510000	1020510096	102972000657	102563417908	150
1020510000	1020510000	1020510096	102972000657	102563417908	150
2385798531	2385798648	7347410361	238624262662	238116511267	150
2385798531	2385798648	7347410361	238624262662	238116511267	150
5879961495	5879961505	8885510857	587754292667	587487697763	150
5879961495	5879961505	8885510857	587754292667	587487697763	150
3589802920	3589802019	9839910000	358684740094	358419063751	150
3589802920	3589802019	9839910000	358684740094	358419063751	150
1466451648	1466451418	9143510313	146204934526	146007394129	150
1466451648	1466451418	9143510313	146204934526	146007394129	150
8056533842	8056533048	2769510641	805903340886	805594591478	150
8056533842	8056533048	2769510641	805903340886	805594591478	150
6675613578	6675613242	4073910000	667081491806	667096539863	150
6675613578	6675613242	4073910000	667081491806	667096539863	150

957826038	957826947	9149910000	95271275589	95618336129	150
957826038	957826947	9149910000	95271275589	95618336129	150
1256500000	1256500622	1256500380	125766284953	125597889958	150
1256500000	1256500622	1256500380	125766284953	125597889958	150
2809915225	2809915341	1928510264	280961125912	280954043929	150
2809915225	2809915341	1928510264	280961125912	280954043929	150
9516481177	9516481950	5208410946	951969797813	951390339730	150
9516481177	9516481950	5208410946	951969797813	951390339730	150
8487625852	8487625294	1229510195	848852269544	848943987791	150
8487625852	8487625294	1229510195	848852269544	848943987791	150
6508725199	6508725290	6001610965	650420753163	650794783008	150
6508725199	6508725290	6001610965	650420753163	650794783008	150
4457410000	4457410856	4457410467	445747319282	445622008157	150
4457410000	4457410856	4457410467	445747319282	445622008157	150
3734999619	3734999485	6171610661	373451354141	373033153927	150
3734999619	3734999485	6171610661	373451354141	373033153927	150
1811568778	1811568556	708510046	181909968411	181348686487	150
1811568778	1811568556	708510046	181909968411	181348686487	150
5894573430	5894573633	4167510594	589309957101	589918625970	150
5894573430	5894573633	4167510594	589309957101	589918625970	150
1503940725	1503940298	2087510780	150043233688	150030995177	150
1503940725	1503940298	2087510780	150043233688	150030995177	150
3315546040	3315546702	5904510994	331822398701	331104449329	150
3315546040	3315546702	5904510994	331822398701	331104449329	150
5802418592	5802418323	4063510497	580327730777	580361400260	150
5802418592	5802418323	4063510497	580327730777	580361400260	150
8583005984	8583005814	7448510420	858138606683	858756064576	150
8583005984	8583005814	7448510420	858138606683	858756064576	150
9523570103	9523570386	48410318	952853881330	952934075744	150
9523570103	9523570386	48410318	952853881330	952934075744	150
3360416248	3360416590	8629410174	336672955773	336798824421	150
3360416248	3360416590	8629410174	336672955773	336798824421	150
6989052634	6989052906	9648510442	698956725441	698980272957	150
6989052634	6989052906	9648510442	698956725441	698980272957	150
6265439458	6265439853	1586510829	626197854492	626640386914	150
6265439458	6265439853	1586510829	626197854492	626640386914	150
1880070538	1880070660	224510121	188295384757	188899428469	150
1880070538	1880070660	224510121	188295384757	188899428469	150
7980240710	7980240460	8535500201	798177957303	798474897301	150
7980240710	7980240460	8535500201	798177957303	798474897301	150
3381930581	3381930832	477510718	338719554396	338267586211	150
3381930581	3381930832	477510718	338719554396	338267586211	150
6026294118	6026294849	7809410995	602350886631	602253837710	150
6026294118	6026294849	7809410995	602350886631	602253837710	150
2618299630	2618299615	842510366	261331511418	261843308520	150
2618299630	2618299615	842510366	261331511418	261843308520	150
6684625876	6684625740	3407410974	668175929235	668031736498	150

6684625876	6684625740	3407410974	668175929235	668031736498	150
2727048719	2727048437	8647510450	272382063828	272048190412	150
2727048719	2727048437	8647510450	272382063828	272048190412	150
7674603514	7674603083	8789410780	767726759828	767684001351	150
7674603514	7674603083	8789410780	767726759828	767684001351	150
9172133151	9172133195	5127510193	917243979979	917292357471	150
9172133151	9172133195	5127510193	917243979979	917292357471	150
7769460792	7769460007	2811510068	776559878736	776461390887	150
7769460792	7769460007	2811510068	776559878736	776461390887	150
2361840657	2361840992	7692510854	236778024353	236679377040	150
2361840657	2361840992	7692510854	236778024353	236679377040	150
6136700264	6136700582	8997410918	613813963061	613370862641	150
6136700264	6136700582	8997410918	613813963061	613370862641	150
560473710	560473596	7469410551	56474225707	56175548502	150
560473710	560473596	7469410551	56474225707	56175548502	150
7723442566	7723442624	5912510080	772395411576	772224897929	150
7723442566	7723442624	5912510080	772395411576	772224897929	150
7400359661	7400359213	3800610049	740435481312	740820726791	150
7400359661	7400359213	3800610049	740435481312	740820726791	150
7806692201	7806692384	6215510041	780395230032	780651998348	150
7806692201	7806692384	6215510041	780395230032	780651998348	150
9173318476	9173318336	4420510138	917960081499	917424180806	150
9173318476	9173318336	4420510138	917960081499	917424180806	150
9420173468	9420173439	2195500766	942680125351	942203338139	150
9420173468	9420173439	2195500766	942680125351	942203338139	150
3890528455	3890528519	5026500064	389267303598	389857529782	150
3890528455	3890528519	5026500064	389267303598	389857529782	150
4926421580	4926421493	1708410992	492604015324	492530583182	150
4926421580	4926421493	1708410992	492604015324	492530583182	150
8586676033	8586676189	5520510149	858794085227	858113725159	150
8586676033	8586676189	5520510149	858794085227	858113725159	150
4958510000	4958510601	4958510568	495011700726	495661631992	150
4958510000	4958510601	4958510568	495011700726	495661631992	150
4515611476	4515611136	2734510275	451725186078	451713326424	150
4515611476	4515611136	2734510275	451725186078	451713326424	150
8293064254	8293064606	5426410172	829920460052	829402701104	150
8293064254	8293064606	5426410172	829920460052	829402701104	150
8586410000	8586410732	8586410788	858733924812	858550533574	150
8586410000	8586410732	8586410788	858733924812	858550533574	150
4633019421	4633019512	7491512072	463979464010	463730202032	150
4633019421	4633019512	7491512072	463979464010	463730202032	150
8396395654	8396395856	6679510734	839818185964	839890596303	150
8396395654	8396395856	6679510734	839818185964	839890596303	150
6342397019	6342397844	6716410103	634280219116	634928303087	150
6342397019	6342397844	6716410103	634280219116	634928303087	150
3639495978	3639495025	8380510726	363397304142	363527929348	150
3639495978	3639495025	8380510726	363397304142	363527929348	150

6865872377	6865872118	1118510086	686715859653	686714568512	150
6865872377	6865872118	1118510086	686715859653	686714568512	150
2396511559	2396511016	2709410981	239278382272	239008444512	150
2396511559	2396511016	2709410981	239278382272	239008444512	150
9931079919	9931079625	345500272	993180103939	993886956361	150
9931079919	9931079625	345500272	993180103939	993886956361	150
3270124631	3270124176	2408410963	327129566834	327657266531	150
3270124631	3270124176	2408410963	327129566834	327657266531	150
7008684484	7008684439	5757410498	700696828410	700794571223	150
7008684484	7008684439	5757410498	700696828410	700794571223	150
2826713003	2826713757	4607510043	282759035419	282862496277	150
2826713003	2826713757	4607510043	282759035419	282862496277	150
5026995080	5026995340	4381610779	502513192824	502728287275	150
5026995080	5026995340	4381610779	502513192824	502728287275	150
7139868534	7139868041	5615500007	713097771702	713909943674	150
7139868534	7139868041	5615500007	713097771702	713909943674	150
1109873020	1109873096	2597410872	110811746509	110179970618	150
1109873020	1109873096	2597410872	110811746509	110179970618	150
2843905199	2843905720	177410632	284457455220	284085209473	150
2481386219	2481386262	9788410789	248984872171	248279873365	150
2481386219	2481386262	9788410789	248984872171	248279873365	150
9669401443	9669401716	815500024	966296069516	966260633937	150
9669401443	9669401716	815500024	966296069516	966260633937	150
8566559720	8566559718	2023510096	856855647401	856580769706	150
8566559720	8566559718	2023510096	856855647401	856580769706	150
6719624438	6719624368	1771510651	671281697250	671797491834	150
6719624438	6719624368	1771510651	671281697250	671797491834	150
8577966475	8577966123	2359410437	857900313973	857513531203	150
8577966475	8577966123	2359410437	857900313973	857513531203	150
1631254931	1631254535	8568410569	163491876360	163209182940	150
1631254931	1631254535	8568410569	163491876360	163209182940	150
1468314114	1468314096	6915500041	146505950675	146084634825	150
1468314114	1468314096	6915500041	146505950675	146084634825	150
2789858472	2789858425	5667510644	278041609367	278628667324	150
2789858472	2789858425	5667510644	278041609367	278628667324	150
2152510000	2152510735	2152510398	215332919559	215016621800	150
2152510000	2152510735	2152510398	215332919559	215016621800	150
7518063017	7518063828	2149410317	751139723502	751798038638	150
7518063017	7518063828	2149410317	751139723502	751798038638	150
4508785851	4508785823	5216500984	450485493307	450641663314	150
4508785851	4508785823	5216500984	450485493307	450641663314	150
1924486479	1924486790	7007510985	192475998205	192754146620	150
1924486479	1924486790	7007510985	192475998205	192754146620	150
1740850122	1740850225	5206500883	174606031340	174147991865	150
1740850122	1740850225	5206500883	174606031340	174147991865	150
1825432810	1825432266	8369410542	182856678438	182524499203	150
1825432810	1825432266	8369410542	182856678438	182524499203	150

7966477277	7966477956	3295500779	796744600120	796399743078	150
7966477277	7966477956	3295500779	796744600120	796399743078	150
9540425640	9540425267	2439410247	954632660214	954570694426	150
9540425640	9540425267	2439410247	954632660214	954570694426	150
7281158549	7281158851	7927410230	728638391791	728282095663	150
7281158549	7281158851	7927410230	728638391791	728282095663	150
1230456975	1230456232	8908510073	123525109208	123927053984	150
1230456975	1230456232	8908510073	123525109208	123927053984	150
720788218	720788556	119910000	72510313604	72490115996	150
720788218	720788556	119910000	72510313604	72490115996	150
1756389462	1756389318	435510264	175191679354	175192330562	150
1756389462	1756389318	435510264	175191679354	175192330562	150
2606410000	2606410144	2606410989	260338072401	260180548644	150
2606410000	2606410144	2606410989	260338072401	260180548644	150
4206133529	4206133880	4869410588	420694786911	420548991897	150
4206133529	4206133880	4869410588	420694786911	420548991897	150
2285256237	2285256750	9636510344	228247311835	228109065899	150
2285256237	2285256750	9636510344	228247311835	228109065899	150
2171488761	2171488679	3269510593	217205615735	217757146541	150
2171488761	2171488679	3269510593	217205615735	217757146541	150
5684710606	5684710413	9484510760	568745000903	568211921890	150
5684710606	5684710413	9484510760	568745000903	568211921890	150
3345456772	3345456336	1961610637	334155622780	334160336614	150
3345456772	3345456336	1961610637	334155622780	334160336614	150
727965109	727965843	4874510695	72034375695	72034438848	150
727965109	727965843	4874510695	72034375695	72034438848	150
7651316208	7651316598	1016510072	765798615508	765838250414	150
7651316208	7651316598	1016510072	765798615508	765838250414	150
4553866842	4553866780	6436510321	455176358279	455914293952	150
4438155008	4438155137	5776410704	443098314780	443342696996	150
4438155008	4438155137	5776410704	443098314780	443342696996	150
791370134	791370284	5378510705	79527747002	79579205899	150
791370134	791370284	5378510705	79527747002	79579205899	150
3628326303	3628326093	4471510624	362441563167	362177790508	150
3628326303	3628326093	4471510624	362441563167	362177790508	150
7228475592	7228475078	4147510396	722832938423	722643496022	150
7228475592	7228475078	4147510396	722832938423	722643496022	150
3123899592	3123899653	3780510760	312617337188	312820239273	150
3123899592	3123899653	3780510760	312617337188	312820239273	150
4379222765	4379222692	4358410449	437429535487	437456306888	150
4379222765	4379222692	4358410449	437429535487	437456306888	150
7266900507	7266900318	1880510768	726336106120	726862407691	150
7266900507	7266900318	1880510768	726336106120	726862407691	150
2922510000	2922510303	2922510176	292525769349	292624982168	150
2922510000	2922510303	2922510176	292525769349	292624982168	150
4301753534	4301753620	6937410323	430856684787	430086491661	150
4301753534	4301753620	6937410323	430856684787	430086491661	150

9580186386	9580186706	9451510428	958754992161	958939473237	150
9580186386	9580186706	9451510428	958754992161	958939473237	150
2546378053	2546378121	6219410034	254056348403	254360028643	150
2546378053	2546378121	6219410034	254056348403	254360028643	150
7257588176	7257588959	4318510109	725336357923	725122701971	150
7257588176	7257588959	4318510109	725336357923	725122701971	150
621924247	621924360	4197410835	62973720626	62552350149	150
621924247	621924360	4197410835	62973720626	62552350149	150
3945445277	3945445027	4178410624	394460413199	394020614758	150
3945445277	3945445027	4178410624	394460413199	394020614758	150
8489829547	8489829250	7305510951	848828427365	848104864346	150
8489829547	8489829250	7305510951	848828427365	848104864346	150
9537960125	9537960229	7168510590	953646494892	953589815302	150
9537960125	9537960229	7168510590	953646494892	953589815302	150
7391506559	7391506622	9961510579	739688242767	739592845556	150
7391506559	7391506622	9961510579	739688242767	739592845556	150
9026511699	9026511899	7406410975	902069960328	902123344790	150
9026511699	9026511899	7406410975	902069960328	902123344790	150
5257815639	5257815470	4937510377	525749963384	525375347658	150
5257815639	5257815470	4937510377	525749963384	525375347658	150
4976525082	4976525922	4791610919	497916415503	497489811910	150
4976525082	4976525922	4791610919	497916415503	497489811910	150
6906269077	6906269876	2581610797	690998336774	690565066210	150
6906269077	6906269876	2581610797	690998336774	690565066210	150
5387599249	5387599612	9725500124	538203709418	538707837560	150
5387599249	5387599612	9725500124	538203709418	538707837560	150
2798376205	2798376556	5476510722	279308095789	279420515749	150
2798376205	2798376556	5476510722	279308095789	279420515749	150
2560219053	2560219852	4761610620	256705118001	256763587928	150
2560219053	2560219852	4761610620	256705118001	256763587928	150
8545538415	8545538350	1077410623	854996460747	854818896294	150
8545538415	8545538350	1077410623	854996460747	854818896294	150
2695667684	2695667617	688410769	269452833038	269752468553	150
2695667684	2695667617	688410769	269452833038	269752468553	150
3627610000	3627610681	7130510211	362092416924	362083212187	150
3627610000	3627610681	7130510211	362092416924	362083212187	150
8215568273	8215568388	5640510357	821999149677	821659770267	150
8215568273	8215568388	5640510357	821999149677	821659770267	150
4590367715	4590367798	1398410841	459210160749	459954620006	150
4590367715	4590367798	1398410841	459210160749	459954620006	150
2184366760	2184366072	4089410707	218356571133	218632740262	150
2184366760	2184366072	4089410707	218356571133	218632740262	150
5285758217	5285758691	6767510655	528844722985	528217694204	150
5285758217	5285758691	6767510655	528844722985	528217694204	150
4058510000	4058510151	8489510816	405573017364	405080002916	150
4058510000	4058510151	8489510816	405573017364	405080002916	150
3134212478	3134212665	4058510478	313451771741	313352444462	150

3134212478	3134212665	4058510478	313451771741	313352444462	150
5950786963	5950786158	2777410693	595933948552	595769229647	150
5950786963	5950786158	2777410693	595933948552	595769229647	150
5279895948	5279895346	336410258	527450008139	527983495906	150
5279895948	5279895346	336410258	527450008139	527983495906	150
979262040	979262507	4099510872	97604537250	97645809484	150
979262040	979262507	4099510872	97604537250	97645809484	150
339524100	339524162	2244510329	33322446600	33869047391	150
339524100	339524162	2244510329	33322446600	33869047391	150
8707762638	8707762502	1680510748	870277636465	870780771810	150
8707762638	8707762502	1680510748	870277636465	870780771810	150
8001320770	8001320587	2402610986	800517975944	800674210621	150
8001320770	8001320587	2402610986	800517975944	800674210621	150
1701117727	1701117039	29510174	170941610063	170619195598	150
1701117727	1701117039	29510174	170941610063	170619195598	150
7473510000	7473510239	1267410544	747537411567	747739891640	150
7473510000	7473510239	1267410544	747537411567	747739891640	150
8776347244	8776347285	6909410004	877913181910	877321861665	150
8776347244	8776347285	6909410004	877913181910	877321861665	150
5558170231	5558170530	9673510662	555029697692	555565221775	150
5558170231	5558170530	9673510662	555029697692	555565221775	150
5687771312	5687771115	7919410104	568837360141	568525254775	150
5687771312	5687771115	7919410104	568837360141	568525254775	150
4002190913	4002190434	8747410400	400414066723	400634610417	150
4002190913	4002190434	8747410400	400414066723	400634610417	150
7949317293	7949317114	5648410383	794817678628	794448040823	150
7949317293	7949317114	5648410383	794817678628	794448040823	150
2250522906	2250522767	5726410202	225351373012	225585473507	150
2250522906	2250522767	5726410202	225351373012	225585473507	150
2023956227	2023956833	835500223	202391913029	202549123067	150
2023956227	2023956833	835500223	202391913029	202549123067	150
8402510000	8402510951	8402510929	840171198724	840686827825	150
8402510000	8402510951	8402510929	840171198724	840686827825	150
17871505	17871554	1847410403	1366296679	1503325188	150
17871505	17871554	1847410403	1366296679	1503325188	150
6337651011	6337651683	2198510883	633267001950	633395659855	150
6337651011	6337651683	2198510883	633267001950	633395659855	150
9065215450	9065215059	7473510640	906999535044	906868622665	150
9065215450	9065215059	7473510640	906999535044	906868622665	150
904779400	904779023	9631610318	90278705373	90376494340	150
904779400	904779023	9631610318	90278705373	90376494340	150
2051581668	2051581454	8469510617	205871594826	205605812109	150
2051581668	2051581454	8469510617	205871594826	205605812109	150
7445632025	7445632252	1594510863	744119075039	744514603470	150
7445632025	7445632252	1594510863	744119075039	744514603470	150
3762289272	3762289798	6939910000	376404473418	376220381657	150
3762289272	3762289798	6939910000	376404473418	376220381657	150

3535432429	3535432271	2373510625	353475999782	353874859500	150
3535432429	3535432271	2373510625	353475999782	353874859500	150
9731043140	9731043447	7723510172	973286190739	973280962792	150
9731043140	9731043447	7723510172	973286190739	973280962792	150
17968589	17968175	8769410582	1399313516	1906659347	150
17968589	17968175	8769410582	1399313516	1906659347	150
4695086884	4695086113	1868410592	469458365706	469257927812	150
4695086884	4695086113	1868410592	469458365706	469257927812	150
5639263313	5639263453	8209410937	563988118936	563709722100	150
5639263313	5639263453	8209410937	563988118936	563709722100	150
4458571545	4458571223	7502610001	445793923728	445352190720	150
4458571545	4458571223	7502610001	445793923728	445352190720	150
6888330557	6888330698	4395510904	688797098698	688355603485	150
6888330557	6888330698	4395510904	688797098698	688355603485	150
3083663634	3083663452	4336510309	308610235689	308285484410	150
3083663634	3083663452	4336510309	308610235689	308285484410	150
8851654889	8851654025	8750510469	885799740961	885650673291	150
8851654889	8851654025	8750510469	885799740961	885650673291	150
6169694783	6169694169	3949410398	616443904910	616083019794	150
6169694783	6169694169	3949410398	616443904910	616083019794	150
1252418636	1252418304	5006510975	125102417888	125947879189	150
1252418636	1252418304	5006510975	125102417888	125947879189	150
3817589078	3817589950	8947510479	381742400714	381061061867	150
3817589078	3817589950	8947510479	381742400714	381061061867	150
7269323169	7269323822	3328510207	726436036716	726260950441	150
7269323169	7269323822	3328510207	726436036716	726260950441	150
1969462626	1969462187	3949510464	196063708462	196831420898	150
1969462626	1969462187	3949510464	196063708462	196831420898	150
4965865677	4965865465	7526410184	496048473665	496983346096	150
4965865677	4965865465	7526410184	496048473665	496983346096	150
7077970190	7077970821	4056510477	707551743481	707212272516	150
7077970190	7077970821	4056510477	707551743481	707212272516	150
8434989269	8434989780	5579410658	843573853936	843343765656	150
8434989269	8434989780	5579410658	843573853936	843343765656	150
2003528789	2003528582	4680610824	200509691301	200043386716	150
2003528789	2003528582	4680610824	200509691301	200043386716	150
7937950731	7937950273	7335500181	793014847557	793929469076	150
7937950731	7937950273	7335500181	793014847557	793929469076	150
727610000	727610424	2588510823	72185086491	72226805045	150
727610000	727610424	2588510823	72185086491	72226805045	150
115426331	115426842	4867410607	11636524099	11137321265	150
115426331	115426842	4867410607	11636524099	11137321265	150
7783394796	7783394371	3727410205	778252868348	778970933277	150
7783394796	7783394371	3727410205	778252868348	778970933277	150
3584875716	3584875234	5738410294	358962968473	358626336483	150
3584875716	3584875234	5738410294	358962968473	358626336483	150
8542645663	8542645031	5439410250	854117754013	854053277948	150

8542645663	8542645031	5439410250	854117754013	854053277948	150
9779342311	9779342997	8706500936	977616369244	977544640723	150
9779342311	9779342997	8706500936	977616369244	977544640723	150
9317441571	9317441906	4517510134	931995411130	931481224888	150
9317441571	9317441906	4517510134	931995411130	931481224888	150
6127888303	6127888820	6169410520	612044069523	612723316229	150
6127888303	6127888820	6169410520	612044069523	612723316229	150
2243242666	2243242196	2368410544	224421757534	224162996221	150
2243242666	2243242196	2368410544	224421757534	224162996221	150
7887332782	7887332291	3117410045	788330171898	788381652440	150
7887332782	7887332291	3117410045	788330171898	788381652440	150
2420568877	2420568851	5931510278	242319880328	242751720442	150
2420568877	2420568851	5931510278	242319880328	242751720442	150
6363487331	6363487227	7449410352	636193666986	636073550274	150
6363487331	6363487227	7449410352	636193666986	636073550274	150
6914400870	6914400282	9349510410	691378393697	691213083279	150
6914400870	6914400282	9349510410	691378393697	691213083279	150
8612710483	8612710688	5151510394	861714425298	861911826075	150
8612710483	8612710688	5151510394	861714425298	861911826075	150
3994653248	3994653951	1423510136	399735436799	399134959185	150
3994653248	3994653951	1423510136	399735436799	399134959185	150
1895364871	1895364846	4376510711	189559083775	189652652461	150
1895364871	1895364846	4376510711	189559083775	189652652461	150
3507448522	3507448517	5106500874	350905956235	350573602664	150
3507448522	3507448517	5106500874	350905956235	350573602664	150
7457538582	7457538240	3939410298	745331883958	745756708006	150
7457538582	7457538240	3939410298	745331883958	745756708006	150
3470595444	3470595684	6482510731	347089387070	347032435077	150
3470595444	3470595684	6482510731	347089387070	347032435077	150
6261035748	6261035452	7433510241	626887407417	626855867839	150
6261035748	6261035452	7433510241	626887407417	626855867839	150
8324925893	8324925779	8182510704	832134536468	832310924913	150
8324925893	8324925779	8182510704	832134536468	832310924913	150
16058323	16058926	5976510772	1422135872	1738506486	150
16058323	16058926	5976510772	1422135872	1738506486	150
5924149408	5924149529	4825500129	592452835959	592737374577	150
5924149408	5924149529	4825500129	592452835959	592737374577	150
9193915788	9193915723	9499410847	919921256857	919749208085	150
9193915788	9193915723	9499410847	919921256857	919749208085	150
4271510000	4271510291	4271510603	427109004474	427165299433	150
4271510000	4271510291	4271510603	427109004474	427165299433	150
9214444769	9214444418	1761510552	921851912260	921969089748	150
9214444769	9214444418	1761510552	921851912260	921969089748	150
5408462230	5408462380	3497410863	540477128157	540941382958	150
5408462230	5408462380	3497410863	540477128157	540941382958	150
8558919078	8558919474	3418410064	855828347674	855208145128	150
8558919078	8558919474	3418410064	855828347674	855208145128	150

7381721349	7381721255	29410107	738244510390	738456591526	150
7381721349	7381721255	29410107	738244510390	738456591526	150
5100519112	5100519276	71610645	510173606573	510317094469	150
5100519112	5100519276	71610645	510173606573	510317094469	150
3647564870	3647564236	2489410744	364711994622	364051987816	150
3647564870	3647564236	2489410744	364711994622	364051987816	150
5366467478	5366467197	9076410639	536450602392	536911623008	150
5366467478	5366467197	9076410639	536450602392	536911623008	150
4565883892	4565883565	2763910000	456298418290	456484212143	150
4565883892	4565883565	2763910000	456298418290	456484212143	150
3952034861	3952034170	6706410003	395724787780	395467319385	150
3952034861	3952034170	6706410003	395724787780	395467319385	150
855910617	855910067	4898510955	85574104921	85232932482	150
855910617	855910067	4898510955	85574104921	85232932482	150
3870641090	3870641445	4410510039	387111902168	387571247276	150
3870641090	3870641445	4410510039	387111902168	387571247276	150
4621656858	4621656185	2744510380	462425177036	462869308697	150
4621656858	4621656185	2744510380	462425177036	462869308697	150
9138006190	9138006227	9726510253	913454902774	913806920035	150
9138006190	9138006227	9726510253	913454902774	913806920035	150
2954752815	2954752523	9168410531	295204144183	295716204987	150
2954752815	2954752523	9168410531	295204144183	295716204987	150
8785012539	8785012731	9315510055	878535565086	878968985237	150
8785012539	8785012731	9315510055	878535565086	878968985237	150
6184807560	6184807552	1427510219	618175277189	618346819076	150
6184807560	6184807552	1427510219	618175277189	618346819076	150
311610000	311610594	311610086	31293191801	31687346871	150
311610000	311610594	311610086	31293191801	31687346871	150
2639410000	2639410970	2639410267	263826837553	263945526645	150
2639410000	2639410970	2639410267	263826837553	263945526645	150
2179264195	2179264184	6261610572	217588145544	217447355667	150
2179264195	2179264184	6261610572	217588145544	217447355667	150
4466967988	4466967682	900510985	446168527387	446035417049	150
4466967988	4466967682	900510985	446168527387	446035417049	150
960029792	960029084	6316500995	96837931266	96294998764	150
960029792	960029084	6316500995	96837931266	96294998764	150
1127456011	1127456427	3441610391	112093835002	112905505381	150
1127456011	1127456427	3441610391	112093835002	112905505381	150
5892626763	5892626235	4654510475	589329923959	589190560697	150
5892626763	5892626235	4654510475	589329923959	589190560697	150
884158503	884158153	2127410142	88615986078	88141992139	150
2463085906	2463085166	7139410223	246316476948	246511784669	150
2463085906	2463085166	7139410223	246316476948	246511784669	150
6991171173	6991171328	247510402	699551065388	699261211983	150
7551006914	7551006424	9135500163	755660322765	755169878963	150
7551006914	7551006424	9135500163	755660322765	755169878963	150
754034656	754034285	290610880	75165800773	75840053438	150

754034656	754034285	290610880	75165800773	75840053438	150
2273075581	2273075373	2357510513	227232441193	227704574643	150
2273075581	2273075373	2357510513	227232441193	227704574643	150
7783609914	7783609183	6102510897	778344086905	778682090519	150
7783609914	7783609183	6102510897	778344086905	778682090519	150
5007553934	5007553455	6806500944	500815277338	500479537968	150
5007553934	5007553455	6806500944	500815277338	500479537968	150
9161343813	9161343071	7549410362	916801326165	916479330641	150
9161343813	9161343071	7549410362	916801326165	916479330641	150
2700490432	2700490049	7972510682	270521572945	270032299590	150
2700490432	2700490049	7972510682	270521572945	270032299590	150
6785986358	6785986363	2895510952	678921737320	678695568939	150
6785986358	6785986363	2895510952	678921737320	678695568939	150
8126067700	8126067775	6831610335	812076481204	812575485911	150
8126067700	8126067775	6831610335	812076481204	812575485911	150
1676938460	1676938091	5727410208	167638297166	167469921104	150
1676938460	1676938091	5727410208	167638297166	167469921104	150
8759895438	8759895694	4288410733	875494276102	875376108420	150
8759895438	8759895694	4288410733	875494276102	875376108420	150
3827292612	3827292689	8400610014	382784816176	382527774788	150
3827292612	3827292689	8400610014	382784816176	382527774788	150
3041754410	3041754239	6750610537	304717126136	304948551285	150
3041754410	3041754239	6750610537	304717126136	304948551285	150
5423157360	5423157758	9061510489	542103615948	542586740918	150
5423157360	5423157758	9061510489	542103615948	542586740918	150
8383889219	8383889179	4876510761	838985463696	838702944784	150
8383889219	8383889179	4876510761	838985463696	838702944784	150
979237264	979237413	9206510999	97551923701	97195435294	150
979237264	979237413	9206510999	97551923701	97195435294	150
3636980459	3636980191	3978510763	363394988157	363274707790	150
3636980459	3636980191	3978510763	363394988157	363274707790	150
4166115940	4166115647	5125500060	416167318606	416297274331	150
4166115940	4166115647	5125500060	416167318606	416297274331	150
7988784892	7988784730	5566500514	798292784132	798572883618	150
7988784892	7988784730	5566500514	798292784132	798572883618	150
1011981351	1011981208	985500740	101832588772	101410962159	150
1011981351	1011981208	985500740	101832588772	101410962159	150
7255969178	7255969530	8291510808	725731124661	725578101729	150
7255969178	7255969530	8291510808	725731124661	725578101729	150
2481584947	2481584576	1277410643	248050542773	248888142635	150
2481584947	2481584576	1277410643	248050542773	248888142635	150
3850584546	3850584440	5768410586	385918172162	385540560358	150
3850584546	3850584440	5768410586	385918172162	385540560358	150
3472348084	3472348603	6294510838	347400176631	347891681645	150
3472348084	3472348603	6294510838	347400176631	347891681645	150
4765244386	4765244118	7980610857	476987032993	476678683167	150
4765244386	4765244118	7980610857	476987032993	476678683167	150

9690483314	9690483082	6613510060	969793219752	969096465540	150
9690483314	9690483082	6613510060	969793219752	969096465540	150
5153141460	5153141287	8394510850	515697039350	515044614867	150
5153141460	5153141287	8394510850	515697039350	515044614867	150
1328238137	1328238339	4178510684	132109345944	132247250883	150
1328238137	1328238339	4178510684	132109345944	132247250883	150
2616379200	2616379083	2424510143	261576322301	261731689220	150
2616379200	2616379083	2424510143	261576322301	261731689220	150
8700107915	8700107249	9444510357	870005358214	870274237581	150
8700107915	8700107249	9444510357	870005358214	870274237581	150
6669657932	6669657267	7527410188	666630144449	666395406116	150
6669657932	6669657267	7527410188	666630144449	666395406116	150
9683788762	9683788990	5570610714	968066376621	968831197070	150
9683788762	9683788990	5570610714	968066376621	968831197070	150
3479613099	3479613866	3909410001	347222683684	347827661064	150
3479613099	3479613866	3909410001	347222683684	347827661064	150
2472030245	2472030735	7819410094	247945716338	247436141355	150
2472030245	2472030735	7819410094	247945716338	247436141355	150
3402156409	3402156520	7949510468	340943576011	340161686351	150
3402156409	3402156520	7949510468	340943576011	340161686351	150
3325736365	3325736719	3577510731	332490906958	332579970031	150
3325736365	3325736719	3577510731	332490906958	332579970031	150
2113571680	2113571667	5328410152	211301232120	211227027534	150
2113571680	2113571667	5328410152	211301232120	211227027534	150
7431528861	7431528344	7149410322	743197828167	743878681407	150
7431528861	7431528344	7149410322	743197828167	743878681407	150
3489048618	3489048890	3770510662	348919020629	348880638182	150
3489048618	3489048890	3770510662	348919020629	348880638182	150
2554627899	2554627883	7635500210	255784624803	255136443839	150
2554627899	2554627883	7635500210	255784624803	255136443839	150
461107816	461107840	987410810	46631497814	46198252262	150
461107816	461107840	987410810	46631497814	46198252262	150
2484870275	2484870888	9251610475	248579722825	248873403490	150
2484870275	2484870888	9251610475	248579722825	248873403490	150
5527235480	5527235649	987510867	552611038714	552544411873	150
5527235480	5527235649	987510867	552611038714	552544411873	150
5517593346	5517593089	919410097	551242910818	551601278592	150
5517593346	5517593089	919410097	551242910818	551601278592	150
5556240662	5556240539	4235500168	555051065918	555526062924	150
5556240662	5556240539	4235500168	555051065918	555526062924	150
6395865386	6395865275	4087410725	639848209090	639947274672	150
6395865386	6395865275	4087410725	639848209090	639947274672	150
4700165712	4700165001	227410151	470073467952	470042225447	150
4700165712	4700165001	227410151	470073467952	470042225447	150
9842832612	9842832673	4219510097	984639616039	984501172455	150
9842832612	9842832673	4219510097	984639616039	984501172455	150
6261138687	6261138181	4358510508	626199983610	626655615627	150

6261138687	6261138181	4358510508	626199983610	626655615627	150
1603687221	1603687003	2707510051	160219716236	160472112570	150
1603687221	1603687003	2707510051	160219716236	160472112570	150
8196359329	8196359826	8641610415	819739085341	819807782014	150
8196359329	8196359826	8641610415	819739085341	819807782014	150
4441106678	4441106514	7388410746	444913133335	444874725033	150
4441106678	4441106514	7388410746	444913133335	444874725033	150
5367300733	5367300326	5690610924	536610490034	536265606833	150
5367300733	5367300326	5690610924	536610490034	536265606833	150
6185937891	6185937346	4755510514	618377973269	618949793420	150
6185937891	6185937346	4755510514	618377973269	618949793420	150
8949064820	8949064952	101510894	894928057721	894619209257	150
8949064820	8949064952	101510894	894928057721	894619209257	150
4418803878	4418803335	6987410816	441953690477	441418274190	150
4418803878	4418803335	6987410816	441953690477	441418274190	150
9118561750	9118561460	1079410605	911557845294	911418216432	150
9118561750	9118561460	1079410605	911557845294	911418216432	150
3722197821	3722197912	7793510872	372116184851	372792407384	150
3722197821	3722197912	7793510872	372116184851	372792407384	150
4963471027	4963471503	3968510664	496024830619	496275017843	150
4963471027	4963471503	3968510664	496024830619	496275017843	150
9840352274	9840352264	4269410528	984088405654	984175388240	150
9840352274	9840352264	4269410528	984088405654	984175388240	150
8766672033	8766672889	2917410122	876374700633	876147428819	150
8766672033	8766672889	2917410122	876374700633	876147428819	150
1901623417	1901623297	118410031	190410886415	190093383709	150
1901623417	1901623297	118410031	190410886415	190093383709	150
8202610651	8202610593	9585510828	820419834724	820915268971	150
8202610651	8202610593	9585510828	820419834724	820915268971	150
7917478128	7917478616	6458410461	791310743050	791134127207	150
7917478128	7917478616	6458410461	791310743050	791134127207	150
6008812553	6008812506	279410624	600799144163	600477867388	150
6008812553	6008812506	279410624	600799144163	600477867388	150
2460509995	2460509910	6459410451	246606811619	246278281247	150
2460509995	2460509910	6459410451	246606811619	246278281247	150
9603325805	9603325824	3027410133	960629862849	960441059387	150
9603325805	9603325824	3027410133	960629862849	960441059387	150
1186893314	1186893052	689510828	118671628635	118495763392	150
1186893314	1186893052	689510828	118671628635	118495763392	150
2457509925	2457509953	4823510179	245632498396	245766061131	150
2457509925	2457509953	4823510179	245632498396	245766061131	150
3685505684	3685505034	6596410886	368498924273	368305529429	150
3685505684	3685505034	6596410886	368498924273	368305529429	150
6226399798	6226399361	5327510213	622605611018	622193231724	150
6226399798	6226399361	5327510213	622605611018	622193231724	150
901019797	901019132	6418510121	90473223941	90504462451	150
901019797	901019132	6418510121	90473223941	90504462451	150

9611084567	9611084514	57510481	961584934323	961052799006	150
9611084567	9611084514	57510481	961584934323	961052799006	150
5207689817	5207689657	1891510861	520204634229	520064288646	150
5207689817	5207689657	1891510861	520204634229	520064288646	150
6983702586	6983702157	9577410680	698246867310	698398478637	150
6983702586	6983702157	9577410680	698246867310	698398478637	150
2625040240	2625040636	9291610874	262862839700	262622734230	150
2625040240	2625040636	9291610874	262862839700	262622734230	150
3210018226	3210018669	1047410327	321760711150	321848401464	150
3210018226	3210018669	1047410327	321760711150	321848401464	150
7291910850	7291910546	8060510500	729859920780	729059851137	150
7291910850	7291910546	8060510500	729859920780	729059851137	150
6616012373	6616012693	4496410874	661947446458	661329917319	150
6616012373	6616012693	4496410874	661947446458	661329917319	150
5036505800	5036505923	969910000	503809908158	503692535544	150
5036505800	5036505923	969910000	503809908158	503692535544	150
8091915664	8091915103	5079510673	809032880638	809207392325	150
6978940638	6978940671	6033510201	697671298097	697037546171	150
6978940638	6978940671	6033510201	697671298097	697037546171	150
8796876228	8796876313	5345500277	879006491444	879051706135	150
8796876228	8796876313	5345500277	879006491444	879051706135	150
1909468571	1909468396	382510716	190731323052	190987126595	150
1909468571	1909468396	382510716	190731323052	190987126595	150
8968944292	8968944617	9226410156	896080141928	896373567917	150
8968944292	8968944617	9226410156	896080141928	896373567917	150
356993757	356993049	9985500751	35920391037	35490013211	150
356993757	356993049	9985500751	35920391037	35490013211	150
4582030350	4582030136	5517410087	458106609358	458422175557	150
4582030350	4582030136	5517410087	458106609358	458422175557	150
1200030930	1200030183	632510246	120469115430	120898499333	150
1200030930	1200030183	632510246	120469115430	120898499333	150
6876907924	6876907809	8054510417	687388795989	687360403045	150
6876907924	6876907809	8054510417	687388795989	687360403045	150
7665195965	7665195935	4629510237	766012240980	766162793587	150
7665195965	7665195935	4629510237	766012240980	766162793587	150
9582150864	9582150060	5875510748	958790758501	958556639842	150
9582150864	9582150060	5875510748	958790758501	958556639842	150
2374306628	2374306914	8529410164	237172683175	237319411762	150
2374306628	2374306914	8529410164	237172683175	237319411762	150
5169826463	5169826564	3478410653	516517645836	516679599116	150
5169826463	5169826564	3478410653	516517645836	516679599116	150
3467489268	3467489579	7468410558	346225957644	346160236722	150
3467489268	3467489579	7468410558	346225957644	346160236722	150
8590532982	8590532259	1236500180	859293288212	859018987763	150
8590532982	8590532259	1236500180	859293288212	859018987763	150
6507173292	6507173460	3085500645	650704268917	650629412650	150
6507173292	6507173460	3085500645	650704268917	650629412650	150

2426510000	2426510950	2426510215	242858541153	242968877411	150
2426510000	2426510950	2426510215	242858541153	242968877411	150
4428020784	4428020661	535500193	442811010103	442771090412	150
4428020784	4428020661	535500193	442811010103	442771090412	150
3091610000	3091610079	3091610848	309688231915	309853417462	150
3091610000	3091610079	3091610848	309688231915	309853417462	150
2014069564	2014069926	6893510882	201681594276	201062588945	150
355323211	355323753	1167410534	35586378168	35102836830	150
355323211	355323753	1167410534	35586378168	35102836830	150
2128961053	2128961227	3871610728	212512859471	212985538433	150
2128961053	2128961227	3871610728	212512859471	212985538433	150
5167571961	5167571498	7233500201	516170732744	516611506727	150
5167571961	5167571498	7233500201	516170732744	516611506727	150
1095580099	1095580661	8463510540	109635835226	109340728341	150
1095580099	1095580661	8463510540	109635835226	109340728341	150
9645848981	9645848605	228410138	964112790390	964658379829	150
9645848981	9645848605	228410138	964112790390	964658379829	150
1789430255	1789430448	3177510691	178570359734	178733513450	150
1789430255	1789430448	3177510691	178570359734	178733513450	150
4326939997	4326939160	9727410212	432048032414	432657521834	150
4326939997	4326939160	9727410212	432048032414	432657521834	150
7340969389	7340969727	5557410478	734593105030	734665397358	150
7340969389	7340969727	5557410478	734593105030	734665397358	150
2686043366	2686043725	3549410358	268563504868	268366444282	150
2686043366	2686043725	3549410358	268563504868	268366444282	150
3474317658	3474317646	3883510777	347270560690	347922245445	150
3474317658	3474317646	3883510777	347270560690	347922245445	150
8406305483	8406305636	1445500283	840238543630	840768387073	150
8406305483	8406305636	1445500283	840238543630	840768387073	150
7105958982	7105958335	8390610898	710972334986	710244981787	150
7105958982	7105958335	8390610898	710972334986	710244981787	150
9721546662	9721546037	1727510249	972116014537	972800570089	150
9721546662	9721546037	1727510249	972116014537	972800570089	150
8824686291	8824686433	3982510778	882764895826	882080589291	150
8824686291	8824686433	3982510778	882764895826	882080589291	150
606653839	606653173	8817410118	60084517532	60227975786	150
606653839	606653173	8817410118	60084517532	60227975786	150
8109486712	8109486267	2667410586	810949838115	810228347354	150
8109486712	8109486267	2667410586	810949838115	810228347354	150
138390290	138390532	5738510348	13306769979	13913180709	150
138390290	138390532	5738510348	13306769979	13913180709	150
4343188805	4343188929	5116410043	434713149634	434151252514	150
4343188805	4343188929	5116410043	434713149634	434151252514	150
5287368712	5287368864	9787410799	528434018432	528407945092	150
5287368712	5287368864	9787410799	528434018432	528407945092	150
1254606897	1254606080	539510322	125886301742	125395197472	150
1254606897	1254606080	539510322	125886301742	125395197472	150

837285563	837285882	2955510534	83528082657	83985449781	150
837285563	837285882	2955510534	83528082657	83985449781	150
2853207581	2853207201	6881610831	285279031196	285640917504	150
2853207581	2853207201	6881610831	285279031196	285640917504	150
7718542976	7718542412	3379410637	771659335423	771871207472	150
7718542976	7718542412	3379410637	771659335423	771871207472	150
596912131	596912579	6528410173	59461661478	59707735069	150
596912131	596912579	6528410173	59461661478	59707735069	150
2872014333	2872014136	3454510454	287021818609	287719455382	150
2872014333	2872014136	3454510454	287021818609	287719455382	150
5717666997	5717666700	110610076	571593138083	571977655395	150
5717666997	5717666700	110610076	571593138083	571977655395	150
3819781984	3819781258	8347510420	381646349502	381936072204	150
3672202556	3672202457	8659510538	367990649607	367766771119	150
3672202556	3672202457	8659510538	367990649607	367766771119	150
3103066205	3103066160	2129711369	310835161111	310494923071	150
6783025132	6783025098	6287510804	678595743842	678012304297	150
6783025132	6783025098	6287510804	678595743842	678012304297	150
5772727149	5772727140	8926500157	577724309826	577543115595	150
5772727149	5772727140	8926500157	577724309826	577543115595	150
7268303348	7268303425	9028410127	726847035990	726062616955	150
7268303348	7268303425	9028410127	726847035990	726062616955	150
508848069	508848534	3722510157	50387724257	50203005468	150
508848069	508848534	3722510157	50387724257	50203005468	150
18311356	18311897	4780610834	1243811853	1943396798	150
18311356	18311897	4780610834	1243811853	1943396798	150
3790077792	3790077840	4101610973	379903350803	379221863490	150
3790077792	3790077840	4101610973	379903350803	379221863490	150
2145656424	2145656155	7598410866	214032859143	214962196629	150
2145656424	2145656155	7598410866	214032859143	214962196629	150
6039218534	6039218356	6537410286	603948640211	603609296331	150
6039218534	6039218356	6537410286	603948640211	603609296331	150
9436018020	9436018276	2385810848	943577275469	943769137741	150
9436018020	9436018276	2385810848	943577275469	943769137741	150
4374558931	4374558082	951510470	437818964134	437554995739	150
4374558931	4374558082	951510470	437818964134	437554995739	150
2387998316	2387998262	4070610663	238318252993	238694690688	150
2387998316	2387998262	4070610663	238318252993	238694690688	150
9710889237	9710889418	7846500346	971241473026	971507867156	150
9710889237	9710889418	7846500346	971241473026	971507867156	150
8944767079	8944767866	7135510241	894999506264	894041874401	150
8944767079	8944767866	7135510241	894999506264	894041874401	150
2591276184	2591276526	9708410000	259763835727	259000133899	150
9231010030	9231010191	2449410347	923783645416	923520597448	150
9231010030	9231010191	2449410347	923783645416	923520597448	150
1439278515	1439278447	1559410456	143409421425	143390263330	150
4970993333	4970993568	3327410164	497541194220	497932000349	150

4970993333	4970993568	3327410164	497541194220	497932000349	150
6687155968	6685048980	5064510516	668347300413	668710903733	150
6687155968	6685048980	5064510516	668347300413	668710903733	150
3413144161	3413144342	8894510900	341958741997	341571181477	150
3413144161	3413144342	8894510900	341958741997	341571181477	150
8993308382	8993308540	3081510683	899554184633	899216309866	150
8993308382	8993308540	3081510683	899554184633	899216309866	150
2321132758	2321132392	9157410442	232332111411	232087767671	150
2321132758	2321132392	9157410442	232332111411	232087767671	150
7296150747	7296150688	3446410371	729817820656	729397376002	150
7296150747	7296150688	3446410371	729817820656	729397376002	150
5464338145	5464338080	5187410736	546124392371	546770282199	150
5464338145	5464338080	5187410736	546124392371	546770282199	150
8398221665	8398221558	5218410047	839454978613	839856635144	150
8398221665	8398221558	5218410047	839454978613	839856635144	150
1936104503	1936104243	6923510191	193773629727	193836000243	150
1936104503	1936104243	6923510191	193773629727	193836000243	150
5991539734	5996296005	3369410537	599068326145	599593072677	150
5991539734	5996296005	3369410537	599068326145	599593072677	150
4487031267	4487031394	7909510069	448435415334	448481650083	150
4487031267	4487031394	7909510069	448435415334	448481650083	150
6915935746	6910249043	9808410010	691820789592	691748397083	150
6915935746	6910249043	9808410010	691820789592	691748397083	150
7801893180	7806129065	5927410228	780020118938	780228649187	150
7801893180	7806129065	5927410228	780020118938	780228649187	150
7194122753	7190444825	950510481	719426985794	719879965130	150
7194122753	7190444825	950510481	719426985794	719879965130	150
4291664035	4294741238	4679910000	429432795709	429096436686	150
4291664035	4294741238	4679910000	429432795709	429096436686	150
8078648935	8077637291	3614510065	807897003091	807255208176	150
8078648935	8077637291	3614510065	807897003091	807255208176	150
5780215438	5784810203	1259910000	578571095071	578177677253	150
9204127469	9202229352	9439410254	920331615955	920938365544	150
2341462163	2343398965	1460510533	234970605272	234738614756	150
2341462163	2343398965	1460510533	234970605272	234738614756	150
9778159845	9778081623	615510078	977180952378	977813702244	150
9778159845	9778081623	615510078	977180952378	977813702244	150
1002189678	1009081685	6151610463	100291116828	100852108233	150
1002189678	1009081685	6151610463	100291116828	100852108233	150
6762950280	6762914393	5047510387	676330575004	676052092813	150
6762950280	6762914393	5047510387	676330575004	676052092813	150
3963512535	3966366267	8455510486	396827862902	396522392245	150
3963512535	3966366267	8455510486	396827862902	396522392245	150
2022945130	2026559726	3783510767	202373802805	202053927467	150
2022945130	2026559726	3783510767	202373802805	202053927467	150
3364515638	3363812684	5815500030	336606801557	336920083258	150
3364515638	3363812684	5815500030	336606801557	336920083258	150

6945374978	6942709779	4229910000	694164919318	694751226802	150
6945374978	6942709779	4229910000	694164919318	694751226802	150
3778973022	3777840825	6690510851	377457029139	377446106590	150
3778973022	3777840825	6690510851	377457029139	377446106590	150
3860500316	3863599613	6505510970	386364452952	386064550327	150
3860500316	3863599613	6505510970	386364452952	386064550327	150
3266756797	3264279360	1718410091	326028871967	326335330258	150
3266756797	3264279360	1718410091	326028871967	326335330258	150
6474285568	6474027676	3611610119	647964872112	647461750425	150
6474285568	6474027676	3611610119	647964872112	647461750425	150
7676080961	7677413565	9890510874	767069012764	767741570749	150
7676080961	7677413565	9890510874	767069012764	767741570749	150
8278739046	8273306767	9079410613	827297950834	827305601627	150
8278739046	8273306767	9079410613	827297950834	827305601627	150
700686599	701572005	8828410206	70716408416	70930603269	150
700686599	701572005	8828410206	70716408416	70930603269	150
2521102638	2520437504	4967510672	252348058841	252159708104	150
2521102638	2520437504	4967510672	252348058841	252159708104	150
4937572902	4932163028	6036410234	493664691768	493890799365	150
4937572902	4932163028	6036410234	493664691768	493890799365	150
6512200606	6513710588	7701542012	651640727847	651213403884	150
6512200606	6513710588	7701542012	651640727847	651213403884	150
8497631597	8492433863	5155510451	849640507698	849270724451	150
8497631597	8492433863	5155510451	849640507698	849270724451	150
4458134393	4455140495	818510155	445439445400	445578669597	150
4458134393	4455140495	818510155	445439445400	445578669597	150
9383699130	9383823510	1738510343	938289976381	938422766590	150
9383699130	9383823510	1738510343	938289976381	938422766590	150
7499211063	7497071492	279510688	749798574724	749324800812	150
7499211063	7497071492	279510688	749798574724	749324800812	150
305330259	300325459	830510272	30053170983	30014659960	150
305330259	300325459	830510272	30053170983	30014659960	150
9590958071	9594063967	953510483	959957483056	959577128848	150
9590958071	9594063967	953510483	959957483056	959577128848	150
6359495754	6352474866	2157510493	635231553728	635063591886	150
6359495754	6352474866	2157510493	635231553728	635063591886	150
2872014333	2872014951	3454510454	287806393161	287544567197	150
2872014333	2872014951	3454510454	287083957743	287544567197	150
2872014333	2872014136	3454510454	287501485975	287544567197	150
2872014333	2872014136	3454510454	287501485975	287544567197	150
2872014333	2872014136	3454510454	287501458025	287544567197	150
2872014333	2872014136	3454510454	287501458025	287544567197	150
1439278515	1439278648	1559410456	143219938379	143397224950	150
1439278515	1439278447	1559410456	143761102101	143397224950	150
3091610000	3091610630	3091610848	309810117291	309964452219	150
3091610000	3091610079	3091610848	309436114615	309964452219	150
3091610000	3091610079	3091610848	309436114615	309964452219	150

6921510000	6921510026	6921510182	692284935294	692274429331	150
9516481177	9516481079	5208410946	951051653684	951924158870	150
6921510000	6921510025	6921510182	692587299246	692274429331	150
6921510000	6921510025	6921510182	692587299246	692274429331	150
9516481177	9516481950	5208410946	951162412273	951924158870	150
9516481177	9516481950	5208410946	951162412273	951924158870	150
175310000	175310941	175310604	17674272065	17843537900	150
175310000	175310941	175310604	17674272065	17843537900	150
7414900000	7414900037	7414900075	741474470558	741976430341	150
7414900000	7414900037	7414900075	741474470558	741976430341	150
9764478372	9764478525	4825110268	976846384591	976749654252	150
9764478372	9764478525	4825110268	976846384591	976749654252	150
175310000	175310942	175310604	17753548552	17843537900	150
7414900000	7414900038	7414900075	741766703260	741976430341	150
9764478372	9764478393	4825110268	976128547353	976749654252	150
6853935263	6853935037	4986059804	685232452912	685911515702	150
6853935263	6853935037	4986059804	685232452912	685911515702	150
7847401518	7847401171	6409857011	784301370950	784630350252	150
7847401518	7847401171	6409857011	784301370950	784630350252	150
5447935942	5447935844	9417310009	544665607894	544243264465	150
5447935942	5447935844	9417310009	544665607894	544243264465	150
7847401518	7847401474	6409857011	784563447015	784630350252	150
6853935263	6853935012	4986059804	685559488931	685911515702	150
5447935942	5447935802	9417310009	544824576661	544243264465	150
7133864322	7135207182	3134500159	713578890310	713851745772	150
7133864322	7138140619	3134500159	713057723841	713851745772	150
5310000	5310799	5310858	678319330	170961345	150
36500000	36500783	36500159	3332503691	3000213157	150
3500000	3500851	3500879	957626481	287532691	150
64500000	64500151	64500438	6556954982	6185996195	150
71500000	71500569	71500591	7792513438	7273131321	150
93500000	93500172	93500762	9718864933	9549354416	150
84600000	84600285	84600663	8105189560	8550215661	150
72500000	72500628	72500581	7523671302	7055745783	150
91500000	91500925	91500784	9449726447	9060768659	150
94500000	94500097	94500729	9274726141	9888063133	150
85400000	85400373	85400709	8551567102	8242212373	150
213400000	213400054	213400039	21776605059	21802241988	150
204400000	204400562	204400924	20505562527	20318581600	150
229400000	229400465	229400136	22954665873	22838743283	150
237400000	237400228	237400264	23223535949	23803900579	150
227400000	227400082	227400166	22660851770	22075934903	150
183500000	183500872	183500674	18116528804	18086471282	150
184400000	184400210	184400707	18098773268	18721888085	150
200500000	200500441	200500929	20448979271	20407418335	150
233500000	233500275	233500194	23572646565	23344736439	150
173400000	173400391	173400620	17779621778	17265154807	150

129400000	129400452	129400126	12085952606	12140934549	150
130500000	130500797	130500215	13636859747	13385496377	150
123610000	123610978	123610141	12677299445	12486203796	150
134400000	134400927	134400212	13998397934	13265700061	150
135400000	135400767	135400215	13010086713	13738768449	150
137610000	137610566	137610193	13459001943	13579818086	150
150500000	150500003	150500411	15202945376	15490609845	150
342500000	342500608	342500312	34336307205	34578297569	150
343400000	343400751	343400343	34541769722	34636053564	150
358610000	358610467	358610399	35395527563	35902100877	150
360500000	360500152	360500531	36251171901	36257799190	150
331500000	331500098	331500225	33698370215	33895888998	150
355500000	355500653	355500373	35326528330	35832504039	150
310610000	310610447	310610096	31434329661	31605447327	150
362400000	362400123	362400551	36908979825	36672680997	150
365400000	365400200	365400539	36813676504	36065176742	150
362500000	362500675	362500511	36057034186	36008878875	150
363500000	363500456	363500499	36589308473	36443877940	150
274500000	274500364	274500551	27987609446	27097227696	150
283500000	283500890	283500684	28370837391	28696913585	150
254500000	254500825	254500358	25204720939	25008177617	150
442500000	442500627	442500322	44279860452	44382585422	150
435400000	435400825	435400247	43151665675	43764515015	150
466400000	466400569	466400562	46383132163	46178021913	150
467400000	467400489	467400581	46346268814	46061437650	150
484500000	484500997	484500670	48682599357	48803077122	150
447400000	447400279	447400381	44185216493	44460348247	150
418400000	418400079	418400073	41999623993	41016875437	150
375400000	375400357	375400639	37043001193	37592360577	150
424400000	424400818	424400143	42711300604	42299868704	150
408410000	408410878	408410961	40966113633	40554001528	150
383500000	383500907	383500694	38057735647	38730022659	150
402500000	402500112	402500922	40482263445	40792457162	150
385400000	385400421	385400739	38150717053	38830016032	150
594810000	594810967	594810031	59625641372	59426241526	150
611500000	611500878	611500056	61507283758	61116934869	150
597400000	597400780	597400886	59041094518	59069695012	150
616400000	616400869	616400066	61274951879	61206004733	150
592400000	592400312	592400870	59610520325	59092800112	150
534400000	534400868	534400252	53561322490	53322829112	150
551500000	551500425	551500441	55968636999	55662415611	150
505500000	505500565	505500879	50447295042	50758344075	150
709400000	709400293	709400988	70936314764	70880467621	150
721500000	721500999	721500164	72984634013	72324402504	150
684500000	684500034	684500689	68106697521	68166493998	150
681500000	681500752	681500749	68158467351	68665022250	150
624400000	624400849	624400162	62788632591	62342222395	150

653400000	653400887	653400472	65261710846	65165649191	150
619400000	619400370	619400078	61524272825	61818827635	150
670500000	670500320	670500660	67850710560	67553531211	150
652500000	652500550	652500441	65784330680	65251601136	150
630500000	630500764	630500263	63492468110	63358965672	150
827400000	827400170	827400224	82263052569	82530735861	150
860500000	860500242	860500580	86653791578	86924132374	150
822500000	822500466	822500161	82022923638	82489425642	150
824500000	824500489	824500126	82829009647	82295512296	150
763400000	763400328	763400580	76033691888	76752946366	150
764400000	764400971	764400568	76796620091	76142603146	150
800500000	800500552	800500988	80086466515	80634626438	150
801500000	801500745	801500976	80011948924	80436506495	150
770500000	770500339	770500670	77427900492	77279853873	150
794500000	794500444	794500798	79372424111	79289445714	150
768400000	768400770	768400593	76913008886	76302495044	150
756700000	756700949	756700472	75729276175	75559157622	150
754500000	754500908	754500408	75308543584	75067978496	150
943500000	943500780	943500360	94771093738	94092855908	150
969400000	969400147	969400600	96121299416	96638784050	150
985400000	985400517	985400797	98294951163	98801465618	150
935400000	935400852	935400298	93447853956	93116455979	150
979400000	979400310	979400698	97850296651	97446511454	150
936400000	936400184	936400296	93879162398	93770006917	150
912500000	912500287	912500070	91131958082	91609566716	150
905400000	905400425	905400984	90551121461	90285599299	150
922400000	922400066	922400217	92736371912	92514329977	150
907400000	907400121	907400038	90691243525	90149199425	150
924400000	924400897	924400192	92158997107	92665838363	150
925500000	925500942	925500135	92502518680	92676103296	150
868400000	868400792	868400603	86201212615	86103574100	150
897410000	897410778	897410900	89875952302	89130801678	150
930500000	930500808	930500292	93656017284	93619344015	150
887700000	887700654	887700777	88870324562	88434624890	150
1102500000	1102500056	1102500893	110477039594	110175285520	150
1094500000	1094500099	1094500730	109042629979	109725415796	150
1096400000	1096400930	1096400837	109954883221	109788450088	150
1073400000	1073400378	1073400611	107559936919	107607196140	150
1057400000	1057400378	1057400442	105772174097	105785579348	150
1004500000	1004500362	1004500862	100891375851	100171410271	150
1008400000	1008400863	1008400935	100514323958	100682217234	150
1052400000	1052400298	1052400422	105449763455	105345794155	150
1020500000	1020500629	1020500108	102250987871	102614194121	150
1193400000	1193400218	1193400819	119235858753	119268465123	150
1193500000	1193500191	1193500774	119506533876	119165191070	150
1205500000	1205500522	1205500850	120304704701	120293067913	150
1235610000	1235610753	1235610233	123074448901	123365616805	150

1236400000	1236400070	1236400225	123971380373	123782728887	150
1214500000	1214500013	1214500975	121129942297	121349972065	150
1215500000	1215500666	1215500956	121744134161	121826672934	150
1192400000	1192400240	1192400831	119184625679	119090108348	150
1184310000	1184310412	1184310670	118486153889	118799270115	150
1184500000	1184500947	1184500643	118939197736	118895685444	150
1124400000	1124400776	1124400114	112458427908	112464476438	150
1141500000	1141500152	1141500304	114899669703	114654074574	150
1165700000	1165700776	1165700524	116740676315	116046132666	150
1132400000	1132400102	1132400238	113233826162	113637553795	150
1333500000	1333500291	1333500205	133675067107	133379650945	150
1352500000	1352500492	1352500413	135386499475	135372192720	150
1349400000	1349400859	1349400345	134009474660	134040448081	150
1328400000	1328400189	1328400164	132674584802	132657526292	150
1365700000	1365700816	1365700544	136686098716	136833951203	150
1310500000	1310500638	1310500039	131072784751	131155320546	150
1354400000	1354400748	1354400430	135501482235	135797764481	150
1324500000	1324500214	1324500078	132581806632	132933598499	150
1287400000	1287400658	1287400759	128737140673	128544116608	150
1303500000	1303500902	1303500909	130942088904	130892587359	150
1264500000	1264500192	1264500459	126978747440	126821572722	150
1265700000	1265700796	1265700534	126036139164	126360401872	150
1281500000	1281500680	1281500710	128727987272	128600411649	150
1284500000	1284500963	1284500652	128776229660	128305071778	150
1255500000	1255500639	1255500364	125001001226	125995944923	150
1273400000	1273400409	1273400631	127037102779	127766862970	150
1258400000	1258400597	1258400448	125625302990	125800373921	150
1477400000	1477400521	1477400681	147079676737	147472747746	150
1483500000	1483500929	1483500705	148385158894	148980637096	150
1442410000	1442410075	1442410360	144955981764	144619964978	150
1585400000	1585400456	1585400760	158277119987	158442659118	150
1594500000	1594500414	1594500779	159712318236	159574605404	150
1590500000	1590500618	1590500847	159141323134	159751399773	150
1512400000	1512400006	1512400079	151631075193	151641867229	150
1515500000	1515500709	1515500991	151687886844	151656794509	150
1552500000	1552500533	1552500432	155156431078	155834196929	150
1526500000	1526500708	1526500110	152901033284	152112631424	150
1553400000	1553400872	1553400463	155747137563	155306947326	150
1494800000	1494800765	1494800886	149009052567	149568695029	150
1521500000	1521500963	1521500146	152520847779	152212879529	150
1708700000	1708700939	1708700965	170970183968	170775953745	150
1724500000	1724500471	1724500117	172069356368	172857381100	150
1702400000	1702400871	1702400000	170411704298	170860562088	150
1697410000	1697410752	1697410881	169548474806	169493028474	150
1722400000	1722400035	1722400198	172290779984	172511627168	150
1734400000	1734400905	1734400273	173706209186	173720195304	150
1693500000	1693500285	1693500823	169797233729	169684576296	150

1675400000	1675400312	1675400670	167693363042	167941744965	150
1657410000	1657410403	1657410484	165957687798	165682784785	150
1665400000	1665400247	1665400570	166746286248	166641545574	150
1620500000	1620500723	1620500167	162018961688	162987627930	150
1633500000	1633500560	1633500234	163838463227	163634635035	150
1649400000	1649400844	1649400375	164830227473	164333818245	150
1824400000	1824400883	1824400183	182262048221	182677113464	150
1809400000	1809400310	1809400999	180635078726	180235624982	150
1842500000	1842500401	1842500363	184325700421	184554888238	150
1815400000	1815400581	1815400082	181890189941	181060830919	150
1808410000	1808410835	1808410002	180190287824	180093071489	150
1745400000	1745400997	1745400381	174858696382	174891545168	150
1777400000	1777400574	1777400710	177547210910	177421755306	150
1795400000	1795400614	1795400878	179808492056	179147036928	150
1774400000	1774400149	1774400668	177899379668	177300944693	150
1758400000	1758400557	1758400496	175098895444	175575643453	150
1755700000	1755700705	1755700484	175211187431	175920017556	150
1934500000	1934500688	1934500234	193302566661	193648178859	150
1965400000	1965400297	1965400600	196994262569	196967343594	150
1947400000	1947400363	1947400432	194702905263	194691596362	150
1974400000	1974400180	1974400688	197551558741	197466336993	150
1988400000	1988400077	1988400812	198683243391	198790847547	150
1914400000	1914400745	1914400095	191079350290	191378179968	150
1927400000	1927400184	1927400235	192854280133	192211202579	150
1887400000	1887400660	1887400818	188903354288	188142829547	150
1888400000	1888400060	1888400802	188303697488	188735913315	150
1895400000	1895400631	1895400888	189048871233	189996224471	150
1880500000	1880500493	1880500779	188772155682	188997304864	150
1878400000	1878400877	1878400703	187917292460	187034075620	150
1874400000	1874400165	1874400678	187112509563	187836475267	150
1910500000	1910500613	1910500098	191481741003	191213681231	150
1913700000	1913700347	1913700138	191806033770	191446285448	150
1869400000	1869400131	1869400591	186103920284	186621095770	150
1900500000	1900500568	1900500999	190430314184	190681521687	150
2093600000	2093600876	2093600770	209909646205	209647987405	150
2057410000	2057410462	2057410425	205015446473	205409740875	150
2072400000	2072400253	2072400623	207028099964	207053696548	150
2056400000	2056400404	2056400414	205256646604	205987324885	150
2105310000	2105310822	2105310870	210251412109	210800646812	150
2113500000	2113500039	2113500989	211385066684	211949734108	150
2051500000	2051500325	2051500393	205896053660	205552118378	150
2084310000	2084310394	2084310661	208466729402	208019403293	150
2054500000	2054500794	2054500341	205683073434	205379059297	150
2042500000	2042500553	2042500284	204842349497	204479840660	150
2013400000	2013400023	2013400021	201864783736	201313048943	150
2023400000	2023400183	2023400120	202899233760	202573400991	150
1990500000	1990500693	1990500887	199428474409	199703407036	150

2015400000	2015400446	2015400996	201304650643	201203140449	150
2015500000	2015500647	2015500934	201643179460	201706938726	150
2032400000	2032400088	2032400229	203973893869	203259094263	150
2004500000	2004500364	2004500863	200253786074	200882701991	150
2187410000	2187410669	2187410733	218311703173	218585287699	150
2228400000	2228400173	2228400155	222867550041	222699538279	150
2230500000	2230500816	2230500227	223812896085	223489727221	150
2224400000	2224400793	2224400125	222659832221	222398683430	150
2222400000	2222400948	2222400149	222365179857	222882279901	150
2235400000	2235400789	2235400227	223411124084	223798594437	150
2171600000	2171600218	2171600595	217354332570	217316170137	150
2172400000	2172400270	2172400634	217458251455	217225027651	150
2125400000	2125400593	2125400113	212360111222	212381289299	150
2352210000	2352210533	2352210503	235612545096	235486117438	150
2323610000	2323610017	2323610162	232219788158	232163121905	150
2334500000	2334500583	2334500176	233148953321	233722901341	150
2284310000	2284310383	2284310681	228155701748	228177127151	150
2297400000	2297400730	2297400858	229238187958	229931208390	150
2293500000	2293500211	2293500785	229895591911	229842847570	150
2294400000	2294400250	2294400818	229583035499	229546594997	150
2257400000	2257400298	2257400463	225838464325	225150367311	150
2454500000	2454500865	2454500380	245156488350	245174560083	150
2463400000	2463400285	2463400552	246615725171	246545818665	150
2464500000	2464500230	2464500480	246001168330	246921652605	150
2434500000	2434500603	2434500185	243050158156	243133720019	150
2443400000	2443400689	2443400355	244019356056	244445573406	150
2459400000	2459400976	2459400454	245006375036	245886246053	150
2413500000	2413500089	2413500019	241715471263	241870536166	150
2404400000	2404400600	2404400946	240933132585	240274485363	150
2394500000	2394500152	2394500760	239814948563	239988163084	150
2394800000	2394800751	2394800877	239642465368	239027223892	150
2394800000	2394800751	2394800877	239894456413	239027223892	150
2394800000	2394800751	2394800877	239887425788	239027223892	150
2411500000	2411500850	2411500038	241887108440	241691630097	150
2424500000	2424500410	2424500089	242691999187	242033069154	150
2388400000	2388400973	2388400754	238667434433	238468728985	150
2367400000	2367400476	2367400573	236283020925	236032858389	150
2367410000	2367410521	2367410556	236115414219	236215048379	150
2374400000	2374400090	2374400629	237351816908	237507271502	150
2571500000	2571500670	2571500643	257412900595	257311973027	150
2583400000	2583400121	2583400762	258382392600	258336462264	150
2583600000	2583600771	2583600720	258386556725	258378805168	150
2606400000	2606400764	2606400968	260829164245	260775270374	150
2563500000	2563500496	2563500519	256280913258	256561091756	150
2534500000	2534500620	2534500195	253910504285	253349958636	150
2525400000	2525400660	2525400155	252028811836	252911938073	150
2505400000	2505400361	2505400947	250180682337	250319651155	150

2535400000	2535400846	2535400259	253926525447	253346850019	150
2699400000	2699400497	2699400871	269881070088	269933258993	150
2693400000	2693400298	2693400869	269764549581	269282009407	150
2677700000	2677700117	2677700661	267773535061	267674168641	150
2729400000	2729400545	2729400188	272739895489	272020325757	150
2713700000	2713700329	2713700119	271569944039	271650301644	150
2637400000	2637400161	2637400306	263656121489	263295825812	150
2650500000	2650500001	2650500464	265580926954	265811228936	150
2625500000	2625500891	2625500107	262609686992	262146381500	150
2642500000	2642500671	2642500344	264187090158	264212963333	150
2672400000	2672400839	2672400684	267474976680	267892311507	150
2852500000	2852500588	2852500463	285475669379	285778951301	150
2815500000	2815500760	2815500026	281219356765	281075220421	150
2832400000	2832400094	2832400305	283339471634	283160250146	150
2835400000	2835400901	2835400290	283752631938	283559236458	150
2857400000	2857400399	2857400523	285906625860	285732418331	150
2832500000	2832500516	2832500264	283069020655	283963881641	150
2783400000	2783400156	2783400781	278318447653	278583492976	150
2783500000	2783500976	2783500734	278893396425	278666996949	150
2786400000	2786400885	2786400807	278807895684	278546864107	150
2759400000	2759400030	2759400482	275792862216	275877605260	150
2749400000	2749400862	2749400386	274403141601	274302507949	150
2765400000	2765400266	2765400581	276964693269	276494183013	150
2956400000	2956400553	2956400511	295614517631	295782416571	150
2972500000	2972500783	2972500674	297540491102	297767070131	150
2957410000	2957410454	2957410515	295647561663	295625491514	150
2924500000	2924500510	2924500138	292950704034	292529214671	150
2952500000	2952500606	2952500473	295803825269	295501361679	150
2931500000	2931500214	2931500285	293350221741	293728776906	150
2968400000	2968400814	2968400615	296641853824	296429337023	150
2889400000	2889400370	2889400790	288578479417	288318219539	150
3094400000	3094400218	3094400799	309032326397	309392466308	150
3097410000	3097410660	3097410824	309265869581	309307288078	150
3068400000	3068400613	3068400528	306495309175	306266086000	150
3104500000	3104500384	3104500874	310398943511	310938562173	150
3107400000	3107400003	3107400959	310555935073	310017651777	150
3070500000	3070500221	3070500603	307858682521	307812987937	150
3046400000	3046400206	3046400310	304560042668	304553119386	150
3055500000	3055500612	3055500345	305429325311	305647929757	150
3048400000	3048400386	3048400333	304134721317	304263549804	150
2984400000	2984400200	2984400788	298609554922	298773471076	150
3004400000	3004400535	3004400908	300511939649	300358984792	150
3021610000	3021610802	3021610158	302983630630	302002879535	150
3038400000	3038400318	3038400234	303153691890	303305861811	150
2991500000	2991500017	2991500874	299271072612	299397702009	150
3024500000	3024500158	3024500051	302409426770	302846324684	150
2993500000	2993500344	2993500853	299404276229	299203944002	150

3009400000	3009400182	3009400922	300957941570	300755592010	150
2997400000	2997400847	2997400926	299201613160	299699920311	150
2994500000	2994500476	2994500820	299809764796	299369428472	150
3202400000	3202400787	3202400953	320401854100	320554712121	150
3218400000	3218400052	3218400056	321291270836	321216514991	150
3221500000	3221500990	3221500118	322682233289	322746792844	150
3192500000	3192500855	3192500792	319726786887	319278847497	150
3208400000	3208400896	3208400957	320443211097	320961877976	150
3194410000	3194410107	3194410822	319096929433	319557846385	150
3197400000	3197400715	3197400850	319597398097	319606324394	150
3216400000	3216400810	3216400029	321799954685	321028643477	150
3166400000	3166400588	3166400533	316600200451	316501079880	150
3131500000	3131500067	3131500208	313610804051	313816435693	150
3138400000	3138400338	3138400244	313398750273	313683365657	150
3154400000	3154400720	3154400412	315304272464	315834407685	150
3148400000	3148400402	3148400343	314071227923	314976031259	150
3127400000	3127400069	3127400159	312476908495	312336656361	150
3316400000	3316400823	3316400039	331330266554	331877678254	150
3317400000	3317400184	3317400081	331162294753	331822099679	150
3350500000	3350500952	3350500435	335878731545	335443766837	150
3307400000	3307400032	3307400981	330884472256	330786463047	150
3326400000	3326400987	3326400138	332115197835	332969098073	150
3336400000	3336400093	3336400236	333879084304	333952005278	150
3354700000	3354700464	3354700458	335653277304	335733294456	150
3329400000	3329400488	3329400149	332368632342	332958108362	150
3300500000	3300500463	3300500942	330092830167	330035053795	150
3282400000	3282400943	3282400743	328860005717	328178585644	150
3292400000	3292400261	3292400843	3294864444942	329801112029	150
3287410000	3287410688	3287410744	328895300524	328400467061	150
3287700000	3287700540	3287700720	328661725362	328034946071	150
3238400000	3238400356	3238400254	323615702875	323655315179	150
3254700000	3254700445	3254700448	325169640478	325977878390	150
3234500000	3234500567	3234500168	323497039212	323460848467	150
3293400000	3293400238	3293400830	329771679063	329524422827	150
3293500000	3293500213	3293500786	329119883731	329536474115	150
3231500000	3231500085	3231500218	323654943389	323438881536	150
3458610000	3458610359	3458610412	345302618094	345563799148	150
3468400000	3468400720	3468400566	346463468977	346382642376	150
3405400000	3405400345	3405400938	340818893465	340703364450	150
3382500000	3382500714	3382500715	338917639188	338371490607	150
3383400000	3383400088	3383400743	338954105569	338507555002	150
3387510000	3387510490	3387510811	338174207170	338767654344	150
3410500000	3410500660	3410500051	341769560019	341382430842	150
3580500000	3580500511	3580500751	358319963753	358968768247	150
3584400000	3584400274	3584400749	358847242581	358269960304	150
3574500000	3574500427	3574500584	357153185172	357726475137	150
3565400000	3565400234	3565400562	356248243360	356250579132	150

3538400000	3538400407	3538400284	353965366598	353654195618	150
3522400000	3522400001	3522400180	352853112792	352554984303	150
3508410000	3508410896	3508410974	350061363758	350835159012	150
3525500000	3525500877	3525500098	352647931629	352033052894	150
3545400000	3545400966	3545400363	354932021783	354975265962	150
3504400000	3504400614	3504400957	350042346627	350847479419	150
3713400000	3713400134	3713400092	371961966928	371621023115	150
3725400000	3725400702	3725400177	372735379174	372489909118	150
3725710000	3725710618	3725710109	372703670954	372934143118	150
3684500000	3684500040	3684500692	368314500732	368748547803	150
3704400000	3704400645	3704400977	370018547672	370336454102	150
3714400000	3714400719	3714400077	371304145890	371758120075	150
3671500000	3671500568	3671500654	367467047520	367089775222	150
3652400000	3652400001	3652400484	365582311518	365345229167	150
3618400000	3618400116	3618400096	361861866811	361629823582	150
3653400000	3653400893	3653400475	365480543492	365129994520	150
3613400000	3613400120	3613400082	361043025580	361958650314	150
3802400000	3802400891	3802400012	380567267849	380102388004	150
3846400000	3846400370	3846400393	384795952209	384198367235	150
3854500000	3854500934	3854500421	385194687108	385620525538	150
3792500000	3792500961	3792500852	379587913842	379907440908	150
3740500000	3740500942	3740500375	374572818255	374888101066	150
3794400000	3794400338	3794400869	379525523816	379456454584	150
3950500000	3950500096	3950500494	395944609051	395462004065	150
3935400000	3935400857	3935400301	393364019451	393921808957	150
3959400000	3959400069	3959400503	395287444518	395332526025	150
3984500000	3984500087	3984500722	398438074204	398798274023	150
3982400000	3982400054	3982400813	398721300553	398096329785	150
3955700000	3955700743	3955700506	395352966256	395076535895	150
3926400000	3926400027	3926400197	392667552434	392582124859	150
3938400000	3938400472	3938400323	393109719912	393735603156	150
3904500000	3904500961	3904500947	390098583418	390752360740	150
3897700000	3897700786	3897700879	389210485874	389844239307	150
3884500000	3884500073	3884500712	388182833903	388569222682	150
3901500000	3901500764	3901500989	390627163755	390841987682	150
3891500000	3891500000	3891500865	389671188121	389538280618	150
3894500000	3894500463	3894500811	389530281461	389383457007	150
4054700000	4054700406	4054700429	405484251217	405782245305	150
4083500000	4083500860	4083500668	408007098833	408309599429	150
4042400000	4042400131	4042400326	404770904665	404542867209	150
4047400000	4047400228	4047400346	404183475681	404484093012	150
4093400000	4093400208	4093400812	409183006875	409913825628	150
4069400000	4069400086	4069400514	406732073452	406124699309	150
4094310000	4094310531	4094310762	409313778399	409965027159	150
3987410000	3987410641	3987410813	398100853337	398500128563	150
3987700000	3987700677	3987700790	398769955922	398375046951	150
3987700000	3987700677	3987700790	398454843990	398375046951	150

3987700000	3987700677	3987700790	398222947178	398375046951	150
4210500000	4210500626	4210500032	421258738272	421551180824	150
4165400000	4165400173	4165400523	416018430717	416753338564	150
4164400000	4164400880	4164400512	416054682723	416674361212	150
4198400000	4198400120	4198400835	419251723236	419545899328	150
4209510000	4209510207	4209510995	420348964765	420956983641	150
4219400000	4219400316	4219400042	421597760908	421013908282	150
4173500000	4173500707	4173500581	417647690139	417205819565	150
4103400000	4103400411	4103400934	410101195175	410930301207	150
4322400000	4322400970	4322400161	432878401748	432321324512	150
4136400000	4136400060	4136400218	413376643115	413696125723	150
4123400000	4123400203	3123400131	412362519620	412224881257	150
4152410000	4152410192	4152410437	415036802615	415293432600	150
4124610000	4124610946	4124610137	412959862678	412908751116	150
4156400000	4156400424	4156400427	415709086283	415370412108	150
4309400000	4309400237	4309400953	430718685082	430468460589	150
4312400000	4312400976	3312400062	431359419689	431230764687	150
4294800000	4294800740	4294800869	429661658370	429685240878	150
4344400000	4344400003	4344400334	434846004314	434132899261	150
4301500000	4301500762	4301500930	430368571696	430467467187	150
4323700000	4323700425	4323700178	432970663839	432650320000	150
4279410000	4279410104	4279410628	427823574126	427078255030	150
4257500000	4257500331	4257500368	425962939765	425447004042	150
4259400000	4259400947	4259400437	425059868901	425111348681	150
4261500000	4261500430	4261500515	426417750067	426583632792	150
4232500000	4232500409	4232500205	423369089369	423635575339	150
4255500000	4255500643	4255500367	425500269047	425635411634	150
4253400000	4253400825	4253400436	425527093747	425640956595	150
4426500000	4426500696	4426500103	442690574638	442245216094	150
4458400000	4458400641	4458400470	445127007038	445732994671	150
4444500000	4444500694	4444500285	444158431467	444233989290	150
4431500000	4431500125	4431500238	443805586956	443381651567	150
4440500000	4440500895	4440500346	444417250922	444210364998	150
4456700000	4456700903	4456700446	445638261373	445510447454	150
4438400000	4438400393	4438400275	443211362136	443510143856	150
4457400000	4457400334	4457400485	445034655586	445323218689	150
4384600000	4384600350	4384600696	438307638441	438324510973	150
4393400000	4393400258	4393400841	439397926636	439045989269	150
4391500000	4391500898	4391500816	439309074626	439290276614	150
4564400000	4564400944	4564400552	456765466331	456150463735	150
4558400000	4558400657	4558400480	455362125678	455632222312	150
4558400000	4558400657	4558400480	455959519690	455632222312	150
4558400000	4558400657	4558400480	455694316061	455632222312	150
4567400000	4567400514	4567400595	456912335344	456438034093	150
4568500000	4568500511	4568500516	456161821882	456211680421	150
4577400000	4577400543	4577400694	457844452081	457619049769	150
4565710000	4565710007	4565710485	456468111722	456210319208	150

4543400000	4543400711	4543400367	454374304718	454418808756	150
4587400000	4587400718	4587400792	458516474478	458518344756	150
4484310000	4484310422	4484310702	448518541441	448301426377	150
4476400000	4476400751	4476400670	447113746795	447484552315	150
4469500000	4469500678	4469500528	446026602737	446194610408	150
4494500000	4494500402	4494500772	449015563305	449497198586	150
4473400000	4473400446	4473400654	447696112068	447361447350	150
4502400000	4502400837	4502400984	450053864750	450000733288	150
4683400000	4683400140	4683400773	468713599434	468142417648	150
4710500000	4710500585	4710500081	471397726368	471072762975	150
4715400000	4715400569	4715400073	471601825796	471187061174	150
4594800000	4594800781	4594800900	459929346677	459285903884	150
4600500000	4600500512	4600500973	460232787730	460509537766	150
4615500000	4615500729	4615500006	461437402733	461237500392	150
4634400000	4634400893	4634400266	463264288140	463681173030	150
4609400000	4609400283	4609400982	460305404936	460969925658	150
4595400000	4595400585	4595400861	459121345925	459824487261	150
4607400000	4607400083	4607400012	460682913153	460417063968	150
4807400000	4807400114	4807400032	480301027551	480272901692	150
4815400000	4815400588	4815400085	481544292315	481361094687	150
4817400000	4817400029	4817400130	481784539162	481659128239	150
4834500000	4834500677	4834500227	483992037520	483070252793	150
4829400000	4829400616	4829400200	482776382347	482735837691	150
4784800000	4784800667	4784800820	478330543636	478498231986	150
4767400000	4767400548	4767400615	476027546291	476443483053	150
4719400000	4719400393	4719400092	471682095558	471862514694	150
4720500000	4720500742	4720500179	472112873901	472206168718	150
4744500000	4744500745	4744500314	474097857248	474652940943	150
4927400000	4927400189	4927400238	492471308110	492485913532	150
4923500000	4923500224	4923500168	492744896836	492553054415	150
4929400000	4929400635	4929400209	492625684894	492295542626	150
4939400000	4939400804	4939400308	493577303901	493985860266	150
4915500000	4915500778	4915500039	491538516912	491434155483	150
4908400000	4908400003	4908400027	490327940633	490076969163	150
4934400000	4934400938	4934400294	493263159829	493472440750	150
4957400000	4957400422	4957400535	495583012992	495980533877	150
4922400000	4922400073	4922400221	492691497793	492448139431	150
4904400000	4904400679	4904400998	490007144613	490444025505	150
4882600000	4882600824	4882600758	488524569396	488783948686	150
4902400000	4902400910	4902400023	490666733563	490431527908	150
4845400000	4845400018	4845400394	484207221922	484174221646	150
4903400000	4903400011	4903400013	490692554100	490696263550	150
4844400000	4844400093	4844400384	484187673403	484156831004	150
4873400000	4873400504	4873400694	487262078510	487545739289	150
4852400000	4852400038	4852400505	485783870635	485917203105	150
5059400000	5059400913	5059400419	505775187194	505060543360	150
5062400000	5062400076	5062400526	506570293310	506402304670	150

5025400000	5025400627	5025400105	502697826969	502456963312	150
5043500000	5043500636	5043500277	504101790040	504163550047	150
5008700000	5008700826	5008700901	500453892810	500672360227	150
4989400000	4989400389	4989400802	498943716814	498706035653	150
5014500000	5014500983	5014500959	501120158643	501088989396	150
4971500000	4971500628	4971500684	497171324140	497513146456	150
4964400000	4964400028	4964400591	496321136748	496914744888	150
5194310000	5194310552	5194310773	519189598586	519568564877	150
5194500000	5194500125	5194500744	519609926100	519634932904	150
5182400000	5182400928	5182400735	518321308834	518882083431	150
5197410000	5197410681	5197410836	519037454390	519764223510	150
5199400000	5199400423	5199400823	519329053017	519964806136	150
5157400000	5157400284	5157400456	515005338548	515640091095	150
5205310000	5205310849	5205310883	520183427972	520685217309	150
5160500000	5160500130	5160500516	516140050669	516036709466	150
5193600000	5193600901	5193600783	519057206317	519711197188	150
5152210000	5152210501	5152210486	515373031885	515601269118	150
5133400000	5133400564	5133400231	513250092398	513800247345	150
5136610000	5136610473	5136610214	513632191738	513589004989	150
5147400000	5147400247	5147400356	514241654857	514507471005	150
5094800000	5094800710	5094800851	509442620054	509474393814	150
5102500000	5102500066	5102500897	510563736148	510964616926	150
5122400000	5122400934	5122400142	512166067251	512353751418	150
5314500000	5314500039	5314500988	531112331900	531515671850	150
5325500000	5325500847	5325500080	532059022254	532299721750	150
5287510000	5287510477	5287510803	528731970519	528263161961	150
5273500000	5273500727	5273500592	527212859740	527461471914	150
5305400000	5305400330	5305400930	530846719099	530021018391	150
5211500000	5211500823	5211500021	521106413654	521745621409	150
5419400000	5419400347	5419400063	541244651683	541713640195	150
5436610000	5436610519	5436610242	543375632534	543493020823	150
5407400000	5407400051	5407400994	540361742302	540188638491	150
5406400000	5406400736	5406400951	540491095302	540598329142	150
5413400000	5413400091	5413400064	541330009953	541890002091	150
5426400000	5426400004	5426400150	542284613415	542108470041	150
5457500000	5457500368	5457500389	545620894789	545994981264	150
5339400000	5339400703	5339400250	533714703485	533756635369	150
5348400000	5348400443	5348400365	534173718382	534491337260	150
5351500000	5351500394	5351500426	535788496617	535074216255	150
5354500000	5354500854	5354500373	535553530004	535258469330	150
5372500000	5372500692	5372500617	537033906760	537580475817	150
5334400000	5334400845	5334400237	533172859800	533272869483	150
5392600000	5392600827	5392600809	539755268791	539773385299	150
5573400000	5573400460	5573400665	557988974590	557743207320	150
5573500000	5573500779	5573500621	557476457391	557783629829	150
5544400000	5544400042	5544400355	554220822642	554392365919	150
5574400000	5574400125	5574400652	557462033537	557808856003	150

5546400000	5546400324	5546400364	554725476221	554226616929	150
5568400000	5568400742	5568400578	556926029060	556167837070	150
5534400000	5534400877	5534400257	553828003113	553244930280	150
5556400000	5556400493	5556400471	555950558093	555933738639	150
5523700000	5523700462	5523700198	552834949664	552681658774	150
5572400000	5572400829	5572400677	557951901075	557299867376	150
5505500000	5505500573	5505500884	550722146063	550626617969	150
5512500000	5512500220	5512500034	551971294580	551661233853	150
5471500000	5471500655	5471500636	547169993070	547908054513	150
5474400000	5474400109	5474400642	547472114519	547710619299	150
5492600000	5492600848	5492600819	549535934010	549866502931	150
5519400000	5519400361	5519400073	551190824346	551067333104	150
5504500000	5504500458	5504500912	550043572529	550836845665	150
5693500000	5693500291	5693500827	569935156468	569297312802	150
5662500000	5662500570	5662500546	566132744558	566268883936	150
5627400000	5627400149	5627400209	562121251201	562012357517	150
5588400000	5588400012	5588400776	558780299549	558022650527	150
5615400000	5615400552	5615400064	561936358121	561472199955	150
5631500000	5631500167	5631500259	563879114966	563570090520	150
5644500000	5644500734	5644500305	564981724559	564980342896	150
5644700000	5644700330	5644700393	564873280518	564198817204	150
5635410000	5635410472	5635410277	563856611791	563629024397	150
5626400000	5626400033	5626400169	562101293360	562946616922	150
5799400000	5799400515	5799400884	579292096310	579309301268	150
5784500000	5784500060	5784500704	578873637125	578150716448	150
5784600000	5784600675	5784600737	578036480594	578178541851	150
5813400000	5813400154	5813400104	581411617647	581854856393	150
5794500000	5794500451	5794500803	579271839245	579655218632	150
5784400000	5784400175	5784400771	578686512132	578088464845	150
5736400000	5736400161	5736400280	573563959292	573600266944	150
5725500000	5725500915	5725500120	572882001386	572463061940	150
5728400000	5728400268	5728400206	572288215013	572058177267	150
5751500000	5751500472	5751500467	575051400085	575918719719	150
5761500000	5761500524	5761500566	576199125795	576610016209	150
5932400000	5932400116	5932400317	593176977558	593122343451	150
5894800000	5894800828	5894800934	589500713012	589550210700	150
5897410000	5897410787	5897410905	589323310033	589075652322	150
5856400000	5856400540	5856400503	585833693383	585679094002	150
5884400000	5884400188	5884400781	588728054793	588163689785	150
5837400000	5837400200	5837400327	583358908379	583983583790	150
5857500000	5857500429	5857500430	585305312904	585025098796	150
5848400000	5848400533	5848400413	584773820556	584345494039	150
6040500000	6040500833	6040500308	604619042624	604679778636	150
6026400000	6026400943	6026400111	602064963739	602191945239	150
6024500000	6024500167	6024500054	602146305924	602633370927	150
6017400000	6017400144	6017400054	601812146263	601199286753	150
6034400000	6034400921	6034400208	603718963182	603995702432	150

5995400000	5995400654	5995400901	599597808977	599494624395	150
5999400000	5999400403	5999400904	599733340943	599404581086	150
5954400000	5954400848	5954400493	595560079730	595400377754	150
5994400000	5994400373	5994400891	599267326080	599357818331	150
6010500000	6010500594	6010500014	601521521282	601017048566	150
6149400000	6149400834	6149400330	614150612480	614211779005	150
6183400000	6183400057	6183400726	618229761959	618452968015	150
6159400000	6159400933	6159400430	615900390426	615570260700	150
6143500000	6143500657	6143500288	614524762806	614266623009	150
6192600000	6192600786	6192600790	619608168696	619825999843	150
6168400000	6168400654	6168400540	616574527062	616130656353	150
6162500000	6162500651	6162500497	616433606077	616731836996	150
6169400000	6169400104	6169400526	616997363315	616870456282	150
6169500000	6169500634	6169500500	616480289866	616186851452	150
6179400000	6179400189	6179400625	617683172574	617654903797	150
6142500000	6142500581	6142500298	614682095635	614923834902	150
6111500000	6111500806	6111500012	611507058080	611877541003	150
6128400000	6128400208	6128400149	612419471459	612815058830	150
6114400000	6114400715	6114400020	611568209802	611188611986	150
6075400000	6075400322	6075400615	607418106151	607173428471	150
6119400000	6119400302	6119400034	611667101373	611549676116	150
6092600000	6092600866	6092600780	609241932710	609021372745	150
6304400000	6304400590	6304400940	630283292167	630224483831	150
6314400000	6314400751	6314400040	631597983998	631437082670	150
6314500000	6314500041	6314500989	631997435223	631822880954	150
6320500000	6320500681	6320500142	632991694980	632444548469	150
6296400000	6296400965	6296400864	629415060035	629397795083	150
6291500000	6291500999	6291500808	629511956692	629411322036	150
6245400000	6245400917	6245400336	624498563212	624680020508	150
6256400000	6256400444	6256400440	625094382214	625816880384	150
6208410000	6208410855	6208410947	620305772721	620561281956	150
6204500000	6204500407	6204500886	620005671153	620630845098	150
6244500000	6244500660	6244500268	624201069113	624757992177	150
6227400000	6227400090	6227400172	622707475201	622666901278	150
6423610000	6423610044	6423610176	642320733870	642465276657	150
6425500000	6425500866	6425500091	642304505437	642038655727	150
6392400000	6392400285	6392400856	639087994409	639635940185	150
6387410000	6387410709	6387410757	638889261975	638998177922	150
6330500000	6330500836	6330500241	633104034478	633208347148	150
6349610000	6349610304	6349610295	634252341474	634870439403	150
6373500000	6373500747	6373500603	637918569001	637436627962	150
6554500000	6554500888	6554500394	655259336129	655718544703	150
6548400000	6548400483	6548400384	654466753122	654951460738	150
6557400000	6557400353	6557400497	655935454359	655575502448	150
6558610000	6558610378	6558610425	655317597463	655111924325	150
6513700000	6513700301	6513700103	651054482819	651794756235	150
6563400000	6563400307	6563400566	656384725565	656658662678	150

6456710000	6456710831	6456710398	645054528007	645002258844	150
6481500000	6481500727	6481500735	648997864382	648799975489	150
6486510000	6486510401	6486510824	648655331125	648209910761	150
6445400000	6445400954	6445400356	644513946554	644540839025	150
6487400000	6487400703	6487400784	648680497010	648053004841	150
6449610000	6449610320	6449610305	644194086501	644493945697	150
6649610000	6649610355	6649610325	664040192954	664193670284	150
6666400000	6666400613	6666400590	666424289310	666136981531	150
6682400000	6682400011	6682400786	668582988529	668277601287	150
6684400000	6684400159	6684400762	668592821752	668207489554	150
6678400000	6678400849	6678400689	667448290091	667278797147	150
6629400000	6629400537	6629400182	662105373092	662923095802	150
6632400000	6632400196	6632400292	663418177678	663037140980	150
6648400000	6648400500	6648400394	664300071330	664427401019	150
6654400000	6654400802	6654400465	665358868605	665201472623	150
6689400000	6689400345	6689400774	668044241211	668149633863	150
6584500000	6584500028	6584500685	658295350572	658163115022	150
6614400000	6614400707	6614400070	661450477599	661414485396	150
6614500000	6614500094	6614500016	661356294922	661971319549	150
6601500000	6601500722	6601500962	660463353644	660426601485	150
6612500000	6612500241	6612500045	661878981495	661352424402	150
6764500000	6764500292	6764500511	676364346849	676646946666	150
6793500000	6793500312	6793500838	679217609006	679145744032	150
6805500000	6805500622	6805500915	680528458722	680880227892	150
6754400000	6754400817	6754400474	675071747314	675931498136	150
6783600000	6783600823	6783600744	678528968001	678186839759	150
6772500000	6772500757	6772500658	677655643197	677590922488	150
6782500000	6782500793	6782500757	678035810076	678069221952	150
6733400000	6733400660	6733400290	673189722458	673068987169	150
6743400000	6743400744	6743400389	674950364258	674313573568	150
6723500000	6723500191	6723500150	672264570496	672518398291	150
6692400000	6692400337	6692400886	669237876600	669069426286	150
6716400000	6716400897	6716400081	671544585199	671891879521	150
6707400000	6707400103	6707400024	670065009592	670316895236	150
6913400000	6913400172	6913400114	691185254980	691990052206	150
6876400000	6876400814	6876400716	687523021629	687727708510	150
6886400000	6886400906	6886400822	688005227892	688084883871	150
6861500000	6861500545	6861500577	686689585474	686220329388	150
6844500000	6844500766	6844500326	684474632955	684685869220	150
6862400000	6862400225	6862400607	686889627984	686668959258	150
6853400000	6853400936	6853400496	685461812509	685297005335	150
6853500000	6853500375	6853500456	685784188416	685148862360	150
7015400000	7015400456	7015400002	701176172782	701225747740	150
7015500000	7015500654	7015500940	701672232415	701851192960	150
7052210000	7052210488	7052210478	705276434137	705704487251	150
7052500000	7052500446	7052500389	705802054765	705421048820	150
7024400000	7024400768	7024400110	702918161540	702160930645	150

7019400000	7019400289	7019400025	701005346433	701984971934	150
7054500000	7054500803	7054500346	705809080470	705557472942	150
6991400000	6991400918	6991400926	699419178018	699414940422	150
6987400000	6987400685	6987400833	698340008436	698365294548	150
6958400000	6958400600	6958400521	695002282085	695849283656	150
7166700000	7166700024	7166700519	716047566521	716710903681	150
7167400000	7167400456	7167400558	716539504048	716901649650	150
7125400000	7125400601	7125400118	712971762929	712781347309	150
7162400000	7162400101	7162400538	716923585054	716677648213	150
7121610000	7121610831	7121610172	712635786656	712849451883	150
7123500000	7123500087	7123500092	712544311321	712720159944	150
7115400000	7115400472	7115400012	711096378779	711865686194	150
7115500000	7115500668	7115500952	711690731840	711157674940	150
7094500000	7094500108	7094500736	709900588679	709206601116	150
7085400000	7085400384	7085400716	708363283635	708577781052	150
7292500000	7292500878	7292500806	729728558234	729905943717	150
7298400000	7298400045	7298400847	729822815697	729995053743	150
7287400000	7287400668	7287400765	728257910268	728382570134	150
7299400000	7299400443	7299400836	729649303542	729751789009	150
7246400000	7246400251	7246400336	724307910405	724437033274	150
7207400000	7207400023	7207400975	720337421412	720530682313	150
7202400000	7202400794	7202400957	720015075403	720549518686	150
7182500000	7182500824	7182500699	718253118658	718967899336	150
7208400000	7208400902	7208400961	720835866804	720252098040	150
7222610000	7222610265	7222610170	722344521255	722862539553	150
7225500000	7225500835	7225500072	722183339339	722138711409	150
7386510000	7386510385	7386510815	738128937496	738897178187	150
7421800000	7421800677	7421800122	742691499492	742577735083	150
7422500000	7422500401	7422500127	742121869693	742310668202	150
7397400000	7397400758	7397400873	739108845832	739305571474	150
7342400000	7342400186	7342400359	734205486800	734838202203	150
7332400000	7332400145	7332400264	733323067471	733807847071	150
7332500000	7332500433	7332500218	733598076076	733698423413	150
7338400000	7338400382	7338400268	733927960426	733551181891	150
7323400000	7323400240	7323400154	732801767956	732888040093	150
7352400000	7352400357	7352400458	735467058331	735653916208	150
7355500000	7355500664	7355500380	735080683830	735870491066	150
7514400000	7514400693	7514400061	751090938345	751072805723	150
7514500000	7514500077	7514500007	751307501828	751977101626	150
7450500000	7450500976	7450500449	745107606914	745106226668	150
7483400000	7483400112	7483400757	748896420745	748259321494	150
7447400000	7447400291	7447400388	744764096886	744354519786	150
7432400000	7432400160	7432400274	743358043016	743700152975	150
7475400000	7475400289	7475400656	747564809222	747359537872	150
7472400000	7472400816	7472400669	747341473354	747841203951	150
7443500000	7443500704	7443500318	744332967046	744180288060	150
7488400000	7488400000	7488400769	748732699402	748687736149	150

7625400000	7625400688	7625400170	762219795026	762806278745	150
7626500000	7626500732	7626500126	762011762443	762434841063	150
7664500000	7664500276	7664500503	766376672764	766118175635	150
7635400000	7635400875	7635400274	763462622669	763849827504	150
7628400000	7628400253	7628400198	762397802533	762910712955	150
7656400000	7656400511	7656400484	765571367339	765963333329	150
7636400000	7636400145	7636400272	763544871100	763322624276	150
7598400000	7598400101	7598400877	759474193838	759512726083	150
7604500000	7604500916	7604500923	760503888867	760740780239	150
7569400000	7569400091	7569400567	756525590064	756744440338	150
7578400000	7578400833	7578400680	757660224323	757295666935	150
7596400000	7596400017	7596400897	759394248125	759134625446	150
7579400000	7579400259	7579400665	757294982600	757931252157	150
7567410000	7567410563	7567410581	756323428486	756763331411	150
7586510000	7586510425	7586510835	758115298431	758314525116	150
7612400000	7612400036	7612400094	761863490421	761768357322	150
7603500000	7603500965	7603500945	760162612653	760273335785	150
7763500000	7763500537	7763500544	776923489802	776218720785	150
7754500000	7754500922	7754500415	775659264701	775887020087	150
7792400000	7792400354	7792400897	779093731899	779898061633	150
7741500000	7741500277	7741500368	774793319370	774079047197	150
7715500000	7715500751	7715500020	771520854327	771148294423	150
7691400000	7691400876	7691400897	769981446584	769727392985	150
7673500000	7673500800	7673500632	767713713426	767519281542	150
7875400000	7875400352	7875400696	787678148297	787332157995	150
7827610000	7827610528	7827610171	782699385772	782088140278	150
7815500000	7815500768	7815500032	781903623866	781898238071	150
7884500000	7884500079	7884500716	788588523410	788109180766	150
7834400000	7834400928	7834400289	783437152342	783224309329	150
7874600000	7874600261	7874600650	787322580303	787147147847	150
7826500000	7826500763	7826500146	782888715760	782253679597	150
7881500000	7881500895	7881500772	788553485966	788490335885	150
7814500000	7814500130	7814500036	781454353098	781741072616	150
7909400000	7909400335	7909400015	790069847781	790656104597	150
7867400000	7867400435	7867400627	786026307751	786465735659	150
7803500000	7803500999	7803500965	780404015585	780133395731	150
7804400000	7804400666	7804400991	780393848279	780927684692	150
7871500000	7871500612	7871500677	787588147337	787006741082	150
8022400000	8022400921	8022400135	802276991320	802262581123	150
8022500000	8022500322	8022500088	802488121212	802443668382	150
7960500000	7960500213	7960500597	796423816482	796898183286	150
7925400000	7925400743	7925400202	792451489207	792178667657	150
7997410000	7997410806	7997410917	799658121389	799007683777	150
7953500000	7953500392	7953500467	795583548319	795625969624	150
8039400000	8039400658	8039400223	803775437618	803939727270	150
8001500000	8001500719	8001500904	800072675703	800719651557	150
7973500000	7973500849	7973500661	797055837852	797230527779	150

7926500000	7926500777	7926500156	792952012325	792440121357	150
7974400000	7974400190	7974400694	797660267292	797591898691	150
8055500000	8055500618	8055500350	805362221637	805487747658	150
8155400000	8155400082	8155400427	815275739828	815894486991	150
8151500000	8151500357	8151500409	815529052108	815122171523	150
8134400000	8134400939	8134400220	813648596134	813000592777	150
8152500000	8152500467	8152500400	815765476693	815310166201	150
8125500000	8125500819	8125500063	812411283104	812705802569	150
8083400000	8083400044	8083400718	808317846839	808509273352	150
8142400000	8142400152	8142400340	814403572516	814287668697	150
8074500000	8074500341	8074500539	807283967938	807939867315	150
8144500000	8144500645	8144500260	814129772210	814634840434	150
8062500000	8062500632	8062500489	806780660136	806680047531	150
8136610000	8136610478	8136610217	813231415736	813570232869	150
8108700000	8108700846	8108700914	810921236084	810763431478	150
8110610000	8110610426	8110610084	811634636453	811274727873	150
8082400000	8082400917	8082400728	808424032405	808653169964	150
8082500000	8082500809	8082500690	808633956487	808651221155	150
8214400000	8214400736	8214400032	821376255934	821453445757	150
8255400000	8255400100	8255400437	825428109666	825249038950	150
8205500000	8205500531	8205500857	820657366456	820085932062	150
8222500000	8222500360	8222500108	822652329144	822692710313	150
8236610000	8236610495	8236610227	823498275408	823655999813	150
8224400000	8224400802	8224400131	822026900043	822935579374	150
8284500000	8284500977	8284500659	828960457877	828267496797	150
8174400000	8174400068	8174400615	817269228756	817702510289	150
8223400000	8223400226	8223400145	822370758994	822715938881	150
8269500000	8269500650	8269500512	826856514147	826428942617	150
8295400000	8295400540	8295400835	829006956380	829989814383	150
8413500000	8413500099	8413500025	841441644490	841548391081	150
8333400000	8333400600	8333400252	833477975420	833660293476	150
8319400000	8319400338	8319400056	831210295148	831326398369	150
8402500000	8402500128	8402500930	840066520404	840920339523	150
8335400000	8335400821	8335400245	833676124517	833292339273	150
8324610000	8324610883	8324610160	832861039211	832102447451	150
8322500000	8322500382	8322500118	832558851836	832478679285	150
8397410000	8397410716	8397410858	839891998303	839215779304	150
8384400000	8384400250	7384400734	838892281838	838184720072	150
8303400000	8303400448	8303400958	830840459668	830044258260	150
8303500000	8303500916	8303500916	830884546255	830453370966	150
8532400000	8532400180	8532400284	853444559296	853791223308	150
8430500000	8430500744	8430500251	843856732495	843817856321	150
8536610000	8536610538	8536610255	853082594048	853508238813	150
8425400000	8425400654	8425400151	842946516940	842672586497	150
8433400000	8433400617	8433400262	843349342240	843366938942	150
8521500000	8521500977	8521500153	852338630674	852949928421	150
8653500000	8653500342	8653500438	865058628343	865978333769	150

8574500000	8574500438	8574500589	857570513629	857163376528	150
8561500000	8561500491	8561500549	856452266822	856507282193	150
8594500000	8594500427	8594500786	859793101512	859536047499	150
8611500000	8611500894	8611500064	861829403347	861307066297	150
8587700000	8587700613	8587700755	858699112596	858022375499	150
8643500000	8643500741	8643500338	864643743068	864977911788	150
8684310000	8684310464	8684310726	868947255165	868094870753	150
8775400000	8775400338	8775400687	877146175995	877042524472	150
8682500000	8682500778	8682500749	868493897735	868063705250	150
8722400000	8722400048	8722400205	872789914843	872850064291	150
8693400000	8693400309	8693400875	869864652483	869842778901	150
8748400000	8748400521	8748400406	874510867570	874318945266	150
8784310000	8784310481	8784310736	878380877137	878719457734	150
8712400000	8712400053	8712400105	871265204339	871409901514	150
8755400000	8755400112	8755400487	875855659591	875476141560	150
8741500000	8741500279	8741500369	874534370561	874481590839	150
8673400000	8673400478	8673400678	867003488162	867573485594	150
8787410000	8787410782	8787410798	878804476305	878645368606	150
8832500000	8832500525	8832500270	883080677070	883516195412	150
8883600000	8883600848	8883600756	888174081150	888782981155	150
8812400000	8812400070	8812400115	881467950479	881657178562	150
8912500000	8912500304	8912500078	891107964728	891033836656	150
8802500000	8802500203	8802500969	880975659339	880161627300	150
8846400000	8846400379	8846400399	884578217339	884680999333	150
8862500000	8862500611	8862500569	886140364028	886298415292	150
8833500000	8833500606	8833500260	883165512394	883795488229	150
8821800000	8821800747	8821800168	882825119793	882834702817	150
9044400000	9044400961	9044400309	904244402563	904690505719	150
9005400000	9005400396	9005400904	900050605292	900430082533	150
8977410000	8977410647	8977410719	897048422549	897081449687	150
8947500000	8947500294	8947500342	894694496719	894461302682	150
8979400000	8979400322	8979400706	897225989512	897240929420	150
9037400000	9037400213	9037400253	903066420257	903528306630	150
9025500000	9025500803	9025500054	902805401126	902381981885	150
8972400000	8972400904	8972400719	897516290382	897891494653	150
8974500000	8974500924	8974500630	897672880165	897586646960	150
9045400000	9045400887	9045400318	904222655129	904847279628	150
9020500000	9020500643	9020500116	902834375461	902825337138	150
9006400000	9006400677	9006400915	900938295684	900526094654	150
8948400000	8948400556	8948400426	894767187049	894484132151	150
9008410000	9008410828	9008410929	900052263862	900714449222	150
8967400000	8967400452	8967400638	896854433698	896406113050	150
9055400000	9055400064	9055400419	905751326842	905943828883	150
9055500000	9055500620	9055500351	905951244334	905968958889	150
9150500000	9150500928	9150500420	915390520722	915761277388	150
9124500000	9124500190	9124500066	912707674577	912648525804	150
9101500000	9101500739	9101500915	910716245986	910040335481	150

9105400000	9105400413	9105400914	910525266771	910303348502	150
9167410000	9167410500	9167410542	916357377986	916483644149	150
9132400000	9132400115	9132400246	913222937633	913459617846	150
9124810000	9124810468	9124810189	912000456406	912085449929	150
9077400000	9077400469	9077400649	907240377303	907640796150	150
9166400000	9166400600	9166400540	916987895522	916765908447	150
9094500000	9094500112	9094500738	909721836147	909961078453	150
9272400000	9272400301	9272400651	927622443852	927995365971	150
9274500000	9274500382	9274500560	927482307756	927322900626	150
9283400000	9283400079	9283400739	928942536788	928677790491	150
9269400000	9269400124	9269400539	926669503837	926375837820	150
9176400000	9176400698	9176400646	917572905644	917877825045	150
9205400000	9205400429	9205400924	920714492818	920622814118	150
9178400000	9178400867	9178400642	917009499244	917817288091	150
9235610000	9235610765	9235610241	923368168965	923008354997	150
9264500000	9264500206	9264500467	926885838532	926000049256	150
9213400000	9213400066	9213400048	921147841826	921937322793	150
9415500000	9415500705	9415500987	941467960018	941457844430	150
9310610000	9310610462	9310610105	931204973644	931072445652	150
9379400000	9379400227	9379400648	937257907322	937726735805	150
9365400000	9365400214	9365400548	936058823318	936108883867	150
9308400000	9308400923	9308400973	930597948381	930563497338	150
9381500000	9381500715	9381500728	938067449209	938606664217	150
9325500000	9325500854	9325500084	932566844368	932128290146	150
9355400000	9355400120	9355400448	935459386475	935196922414	150
9387600000	9387600953	9387600678	938175070938	938804614928	150
9305500000	9305500550	9305500868	930471824202	930689551423	150
9356400000	9356400468	9356400454	935636516733	935342732123	150
9429400000	9429400512	9429400165	942928190065	942940871708	150
9454500000	9454500874	9454500387	945192590113	945091003947	150
9504400000	9504400624	9504400963	950867610249	950322880389	150
9521600000	9521600740	9521600135	952939846120	952225082435	150
9521800000	9521800697	9521800135	952255252856	952413499366	150
9523400000	9523400273	9523400176	952263654879	952587906322	150
9465710000	9465710997	9465710480	946243868644	946520214674	150
9523500000	9523500161	9523500133	952286308931	952988209447	150
9452400000	9452400376	9452400470	945640525640	945078997537	150
9497410000	9497410732	9497410869	949536841219	949200476792	150
9543500000	9543500726	9543500329	954238561442	954288497008	150
9499400000	9499400478	9499400858	949755989431	949251586763	150
9425500000	9425500871	9425500094	942972232632	942697170335	150
9467410000	9467410550	9467410573	946083453824	946850338599	150
9453500000	9453500306	9453500419	945260470204	945793347461	150
9441500000	9441500225	9441500342	944066868933	944748995763	150
9542400000	9542400224	9542400381	954123521088	954330673114	150
9498400000	9498400085	9498400869	949232459659	949388285997	150
9644400000	9644400065	9644400369	964765231328	964798252892	150

9615500000	9615500737	9615500011	961116747930	961739395830	150
9672500000	9672500744	9672500651	967079443386	967784864946	150
9617400000	9617400007	9617400115	961609749463	961397025535	150
9605500000	9605500597	9605500897	960267293270	960803385420	150
9677410000	9677410604	9677410690	967953541415	967213049957	150
9563500000	9563500507	9563500526	956871072908	956778476224	150
9637400000	9637400173	9637400313	963026300018	963554960065	150
9584310000	9584310447	9584310717	958341354263	958665390721	150
9557500000	9557500392	9557500405	955742069797	955630968641	150
9586400000	9586400868	9586400793	958656678057	958648135433	150
9657400000	9657400377	9657400510	965007833032	965004555680	150
9657410000	9657410417	9657410492	965927372737	965900155676	150
9564400000	9564400952	9564400557	956871587239	956182314622	150
9608410000	9608410815	9608410990	960172869540	960721959687	150
9696400000	9696400037	9696400910	969805872267	969496803362	150
9798400000	9798400142	9798400899	979535856494	979994152758	150
9798510000	9798510131	9798510950	979488430457	979550518063	150
9691500000	9691500971	9691500851	969283233129	969788986466	150
9708700000	9708700955	9708700973	970531553006	970634523644	150
9725400000	9725400711	9725400183	972228289535	972172716394	150
9785400000	9785400500	9785400786	978786922499	978309218645	150
9773500000	9773500818	9773500644	977750617833	977090556190	150
9771500000	9771500597	9771500669	977165289247	977556184129	150
9777410000	9777410618	9777410700	977636088837	977146125400	150
9684500000	9684500049	9684500698	968129320269	968907206932	150
9768500000	9768500499	9768500544	976168957452	976923022297	150
9714500000	9714500115	9714500028	971789916700	971775784285	150
9833400000	9833400682	9833400303	983472482893	983218362804	150
9822500000	9822500345	9822500170	982535742358	982049541818	150
9882400000	9882400048	9882400809	988029203975	988719050464	150
9840500000	9840500968	9840500391	984068449800	984517816680	150
9873500000	9873500836	9873500653	987172342855	987652143952	150
9903500000	9903500018	9903500976	990229205113	990452772793	150
9854500000	9854500132	9854500427	985656976362	985260300766	150
9883500000	9883500153	9883500751	988365260215	988207118943	150
9841500000	9841500300	9841500380	984763998879	984500432815	150
9812610000	9812610199	9812610132	981785823204	981615482314	150
9921500000	9921500045	9921500193	992791650849	992185108466	150
9898400000	9898400158	9898400909	989776667657	989938584583	150
9902500000	9902500223	9902500979	990643506169	990006367155	150
9965400000	9965400310	9965400608	996924921241	996502393399	150
9943500000	9943500796	9943500369	994348969832	994546628463	150
9980500000	9980500523	9980500796	998755499494	998862854336	150
9970500000	9970500417	9970500698	997599256207	997732284816	150
6914603845	6914603482	9739400293	691405314854	691385148841	150
1812610000	1812610278	4102400944	181824397144	181924880769	150
6961959135	6961959229	4993400900	696967328529	696223330563	150

1795631490	1795631136	5794800923	179190457900	179312117910	150
6242446723	6242446428	5444700373	624805066934	624081451252	150
5038454027	5038454430	8442400370	503467792472	503331536196	150
660321636	660321981	131800191	66915549759	66834135229	150
8916317444	8916317943	6742400398	891656238882	891193731139	150
7990492248	7990492317	1663400571	799961803243	799920509348	150
3587947405	3587947614	3877400722	358286291554	358000933099	150
7837516746	7837516070	2992910000	783106294026	783858213778	150
3108433950	3108433599	7270500627	310565792180	310990586009	150
3661423246	3661423984	9327400185	366467524690	366815835531	150
4456441102	4456441915	5638400296	445131543799	445833373298	150
1909400000	1909400205	3944400393	190253662067	190153103965	150
6822584129	6822584217	6279959514	682053909459	682834707892	150
1682572973	1682572406	9493910000	168700536257	168784817694	150
5591641389	5591641370	3500302483	559227618033	559986129534	150
5962931605	5962931645	593910000	596765670838	596320198541	150
5938040345	5938040663	4562500535	593411386425	593386376007	150
3074406251	3074406436	7493910000	307894902808	307744431128	150
3468500000	3468500482	3593910000	346844662430	346583897992	150
9714400000	9714400114	3468500504	971709007340	971473545849	150
9306853254	9306853526	4493910000	930381768691	930657824564	150
1938265261	1938265357	6983400804	193794987050	193086509056	150
7307920069	7307920637	3890500879	730349916064	730642292749	150
787379678	787379807	7494310805	78257351390	78128574910	150
6405346065	6405346140	4308700929	640016935779	640095835114	150
860681043	860681597	803400999	86420929498	86381889518	150
5323005453	5323005836	377400670	532453081911	532193589265	150
5917880508	5917880121	7427400193	591869562597	591165526207	150
3327542204	3327542864	8044500250	332097583526	332618071837	150
4756728920	4756728319	2493910000	475978233046	475045725865	150
2677100000	2677100181	2215400017	267607457114	267166010784	150
539510000	539510348	2434400244	53909914409	53297347023	150
8923557979	8923557313	4693910000	892496056396	892722985887	150
5687410000	5687410151	5687410785	568145747976	568298103550	150
6288218585	6288218063	7212500007	628701343766	628293846482	150
6692304266	6692304267	3668500527	669066473249	669841530449	150
9396989969	9396989027	5153400427	939274945873	939379431509	150
9396562666	9396562114	2214400026	939596959720	939990737347	150
146134642	146134727	4944700421	14579011014	14186950255	150
8185050432	8185050972	9982600773	818429338826	818823557187	150
7109498414	7109498723	9714400083	710590030583	710787286722	150
301671542	301671041	5963500562	30447709563	30747812701	150
2328639796	2328639738	2256710375	232178223177	232658621492	150
8529758910	8529758833	4635610275	852511233968	852478293061	150
4705400000	4705400600	4705400969	470004718499	470547038956	150
7629452704	7629452199	7080500706	762147467211	762759073489	150
1187079622	1187079074	9444500290	118501465234	118151302419	150

4353505815	4353505369	1877700680	435845968558	435189486518	150
752065354	752065458	5433500219	75627988405	75183604793	150
886360793	886360607	9188400741	88343801061	88214881553	150
7468884616	7468884542	2344500274	746827513072	746826885733	150
1086130205	1086130270	3095400810	108586741625	108954084238	150
2132177414	2132177243	4927610178	213885437599	213553017667	150
9481447987	9481447933	7510610123	948431923333	948543735483	150
34735206	34735912	1253500391	3470791124	3358076207	150
7865020696	7865020566	3169500497	786296178822	786161610468	150
6626374750	6626374846	1915400092	662954305569	662735425497	150
3568229578	3568229410	3747400414	356582073625	356874007577	150
2554016299	2554016655	7843910000	255159106114	255262307993	150
9498972037	9498972890	806400986	949523025792	949880536828	150
7912046471	7912046920	9258400456	791735693256	791479552910	150
7260179122	7260179613	7027400153	726328400660	726197745688	150
1834329175	1834329554	9711500075	183817842297	183128204119	150
8778880435	8778880698	2622500142	877532614138	877790160569	150
3855800000	3855800216	3855800549	385495690851	385413289613	150
7469819029	7469819203	8687400806	746048908313	746495353393	150
8117793302	8117793526	7953400507	811511825708	811656726142	150
3049930228	3049930658	2429400158	304905212545	304700514959	150
3577777726	3577777537	9643400382	357587759243	357871269801	150
7184449698	7184449600	1415400038	718192123123	718831461856	150
6368406081	6368406164	9539400273	636082514800	636162496708	150
3311506353	3311506698	9825400193	331502269109	331201112387	150
7612183434	7612183130	6587510834	761818994371	761748513511	150
9008114406	9008114538	2203400942	900979851779	900478380885	150
3211105863	3211105076	7911500092	321118267173	321823920850	150
950143014	950143740	7662400588	95015906008	95502937386	150
2291500000	2291500953	2291500804	229784964863	229700986520	150
5288643217	5288643350	78400623	528496530535	528978602756	150
9558510000	9558510189	9558510533	955525940425	955199957974	150
4628244270	4628244558	5797400911	462029038384	462361015931	150
6107927501	6107927024	1005500829	610014821223	610811142645	150
6469943206	6469943971	5012400034	646162545744	646531593242	150
8243142612	8243142234	900020000	824088725832	824687397999	150
1684031363	1684031724	9341500332	168363022417	168905992868	150
4998120265	4998120178	3891400913	499368365096	499293989364	150
1992824519	1992824121	6170500616	199346905089	199688068760	150
2394063707	2394063079	3515400050	239265947608	239167468917	150
4957341734	4957341859	691500842	495314016292	495439728838	150
3772973916	3772973125	1240500323	377501564633	377273550587	150
3859477176	3859477085	583500714	385719889114	385771653273	150
4216452858	4216452024	2389400740	421636087676	421776421802	150
1187510000	1187510760	1187510789	118684817839	118138284674	150
5820974667	5820974392	3508700947	582037400805	582374029980	150
1157766387	1157766041	9853910000	115466227909	115065048513	150

1849485482	1849485080	8181600701	184157389809	184992896926	150
7431115929	7431115830	3194400809	743511090668	743255090803	150
1640594010	1640594990	8816400093	164650604774	164710280592	150
534842740	534842609	1826500140	53899593577	53306202088	150
5824683407	5824683573	9674500600	582314494648	582657759885	150
4080000202	4080000728	4678794679	408696744530	408517856742	150
2929911695	2929911944	8905500929	292817191297	292225412208	150
3225915227	3225915082	8053910000	322990964550	322918688066	150
1737703506	1737703761	494500768	173566022617	173329151596	150
860955431	860955237	3774039950	86611462486	86559787134	150
2270553440	2270553368	823400197	227087972163	227223412722	150
9028287753	9028287521	8032500189	902426074002	902126082302	150
3449423855	3449423286	5232400252	344848884782	344488439724	150
4134323945	4134323797	7683600735	413463552603	413850273102	150
8316144173	8316144982	363400540	831189345349	831732923431	150
4081909931	4081909652	8624610190	408597822454	408618017052	150
2996296758	2996296172	4225400125	299974897241	299208717594	150
295108546	295108854	5912400122	29255479612	29006182307	150
6188243181	6188243474	3788400794	618817884977	618632003221	150
2568887174	2568887102	3462400564	256892941255	256927726674	150
5389070009	5389070642	4368400557	538207029864	538434721234	150
4307296393	4307296076	7962400618	430392504023	430606150824	150
4586601540	4586601765	8782400798	458726934509	458557127120	150
7769088994	7769088125	5324500082	776020480575	776425534753	150
8334998323	8334998116	9061500500	833441788615	833247473064	150
9160911166	9160911176	6556700458	916584382333	916256781940	150
476180784	476180872	5663500532	47033736112	47145162576	150
4817274682	4817274473	3655400472	481030173939	481616734568	150
9948554350	9948554209	7594400853	994713748160	994197689707	150
2024892767	2024892065	8863500555	202939011691	202237348812	150
5458611620	5458611712	8613500045	545280321015	545495520667	150
5779713638	5779713090	2484800789	577745740857	577703011757	150
9522238445	9522238355	4023610135	952019222036	952360998008	150
5548190456	5548190941	9977510777	554873311314	554480729515	150
6155796438	6155796117	955400499	615631848153	615701273283	150
2277522194	2277522874	725500115	227401064385	227821791539	150
4695262050	4695262344	821800158	469481086061	469245623759	150
4056520460	4056520284	983400798	405034542438	405246366453	150
3520862296	3520862514	5454700470	352325161982	352088947021	150
3340405063	3340405158	4892133075	334098025078	334659734623	150
5915862624	5915862644	1909400009	591674392761	591065265827	150
6361334332	6361334858	1974500623	636974163953	636452117599	150
8160033997	8160033027	2454400441	816969475337	816056191474	150
3602874391	3602874323	423610170	360950638327	360117417211	150
6541228863	6541228325	7196400854	654144735282	654547022361	150
3656724977	3656724214	624500106	365001088417	365367634693	150
734659440	734659113	3108400947	73539951725	73175297684	150

3045254010	3045254775	6175400625	304766186392	304717055137	150
3007400000	3007400633	3007400948	300860058835	300903961553	150
4783465768	4783465792	1503500929	478676568753	478487910830	150
3511951149	3511951858	9470500649	351254996551	351509562467	150
5343745048	5343745914	8921800179	534708931353	534035430656	150
7304414570	7304414088	3035400208	730772751638	730918691775	150
2377433853	2377433292	5088400727	237352662317	237678542366	150
609064725	609064642	1397410851	60506226019	60862823919	150
3834923739	3834923153	6998510967	383134175393	383631599036	150
4890019334	4890019176	2223610153	489725698166	489514754337	150
4023500000	4023500287	4023500079	402867130493	402426086679	150
7374500000	7374500416	7374500569	737288113092	737827392835	150
6867891671	6867891979	8192400838	686497935781	686922005964	150
8072952763	8072952965	8185400727	807382483030	807560554818	150
6272479059	6272479515	5171500606	627195409008	627277206340	150
7057055560	7057055940	1919400109	705051456400	705820040603	150
8287700000	8287700631	8287700725	828878632698	828144754574	150
9261751370	9261751905	9432500230	926703876919	926971503579	150
3160804132	3160804606	6549610315	316963795440	316192918665	150
8113621759	8113621291	2263500491	811536776356	811767800307	150
3979830186	3979830517	7642400389	397651446867	397034679739	150
7048425168	7048425451	8079400617	704412965457	704760429430	150
5830271028	5830271030	7252210498	583442483417	583691566141	150
9378302415	9378302762	6271500617	937358794979	937906624524	150
7108955975	7108955712	1203500899	710513350126	710100883635	150
1959283798	1959283544	1818400114	195900463561	195907229000	150
425978838	425978722	7603400986	42764528381	42661746969	150
5462156427	5462156978	4582500735	546105863708	546959069302	150
9940702688	9940702866	6005500834	994908820302	994192087310	150
9288558063	9288558249	8172500599	928508637865	928896339870	150
906431738	906431536	3195400820	90330887309	90403144966	150
3980884202	3980884690	790500866	398503096035	398339819757	150
323237107	323237940	3493400850	32965015842	32068296315	150
7939546319	7939546589	8117400066	793731029913	793808372371	150
5643554489	5643554431	8493910000	564280219872	564489287835	150
1103890146	1103890956	4594310812	110308690501	110279215602	150
3991492439	3991492713	4618400097	399880051657	399290344738	150
6436510000	6436510873	1092400821	643268946039	643220962561	150
321192206	321192673	7855700500	32537490024	32139724137	150
3441217956	3441217417	4067400545	344948398794	344382579016	150
4145416964	4145416919	3937400335	414231654280	414570275734	150
8411677760	8411677531	9818400122	841079026941	841473076234	150
2729936476	2729936643	3913500068	272864453867	272263407651	150
5803499606	5803499996	3813500058	580500223073	580903466454	150
5030150273	5030150183	1943400404	503494509230	503945712752	150
2995688491	2995688412	6575400665	299806712286	299830976682	150
6967251933	6967251158	8023700153	696830044595	696326408338	150

1965352289	1965352590	6280500725	196908787068	196966898987	150
4791610000	4791610483	4636610261	479423686501	479359895900	150
9607389308	9607389098	2562400573	960313328426	960851494030	150
1598098759	1598098416	664500496	159051827112	159076332466	150
5637694705	5637694764	704500926	563719300380	563785962306	150
812253912	812253230	2377410654	81902651898	81707302932	150
3291516692	3291516831	4425400147	329202448251	329056725756	150
2414408952	2414408763	6273400636	241046603685	241717476708	150
8595852788	8595852829	5983600763	859509732686	859901376987	150
119239619	119239128	4234400226	11415820311	11375260702	150
6772400000	6772400909	6772400698	677967931243	677206868598	150
4812984699	4812984807	1105500840	481279039653	481261988668	150
4855828035	4855828970	7239400242	485824614060	485497831011	150
5992956164	5992956004	742410391	599844436139	599357411972	150
1236332230	1236332927	4305500863	123227610023	123828198293	150
5854531287	5854531755	3065400512	585898936358	585435649901	150
67515789	67515924	624610182	6097601855	6155070737	150
2368195815	2368195135	9912610142	236906115929	236356938250	150
3034558502	3034558533	5081500695	303449303521	303987623152	150
3149830333	3149830304	1694810043	314210800520	314445727630	150
3201030945	3201030601	4513400073	320480138970	320628050499	150
8283391987	8283391555	2602400992	828315415669	828456171493	150
5212909773	5212909326	43400314	521014479915	521165959385	150
9896400000	9896400170	9896400932	989979179146	989515029015	150
8424314367	8424314644	5621800142	842485171274	842060235484	150
5778142309	5778142250	1028400134	577116970277	577465822387	150
672105232	672105793	6864500519	67147392397	67788578139	150
777797263	777797873	9184400716	77074953837	77038054281	150
7082181799	7082181693	4881600765	708938802756	708464950316	150
4834350288	4834350500	7021500102	483255967799	483633864278	150
9075572637	9075572303	3524400155	907553318886	907935627668	150
8136462003	8136462139	8684500697	813161150772	813674631502	150
1069025489	1069025337	4453810511	106337680695	106456893872	150
7172189345	7172189167	3018400036	717532930031	717043747814	150
6016761163	6016761298	7484500677	601716308152	601518563992	150
7655899501	7655899638	9871600672	765366778117	765402794514	150
1657433884	1657433176	4622400191	165830020435	165301319762	150
2068810960	2068810318	8505400953	206747058778	206374367891	150
602571905	602571121	2774500603	60411870570	60229069628	150
2317506479	2317506101	6118400049	231034520807	231248155246	150
9979694066	9979694524	1577410673	997776473406	997289464896	150
7718365231	7718365647	9872400710	771185281727	771979197569	150
7331557469	7331557893	4087700702	733810693785	733275372795	150
7854967941	7854967972	4321500129	785614730911	785768623102	150
1956406870	1956406109	1805500910	195897389567	195727720007	150
2432497356	2432497767	6892500865	243398051229	243390423884	150
1173644506	1173644536	1121810167	117285627341	117098868059	150

2629398992	2629398366	6146400324	262123589576	262065431728	150
9995430890	9995430963	6391500818	999656264459	999387420333	150
7400823730	7400823777	3399400842	740349303587	740169397733	150
3445055240	3445055688	1315500967	344733363989	344220728221	150
8067489797	8067489149	9698510940	806334765114	806447898049	150
8260506275	8260506030	8416400054	826681853753	826821932459	150
593361599	593361027	7294500755	59315549062	59505134289	150
8468196400	8468196821	4549400368	846530612423	846513715136	150
1247652036	1247652321	2484600704	124634644375	124548285000	150
9448961109	9448961496	6934310263	944297155997	944461903713	150
4484887830	4484887020	2365710464	448287407528	448662520189	150
557852882	557852916	4413700091	55794099255	55759052058	150
8773956956	8773956569	9686510847	877088902173	877556468232	150
3756677278	3756677011	1724400173	375088179809	375470075044	150
4675585833	4675585917	4838400315	467432996023	467073627098	150
5672983497	5672983484	9049400323	567475197320	567045752206	150
6185558823	6185558686	2053400414	618568683252	618069256510	150
6980206940	6980206629	6753400487	698156513233	698806024685	150
5975686716	5975686560	9774500610	597293422503	597212943176	150
7521304689	7521304097	6724500122	752281449736	752319715786	150
4829465554	4829465366	7867410610	482726030893	482094553284	150
5364202076	5364202788	1157500355	536696384998	536071441659	150
4590486798	4590486868	3537400297	459595025933	459439040070	150
4192438184	4192438983	9461500540	419962225282	419035957191	150
1439885878	1439885202	7756700479	143100986833	143369410482	150
1760536051	1760536512	2584500681	176175444646	176045181363	150
3527692440	3527692984	6428400179	352364075402	352832981977	150
3775154815	3775154592	2956700494	377312355582	377442944081	150
7736923478	7736923094	5452210516	773627305949	773510855914	150
7382297518	7382297155	7684600729	738141368432	738022828816	150
919954323	919954404	3000500912	91724725503	91490079744	150
2866033142	2866033440	4921500188	286570946332	286250557914	150
9082725958	9082725584	481600722	908273223064	908317445785	150
3952034861	3952034117	6706410003	395033346715	395413569464	150
5470179654	5470179084	5639400279	547115686871	547727946163	150
3915450005	3915450222	7697400903	391063166579	391262874360	150
9866410437	9866410057	5427610130	986377267696	986031908472	150
6365426204	6365426058	6703500954	636405872386	636974043750	150
3969282512	3969282114	1036400205	396191085912	396311029878	150
3959393054	3959393811	1032500182	395039342631	395654727776	150
8858437578	8858437230	6509910000	885481797626	885595109157	150
6237420854	6237420804	758610439	623498426820	623233788574	150
1199630589	1199630497	5608400998	119142163844	119841085439	150
391221560	391221656	3959710427	39504668694	39032834976	150
1790458490	1790458662	942500372	179637261600	179572887646	150
1891788798	1891788763	453500410	189902339314	189534524330	150
9714461043	9714461960	9512400086	971179231252	971280806797	150

1614621879	1614621511	3493500806	161049187327	161150584772	150
2540237846	2540237147	1465710472	254710690403	254369783854	150
3497060505	3497060085	3357500377	349023286197	349752804421	150
8801303730	8801303664	3627610147	880146693669	880435330612	150
622720369	622720892	602500943	62729419790	62690720309	150
3395409960	3395409018	8793500840	339606868414	339604602360	150
416747747	416747686	3394400829	41297061587	41391157195	150
5663329285	5663329119	3735400280	566920134445	566717701106	150
9295781872	9295781907	4762500555	929721398774	929242459552	150
1376372024	1376372306	9642500351	137509974486	137093286895	150
9576571626	9576571412	4906400000	957800465530	957075554031	150
9537361969	9537361336	2654500400	953692889466	953862582745	150
9639831109	9639831640	727610154	963912585684	963038147812	150
8143137257	8143137442	5164500453	814710030532	814128980201	150
8268049761	8268049639	3996400937	826460216715	826353315684	150
170901252	170901530	8448400376	17728135911	17237837240	150
4203769051	4203769216	5385400744	420272969749	420421136657	150
2643148735	2643148361	3357400474	264484621195	264862036360	150
2893207297	2893207818	6589400764	289665845954	289430616256	150
3221201784	3221201055	7370500637	322578062467	322591907678	150
7098757588	7098757907	6702500957	709146749716	709389265839	150
4760182475	4760182894	7487700744	476829697571	476860444334	150
6831361794	6831361094	4386400766	683243355574	683646176866	150
8596701315	8596701886	5074500536	859298841542	859685112721	150
3292915577	3292915615	8581600740	329569539114	329474596788	150
1612186561	1612186681	7202500909	161701916401	161421110017	150
6746708053	6746708599	456710392	674037525047	674439955523	150
601986155	601986215	4112500994	60756455012	60793333675	150
381298561	381298002	6084500638	38872109872	38111808531	150
1689917178	1689917042	2061500493	168249725400	168248809107	150
6593118392	6593118228	6983500758	659296865659	659940009487	150
317789376	317789112	8747400419	31658697017	31432667541	150
2475415985	2475415105	6474500577	247431168813	247763489398	150
5831402813	5831402997	9243500301	583061360361	583261178574	150
3601788007	3601788030	2064400500	360518518107	360300438884	150
1260822933	1260822773	9112400048	126530847824	126828924472	150
8293378644	8293378314	7294310785	829259698057	829997789421	150
9223327335	9223327468	4220500130	922936287331	922044225824	150
7334619922	7334619595	8730500280	733509745052	733500147672	150
5055944711	5055944986	7375400646	505170987972	505891633234	150
8688253954	8688253874	8533910000	868868151109	868158222900	150
3692409321	3692409936	9622500150	369356882294	369519243336	150
5044960703	5044960463	1114500965	504079918699	504814068859	150
4794924014	4794924767	2615400061	479587468569	479495762369	150
8769152768	8769152517	6077410628	876547375620	876234906117	150
7882719585	7882719384	6404500905	788901810554	788318531041	150
8589408230	8589408377	9574400656	858065159575	858672798942	150

4006902381	4006902375	7892400907	400013627898	400492165999	150
5660425701	5660425453	1775400680	566180924099	566502639396	150
1199666866	1199666378	2206400928	119782537751	119188205203	150
5313967552	5313967927	2325400134	531057021369	531591633043	150
9251570964	9251570431	4487510822	925120949135	925356876441	150
3736266034	3736266121	1812610124	373522614555	373693291730	150
6066582917	6066582922	9554400458	606594153561	606659338776	150
6956607408	6956607036	1524610173	695662063110	695352180818	150
3619758003	3619758154	3393500796	361649763479	361260077014	150
6711602498	6711602554	6435610258	671886484338	671902170529	150
9677708679	9677708436	8315500974	967644481912	967797928942	150
6968303816	6968303757	4781500760	696891099820	696486249803	150
9397324728	9397324984	4156710367	939349870704	939560399973	150
8052082484	8052082502	126400115	805045256160	805678572765	150
7169839198	7169839720	1498400861	716789241557	716039203716	150
415671926	415671466	9237400273	41024935473	41933573391	150
5839009975	5839009799	1615500003	583002635226	583984262994	150
905973005	905973933	7977700695	90392710755	90977948845	150
3870353522	3870353827	9410610115	387925861719	387702085916	150
8202376970	8202376688	5780500773	820202498915	820843675823	150
1754418408	1754418908	9058400437	175204449797	175353461583	150
6476482706	6476482671	6297700823	647072003016	647851353015	150
1202091420	1202091629	9692400889	120003677165	120347950041	150
2169083837	2169083858	3472810712	216525536891	216768764861	150
5277404642	5277404965	1579400660	527303717361	527225568690	150
4021478198	4021478812	5003400925	402685196275	402871904520	150
2521993413	2521993326	6752500457	252938473445	252382977380	150
1920052532	1920052102	8598510929	192244438236	192991348198	150
2592667964	2592667668	5978400717	259325502026	259381767105	150
6486494972	6486494941	5576400682	648290229342	648732830961	150
1028493044	1028493047	1584600713	102213809354	102199191366	150
6805525905	6805525075	2315400028	680087639844	680142327040	150
3937531808	3937531464	3553810520	393968194271	393375854745	150
6279771702	6279771623	1264400519	627323132965	627494822619	150
9898647916	9898647340	7704500932	989384139839	989383748238	150
9784093578	9784093296	5870500684	978103818811	978336704763	150
2319702431	2319702802	8612610111	231540835464	231773409728	150
2318896334	2318896401	1572810720	231342807636	231691592361	150
6665638470	6665638750	402400970	666308732210	666635680163	150
7652265810	7652265512	5356700438	765173559203	765987239915	150
1943464926	1943464666	6224810196	194231929043	194907732854	150
7073394845	7073394575	1222610164	707309528543	707313896590	150
2903670466	2903670304	8402810014	290255177507	290716173620	150
4746813363	4746813529	1292600795	474416434360	474117588995	150
9556271913	9556271234	5952400516	955006532037	955429421149	150
4206111782	4206111123	2446400350	420026543266	420947530544	150
6951266969	6951266824	7353400449	695435697814	695259743653	150

7839683285	7839683892	9304500898	783235162988	783449954842	150
1243328032	1243328967	1865400590	124910342674	124964368775	150
2212457735	2212457770	5698400885	221461651517	221208624198	150
6302195502	6302195937	5272500607	630438206271	630610880703	150
2035716185	2035716938	8472500630	203730555468	203677835210	150
7629911440	7629911164	1942400412	762494902574	762495065775	150
4574249280	4574249446	3508400987	457019040311	457145281263	150
6318505589	6318505819	3695400870	631871408510	631869777162	150
7162901192	7162901848	1402810007	716055950172	716867031593	150
5424107592	5424107175	5905400989	542682495007	542530783889	150
3065319771	3065319732	9086400740	306486984713	306191555126	150
6749767489	6749767298	6415400043	674722875144	674442921898	150
7901068091	7901068881	226400125	790438163820	790123499955	150
7752222700	7752222900	313500007	775696455869	775621074428	150
3134886624	3134886929	3511610109	313795379549	313241461830	150
2361653378	2361653119	284600683	236664931183	236994245568	150
556740005	556740189	755400479	55377283996	55137299014	150
7523705964	7523705963	24400104	752363559961	752519578008	150
8270828496	8270828337	4781600756	827489015349	827250881791	150
6024795930	6024795431	7073500574	602802628560	602975189796	150
797008837	797008124	4302400964	79552770613	79850544051	150
2861354957	2861354873	1863400591	286206951485	286295007671	150
6941786504	6941786697	9923986872	694463687184	694346854650	150
128881461	128881474	9392500818	12797102361	12269272312	150
7572705461	7572705109	4066700506	757792410767	757270144303	150
7604599577	7604599193	1452500423	760210359714	760309700289	150
9773546721	9773546398	2564500489	977699391658	977782809630	150
5556162457	5556162339	143400324	555367878171	555716219756	150
9320121627	9320121851	2805400977	932323562662	932550452313	150
9830514990	9830514508	3826400187	983452240668	983481786100	150
2010996471	2010996635	7584083778	201676693455	201167109934	150
8040110254	8040110003	2555400461	804055536236	804064538487	150
6527755904	6527755244	1286400752	652158599747	652998199558	150
8417938804	8417938987	6163400526	841308546398	841108210438	150
2157465171	2157465459	1262445943	215466313369	215457805323	150
2937372781	2937372130	3784500702	293572188728	293468262029	150
9221967951	9221967659	2683500725	922533051528	922422727744	150
4672578169	4672578985	964400587	467575662848	467647835304	150
9543343810	9543343896	1721800148	954393896800	954541965377	150
607440288	607440537	1587410772	60712578339	60784953068	150
5742448164	5742448536	7014400011	574350719923	574990565193	150
9901932231	9901932653	7064500445	990176386308	990454863813	150
1925871790	1925871826	8592500837	192690003560	192206282277	150
5035827896	5035827193	7021610162	503841098271	503377645626	150
4127292557	4127292010	6632500248	412954786326	412243797795	150
5669446941	5669446554	1482500723	566680168281	566149505121	150
3671305679	3671305169	2884500711	367809422500	367485451342	150

8814278626	8814278659	5610610131	881431677022	881751229214	150
2598231748	2598231682	4496400883	259920192602	259145914391	150
8224431960	8224431698	9711610134	822879184296	822124249462	150
8736470309	8736470085	9697700865	873661486777	873903410651	150
1494277598	1494277837	1035710136	149419810524	149939307724	150
6488079178	6488920206	8195400825	648839606802	648718593923	150
325460071	325510159	4497700841	32326307724	32519561579	150
5200159456	5202091185	6646400376	520937557926	520756167645	150
9995218408	9998336958	3893400890	999568285203	999747161848	150
7997217557	7997217156	6190500813	799487953988	799525953168	150
8947540845	8947540293	2981600773	894601464823	894771645270	150
7854065303	7854065004	7634500210	785238123998	785773314452	150
9494450496	9494450865	4236500183	949970545913	949953138712	150
8963380503	8963380864	3340500335	896264926197	896965494223	150
1341233794	1345870787	3021810159	134357289886	134671721222	150
7080877032	7080877643	1593910000	708426183572	708060831741	150
1363559548	1362069451	3859710417	136658480731	136938766299	150
3273284424	3274042705	8917400144	327688658215	327255635051	150
3479591232	3473229860	9097700806	347319560185	347719502555	150
2872502750	2870079683	4364400532	287640911425	287267673010	150
5703221598	5708688316	2252400443	570146669044	570479109542	150
3398833332	3392558237	9611610125	339346008961	339421750384	150
5437874690	5432013669	2591500834	543618490239	543704049722	150
2220579736	2220629574	7733500249	222070503438	222449337210	150
4323638805	4323496397	1896400923	432836199698	432139634572	150
2560142883	2566032382	7104500878	256344018940	256808944002	150
305769219	301335397	578400673	30023558756	30564454018	150
6440379371	6448796569	5393500798	644175599138	644472061473	150
6437228802	6434664072	9744700407	643825539384	643654427872	150
1883440304	1882105461	6390500832	188123492445	188391451337	150
6352372908	6356451796	6684500695	635280476899	635514173189	150
3651733632	3651453330	640500362	365436786982	365399053522	150
2016937143	2017712526	6306400942	201363259599	201241616593	150
6378052680	6371267045	6189400724	637473651034	637161366721	150
792074021	793255334	8381600720	79757824870	79561776520	150
647673209	642801535	6582400776	64601608017	64587499367	150
5372787505	5375437149	6009510977	537406459089	537510553098	150
9461085259	9461005044	4507400003	946928624802	946111637552	150
611080491	611802842	520500156	61524710271	61287604564	150
681158977	685443236	994400886	68906770118	68623193330	150
8427784452	8423639906	2495400849	842342278729	842753800810	150
3739115239	3730652373	8466400571	373871136759	373392284595	150
9021870302	9029331656	9924500145	902280170127	902733328622	150
5219467972	5210304580	4016400010	521186586883	521727296675	150
9898125792	9893189064	5505310913	989732982769	989159337575	150
5310000	5310798	5310858	450070544	170961345	150
5310000	5310798	5310858	450070544	170961345	150

36500000	36500782	36500159	3929633678	3000213157	150
36500000	36500782	36500159	3929633678	3000213157	150
3500000	3500850	3500879	946953575	287532691	150
3500000	3500850	3500879	946953575	287532691	150
71500000	71500568	71500591	7432793531	7273131321	150
71500000	71500568	71500591	7432793531	7273131321	150
93500000	93500171	93500762	9743472691	9549354416	150
93500000	93500171	93500762	9743472691	9549354416	150
84600000	84600284	84600663	8855535273	8550215661	150
84600000	84600284	84600663	8855535273	8550215661	150
72500000	72500627	72500581	7096666723	7055745783	150
72500000	72500627	72500581	7096666723	7055745783	150
91500000	91500924	91500784	9364530698	9060768659	150
91500000	91500924	91500784	9364530698	9060768659	150
94500000	94500096	94500729	9161206332	9888063133	150
94500000	94500096	94500729	9161206332	9888063133	150
64500000	64500150	64500438	6479545955	6185996195	150
64500000	64500150	64500438	6479545955	6185996195	150
85400000	85400372	85400709	8805107012	8242212373	150
85400000	85400372	85400709	8805107012	8242212373	150
213400000	213400053	213400039	21988722764	21802241988	150
213400000	213400053	213400039	21988722764	21802241988	150
204400000	204400561	204400924	20404438121	20318581600	150
204400000	204400561	204400924	20404438121	20318581600	150
229400000	229400464	229400136	22551553972	22838743283	150
229400000	229400464	229400136	22551553972	22838743283	150
237400000	237400227	237400264	23709710778	23803900579	150
237400000	237400227	237400264	23709710778	23803900579	150
227400000	227400081	227400166	22289327488	22075934903	150
227400000	227400081	227400166	22289327488	22075934903	150
184400000	184400209	184400707	18658358662	18721888085	150
184400000	184400209	184400707	18658358662	18721888085	150
200500000	200500440	200500929	20845962994	20407418335	150
200500000	200500440	200500929	20845962994	20407418335	150
233500000	233500274	233500194	23850184585	23344736439	150
233500000	233500274	233500194	23850184585	23344736439	150
173400000	173400390	173400620	17340737366	17265154807	150
173400000	173400390	173400620	17340737366	17265154807	150
183500000	183500871	183500674	18217143662	18086471282	150
183500000	183500871	183500674	18217143662	18086471282	150
175310000	175310943	175310772	17961302669	17843537900	150
175310000	175310943	175310772	17961302669	17843537900	150
175310000	175310945	175310845	17740459786	17843537900	150
175310000	175310945	175310845	17740459786	17843537900	150
175310000	175310946	175310262	17629827266	17843537900	150
175310000	175310946	175310262	17629827266	17843537900	150
175310000	175310947	175310738	17732872456	17843537900	150

175310000	175310947	175310738	17732872456	17843537900	150
175310000	175310948	175310856	17707882684	17843537900	150
175310000	175310948	175310856	17707882684	17843537900	150
175310000	175310949	175310094	17719836845	17843537900	150
175310000	175310949	175310094	17719836845	17843537900	150
175310000	175310950	175310281	17413889936	17843537900	150
175310000	175310950	175310281	17413889936	17843537900	150
175310000	175310951	175310829	17816019482	17843537900	150
175310000	175310951	175310829	17816019482	17843537900	150
175310000	175310952	175310365	17288462895	17843537900	150
175310000	175310952	175310365	17288462895	17843537900	150
129400000	129400451	129400126	12358872025	12140934549	150
129400000	129400451	129400126	12358872025	12140934549	150
130500000	130500796	130500215	13367477781	13385496377	150
130500000	130500796	130500215	13367477781	13385496377	150
123610000	123610977	123610141	12498709265	12486203796	150
123610000	123610977	123610141	12498709265	12486203796	150
134400000	134400926	134400212	13968575974	13265700061	150
134400000	134400926	134400212	13968575974	13265700061	150
135400000	135400766	135400215	13352748720	13738768449	150
135400000	135400766	135400215	13352748720	13738768449	150
137610000	137610565	137610193	13586330740	13579818086	150
137610000	137610565	137610193	13586330740	13579818086	150
150500000	150500002	150500411	15885920082	15490609845	150
150500000	150500002	150500411	15885920082	15490609845	150
342500000	342500607	342500312	34104788154	34578297569	150
342500000	342500607	342500312	34104788154	34578297569	150
358610000	358610466	358610399	35149499135	35902100877	150
358610000	358610466	358610399	35149499135	35902100877	150
343400000	343400750	343400343	34026652549	34636053564	150
343400000	343400750	343400343	34026652549	34636053564	150
360500000	360500151	360500531	36873340475	36257799190	150
360500000	360500151	360500531	36873340475	36257799190	150
331500000	331500097	331500225	33760293150	33895888998	150
331500000	331500097	331500225	33760293150	33895888998	150
355500000	355500652	355500373	35380440220	35832504039	150
355500000	355500652	355500373	35380440220	35832504039	150
310610000	310610446	310610096	31753889282	31605447327	150
310610000	310610446	310610096	31753889282	31605447327	150
362400000	362400122	362400551	36414536673	36672680997	150
362400000	362400122	362400551	36414536673	36672680997	150
365400000	365400199	365400539	36420162432	36065176742	150
365400000	365400199	365400539	36420162432	36065176742	150
362500000	362500674	362500511	36713690975	36008878875	150
362500000	362500674	362500511	36713690975	36008878875	150
363500000	363500455	363500499	36434412945	36443877940	150
363500000	363500455	363500499	36434412945	36443877940	150

274500000	274500363	274500551	27923673754	27097227696	150
274500000	274500363	274500551	27923673754	27097227696	150
283500000	283500889	283500684	28400310301	28696913585	150
283500000	283500889	283500684	28400310301	28696913585	150
254500000	254500824	254500358	25991535095	25008177617	150
254500000	254500824	254500358	25991535095	25008177617	150
442500000	442500626	442500322	44001970665	44382585422	150
442500000	442500626	442500322	44001970665	44382585422	150
435400000	435400824	435400247	43054593777	43764515015	150
435400000	435400824	435400247	43054593777	43764515015	150
466400000	466400568	466400562	46500659922	46178021913	150
466400000	466400568	466400562	46500659922	46178021913	150
467400000	467400488	467400581	46712730701	46061437650	150
467400000	467400488	467400581	46712730701	46061437650	150
484500000	484500996	484500670	48273166472	48803077122	150
484500000	484500996	484500670	48273166472	48803077122	150
447400000	447400278	447400381	44077749451	44460348247	150
447400000	447400278	447400381	44077749451	44460348247	150
375400000	375400356	375400639	37105164617	37592360577	150
375400000	375400356	375400639	37105164617	37592360577	150
424400000	424400817	424400143	42931455701	42299868704	150
424400000	424400817	424400143	42931455701	42299868704	150
408410000	408410877	408410961	40622628995	40554001528	150
408410000	408410877	408410961	40622628995	40554001528	150
383500000	383500906	383500694	38622761283	38730022659	150
383500000	383500906	383500694	38622761283	38730022659	150
402500000	402500111	402500922	40728466944	40792457162	150
402500000	402500111	402500922	40728466944	40792457162	150
385400000	385400420	385400739	38640373034	38830016032	150
385400000	385400420	385400739	38640373034	38830016032	150
418400000	418400078	418400073	41740052152	41016875437	150
418400000	418400078	418400073	41740052152	41016875437	150
594810000	594810966	594810031	59865004087	59426241526	150
594810000	594810966	594810031	59865004087	59426241526	150
611500000	611500877	611500056	61066533979	61116934869	150
611500000	611500877	611500056	61066533979	61116934869	150
597400000	597400779	597400886	59328786826	59069695012	150
597400000	597400779	597400886	59328786826	59069695012	150
616400000	616400868	616400066	61092033990	61206004733	150
616400000	616400868	616400066	61092033990	61206004733	150
592400000	592400311	592400870	59352049597	59092800112	150
592400000	592400311	592400870	59352049597	59092800112	150
534400000	534400869	534400252	53936555746	53322829112	150
534400000	534400869	534400252	53936555746	53322829112	150
551500000	551500424	551500441	55715188810	55662415611	150
551500000	551500424	551500441	55715188810	55662415611	150
505500000	505500564	505500879	50598587345	50758344075	150

505500000	505500564	505500879	50598587345	50758344075	150
684500000	684500033	684500689	68965392147	68166493998	150
684500000	684500033	684500689	68965392147	68166493998	150
709400000	709400292	709400988	70798885412	70880467621	150
709400000	709400292	709400988	70798885412	70880467621	150
721500000	721500998	721500164	72558883944	72324402504	150
721500000	721500998	721500164	72558883944	72324402504	150
624400000	624400848	624400162	62375103724	62342222395	150
624400000	624400848	624400162	62375103724	62342222395	150
653400000	653400886	653400472	65703614085	65165649191	150
653400000	653400886	653400472	65703614085	65165649191	150
619400000	619400369	619400078	61311245103	61818827635	150
619400000	619400369	619400078	61311245103	61818827635	150
670500000	670500319	670500660	67512170430	67553531211	150
670500000	670500319	670500660	67512170430	67553531211	150
681500000	681500751	681500749	68958056427	68665022250	150
681500000	681500751	681500749	68958056427	68665022250	150
652500000	652500549	652500441	65536704245	65251601136	150
652500000	652500549	652500441	65536704245	65251601136	150
630500000	630500763	630500263	63968246487	63358965672	150
630500000	630500763	630500263	63968246487	63358965672	150
827400000	827400169	827400224	82879380140	82530735861	150
827400000	827400169	827400224	82879380140	82530735861	150
860500000	860500241	860500580	86813221050	86924132374	150
860500000	860500241	860500580	86813221050	86924132374	150
822500000	822500465	822500161	82431580825	82489425642	150
822500000	822500465	822500161	82431580825	82489425642	150
824500000	824500488	824500126	82649495400	82295512296	150
824500000	824500488	824500126	82649495400	82295512296	150
763400000	763400327	763400580	76043505717	76752946366	150
763400000	763400327	763400580	76043505717	76752946366	150
764400000	764400970	764400568	76892552831	76142603146	150
764400000	764400970	764400568	76892552831	76142603146	150
800500000	800500551	800500988	80714900335	80634626438	150
800500000	800500551	800500988	80714900335	80634626438	150
770500000	770500338	770500670	77279185588	77279853873	150
770500000	770500338	770500670	77279185588	77279853873	150
801500000	801500744	801500976	80408316933	80436506495	150
801500000	801500744	801500976	80408316933	80436506495	150
794500000	794500443	794500798	79968431539	79289445714	150
794500000	794500443	794500798	79968431539	79289445714	150
768400000	768400769	768400593	76322408315	76302495044	150
768400000	768400769	768400593	76322408315	76302495044	150
756700000	756700948	756700472	75953072095	75559157622	150
756700000	756700948	756700472	75953072095	75559157622	150
754500000	754500907	754500408	75040637080	75067978496	150
754500000	754500907	754500408	75040637080	75067978496	150

943500000	943500779	943500360	94554239414	94092855908	150
943500000	943500779	943500360	94554239414	94092855908	150
969400000	969400146	969400600	96383234408	96638784050	150
969400000	969400146	969400600	96383234408	96638784050	150
985400000	985400516	985400797	98466537926	98801465618	150
985400000	985400516	985400797	98466537926	98801465618	150
935400000	935400851	935400298	93749791111	93116455979	150
935400000	935400851	935400298	93749791111	93116455979	150
979400000	979400309	979400698	97242924281	97446511454	150
979400000	979400309	979400698	97242924281	97446511454	150
936400000	936400183	936400296	93407253513	93770006917	150
936400000	936400183	936400296	93407253513	93770006917	150
912500000	912500286	912500070	91349769621	91609566716	150
912500000	912500286	912500070	91349769621	91609566716	150
905400000	905400424	905400984	90445695983	90285599299	150
905400000	905400424	905400984	90445695983	90285599299	150
922400000	922400065	922400217	92046151799	92514329977	150
922400000	922400065	922400217	92046151799	92514329977	150
907400000	907400120	907400038	90026451389	90149199425	150
907400000	907400120	907400038	90026451389	90149199425	150
924400000	924400896	924400192	92274831029	92665838363	150
924400000	924400896	924400192	92274831029	92665838363	150
925500000	925500941	925500135	92129255290	92676103296	150
925500000	925500941	925500135	92129255290	92676103296	150
868400000	868400791	868400603	86503258858	86103574100	150
868400000	868400791	868400603	86503258858	86103574100	150
897410000	897410777	897410900	89831606646	89130801678	150
897410000	897410777	897410900	89831606646	89130801678	150
930500000	930500807	930500292	93357784430	93619344015	150
930500000	930500807	930500292	93357784430	93619344015	150
884800000	884800674	884800826	88599669755	88940105782	150
884800000	884800674	884800826	88599669755	88940105782	150
887700000	887700653	887700777	88215951583	88434624890	150
887700000	887700653	887700777	88215951583	88434624890	150
1102500000	1102500055	1102500893	110043342562	110175285520	150
1102500000	1102500055	1102500893	110043342562	110175285520	150
1094500000	1094500098	1094500730	109736689131	109725415796	150
1094500000	1094500098	1094500730	109736689131	109725415796	150
1096400000	1096400929	1096400837	109108639770	109788450088	150
1096400000	1096400929	1096400837	109108639770	109788450088	150
1073400000	1073400377	1073400611	107941642282	107607196140	150
1073400000	1073400377	1073400611	107941642282	107607196140	150
1057400000	1057400377	1057400442	105176131355	105785579348	150
1057400000	1057400377	1057400442	105176131355	105785579348	150
1004500000	1004500361	1004500862	100483679008	100171410271	150
1004500000	1004500361	1004500862	100483679008	100171410271	150
1008400000	1008400862	1008400935	100355148666	100682217234	150

1008400000	1008400862	1008400935	100355148666	100682217234	150
1052400000	1052400297	1052400422	105521701333	105345794155	150
1052400000	1052400297	1052400422	105521701333	105345794155	150
1020500000	1020500628	1020500108	102037841947	102614194121	150
1020500000	1020500628	1020500108	102037841947	102614194121	150
1193400000	1193400217	1193400819	119714191990	119268465123	150
1193400000	1193400217	1193400819	119714191990	119268465123	150
1193500000	1193500190	1193500774	119933633219	119165191070	150
1193500000	1193500190	1193500774	119933633219	119165191070	150
1205500000	1205500521	1205500850	120747831488	120293067913	150
1205500000	1205500521	1205500850	120747831488	120293067913	150
1235610000	1235610752	1235610233	123401357318	123365616805	150
1235610000	1235610752	1235610233	123401357318	123365616805	150
1236400000	1236400069	1236400225	123870201364	123782728887	150
1236400000	1236400069	1236400225	123870201364	123782728887	150
1214500000	1214500012	1214500975	121595380279	121349972065	150
1214500000	1214500012	1214500975	121595380279	121349972065	150
1215500000	1215500665	1215500956	121004250014	121826672934	150
1215500000	1215500665	1215500956	121004250014	121826672934	150
1192400000	1192400239	1192400831	119616499237	119090108348	150
1192400000	1192400239	1192400831	119616499237	119090108348	150
1184310000	1184310411	1184310670	118313389143	118799270115	150
1184310000	1184310411	1184310670	118313389143	118799270115	150
1184500000	1184500946	1184500643	118943038085	118895685444	150
1184500000	1184500946	1184500643	118943038085	118895685444	150
1124400000	1124400775	1124400114	112677022110	112464476438	150
1124400000	1124400775	1124400114	112677022110	112464476438	150
1141500000	1141500151	1141500304	114377559426	114654074574	150
1141500000	1141500151	1141500304	114377559426	114654074574	150
1165700000	1165700775	1165700524	116574575646	116046132666	150
1165700000	1165700775	1165700524	116574575646	116046132666	150
1132400000	1132400101	1132400238	113418733020	113637553795	150
1132400000	1132400101	1132400238	113418733020	113637553795	150
1352500000	1352500491	1352500413	135556071816	135372192720	150
1352500000	1352500491	1352500413	135556071816	135372192720	150
1349400000	1349400858	1349400345	134410985224	134040448081	150
1349400000	1349400858	1349400345	134410985224	134040448081	150
1328400000	1328400188	1328400164	132505847001	132657526292	150
1328400000	1328400188	1328400164	132505847001	132657526292	150
1365700000	1365700815	1365700544	136667579281	136833951203	150
1365700000	1365700815	1365700544	136667579281	136833951203	150
1310500000	1310500637	1310500039	131472581388	131155320546	150
1310500000	1310500637	1310500039	131472581388	131155320546	150
1333500000	1333500290	1333500205	133795987841	133379650945	150
1333500000	1333500290	1333500205	133795987841	133379650945	150
1354400000	1354400747	1354400430	135072394961	135797764481	150
1354400000	1354400747	1354400430	135072394961	135797764481	150

1324500000	1324500213	1324500078	132137154776	132933598499	150
1324500000	1324500213	1324500078	132137154776	132933598499	150
1287400000	1287400657	1287400759	128428342633	128544116608	150
1287400000	1287400657	1287400759	128428342633	128544116608	150
1303500000	1303500901	1303500909	130870837289	130892587359	150
1303500000	1303500901	1303500909	130870837289	130892587359	150
1264500000	1264500191	1264500459	126237162030	126821572722	150
1264500000	1264500191	1264500459	126237162030	126821572722	150
1281500000	1281500679	1281500710	128394051407	128600411649	150
1281500000	1281500679	1281500710	128394051407	128600411649	150
1265700000	1265700795	1265700534	126583919500	126360401872	150
1265700000	1265700795	1265700534	126583919500	126360401872	150
1284500000	1284500962	1284500652	128957387610	128305071778	150
1284500000	1284500962	1284500652	128957387610	128305071778	150
1255500000	1255500638	1255500364	125020262771	125995944923	150
1255500000	1255500638	1255500364	125020262771	125995944923	150
1273400000	1273400408	1273400631	127618961456	127766862970	150
1273400000	1273400408	1273400631	127618961456	127766862970	150
1258400000	1258400596	1258400448	125322129047	125800373921	150
1258400000	1258400596	1258400448	125322129047	125800373921	150
1477400000	1477400520	1477400681	147938611119	147472747746	150
1477400000	1477400520	1477400681	147938611119	147472747746	150
1483500000	1483500928	1483500705	148631853562	148980637096	150
1483500000	1483500928	1483500705	148631853562	148980637096	150
1442410000	1442410074	1442410360	144053951792	144619964978	150
1442410000	1442410074	1442410360	144053951792	144619964978	150
1585400000	1585400455	1585400760	158332825154	158442659118	150
1585400000	1585400455	1585400760	158332825154	158442659118	150
1594500000	1594500413	1594500779	159188381039	159574605404	150
1594500000	1594500413	1594500779	159188381039	159574605404	150
1590500000	1590500617	1590500847	159557831803	159751399773	150
1590500000	1590500617	1590500847	159557831803	159751399773	150
1512400000	1512400005	1512400079	151627475449	151641867229	150
1512400000	1512400005	1512400079	151627475449	151641867229	150
1515500000	1515500708	1515500991	151553326311	151656794509	150
1515500000	1515500708	1515500991	151553326311	151656794509	150
1552500000	1552500532	1552500432	155223992134	155834196929	150
1552500000	1552500532	1552500432	155223992134	155834196929	150
1526500000	1526500707	1526500110	152568417558	152112631424	150
1526500000	1526500707	1526500110	152568417558	152112631424	150
1553400000	1553400871	1553400463	155859415776	155306947326	150
1553400000	1553400871	1553400463	155859415776	155306947326	150
1494800000	1494800764	1494800886	149115932759	149568695029	150
1494800000	1494800764	1494800886	149115932759	149568695029	150
1521500000	1521500962	1521500146	152573809066	152212879529	150
1521500000	1521500962	1521500146	152573809066	152212879529	150
1708700000	1708700938	1708700965	170188553825	170775953745	150

1708700000	1708700938	1708700965	170188553825	170775953745	150
1724500000	1724500470	1724500117	172153653981	172857381100	150
1724500000	1724500470	1724500117	172153653981	172857381100	150
1702400000	1702400870	1702400000	170107854293	170860562088	150
1702400000	1702400870	1702400000	170107854293	170860562088	150
1694800000	1694800792	1694800907	169907726549	169850156287	150
1694800000	1694800792	1694800907	169907726549	169850156287	150
1697410000	1697410751	1697410881	169850198713	169493028474	150
1697410000	1697410751	1697410881	169850198713	169493028474	150
1722400000	1722400034	1722400198	172780997537	172511627168	150
1722400000	1722400034	1722400198	172780997537	172511627168	150
1734400000	1734400904	1734400273	173934777244	173720195304	150
1734400000	1734400904	1734400273	173934777244	173720195304	150
1693500000	1693500284	1693500823	169256275912	169684576296	150
1693500000	1693500284	1693500823	169256275912	169684576296	150
1675400000	1675400311	1675400670	167818917356	167941744965	150
1675400000	1675400311	1675400670	167818917356	167941744965	150
1657410000	1657410402	1657410484	165355395897	165682784785	150
1657410000	1657410402	1657410484	165355395897	165682784785	150
1665400000	1665400246	1665400570	166621622005	166641545574	150
1665400000	1665400246	1665400570	166621622005	166641545574	150
1620500000	1620500722	1620500167	162889003297	162987627930	150
1620500000	1620500722	1620500167	162889003297	162987627930	150
1633500000	1633500559	1633500234	163682775832	163634635035	150
1633500000	1633500559	1633500234	163682775832	163634635035	150
1649400000	1649400843	1649400375	164909961095	164333818245	150
1649400000	1649400843	1649400375	164909961095	164333818245	150
1824400000	1824400882	1824400183	182316406576	182677113464	150
1824400000	1824400882	1824400183	182316406576	182677113464	150
1809400000	1809400309	1809400999	180200677510	180235624982	150
1809400000	1809400309	1809400999	180200677510	180235624982	150
1842500000	1842500400	1842500363	184130354567	184554888238	150
1842500000	1842500400	1842500363	184130354567	184554888238	150
1815400000	1815400580	1815400082	181538880201	181060830919	150
1815400000	1815400580	1815400082	181538880201	181060830919	150
1808410000	1808410834	1808410002	180827608370	180093071489	150
1808410000	1808410834	1808410002	180827608370	180093071489	150
1745400000	1745400996	1745400381	174575983824	174891545168	150
1745400000	1745400996	1745400381	174575983824	174891545168	150
1777400000	1777400573	1777400710	177838179353	177421755306	150
1777400000	1777400573	1777400710	177838179353	177421755306	150
1795400000	1795400613	1795400878	179359912231	179147036928	150
1795400000	1795400613	1795400878	179359912231	179147036928	150
1774400000	1774400148	1774400668	177331463280	177300944693	150
1774400000	1774400148	1774400668	177331463280	177300944693	150
1758400000	1758400556	1758400496	175355673975	175575643453	150
1758400000	1758400556	1758400496	175355673975	175575643453	150

1755700000	1755700704	1755700484	175921314170	175920017556	150
1934500000	1934500687	1934500234	193364182236	193648178859	150
1934500000	1934500687	1934500234	193364182236	193648178859	150
1965400000	1965400296	1965400600	196404566925	196967343594	150
1965400000	1965400296	1965400600	196404566925	196967343594	150
1947400000	1947400362	1947400432	194777184946	194691596362	150
1947400000	1947400362	1947400432	194777184946	194691596362	150
1974400000	1974400179	1974400688	197842644186	197466336993	150
1974400000	1974400179	1974400688	197842644186	197466336993	150
1988400000	1988400076	1988400812	198616346590	198790847547	150
1988400000	1988400076	1988400812	198616346590	198790847547	150
1914400000	1914400744	1914400095	191595900199	191378179968	150
1914400000	1914400744	1914400095	191595900199	191378179968	150
1927400000	1927400183	1927400235	192877217511	192211202579	150
1927400000	1927400183	1927400235	192877217511	192211202579	150
1887400000	1887400659	1887400818	188292927566	188142829547	150
1887400000	1887400659	1887400818	188292927566	188142829547	150
1888400000	1888400059	1888400802	188181322376	188735913315	150
1888400000	1888400059	1888400802	188181322376	188735913315	150
1880500000	1880500492	1880500779	188320820557	188997304864	150
1880500000	1880500492	1880500779	188320820557	188997304864	150
1895400000	1895400630	1895400888	189688503170	189996224471	150
1895400000	1895400630	1895400888	189688503170	189996224471	150
1878400000	1878400876	1878400703	187889754592	187034075620	150
1878400000	1878400876	1878400703	187889754592	187034075620	150
1874400000	1874400164	1874400678	187079523328	187836475267	150
1874400000	1874400164	1874400678	187079523328	187836475267	150
1910500000	1910500612	1910500098	191197119674	191213681231	150
1910500000	1910500612	1910500098	191197119674	191213681231	150
1913700000	1913700346	1913700138	191514630210	191446285448	150
1913700000	1913700346	1913700138	191514630210	191446285448	150
1869400000	1869400130	1869400591	186992086904	186621095770	150
1869400000	1869400130	1869400591	186992086904	186621095770	150
1900500000	1900500567	1900500999	190782564978	190681521687	150
1900500000	1900500567	1900500999	190782564978	190681521687	150
2093600000	2093600875	2093600770	209237104430	209647987405	150
2093600000	2093600875	2093600770	209237104430	209647987405	150
2057410000	2057410461	2057410425	205098405290	205409740875	150
2057410000	2057410461	2057410425	205098405290	205409740875	150
2072400000	2072400252	2072400623	207315009844	207053696548	150
2072400000	2072400252	2072400623	207315009844	207053696548	150
2056400000	2056400403	2056400414	205914753206	205987324885	150
2056400000	2056400403	2056400414	205914753206	205987324885	150
2105310000	2105310821	2105310870	210821273544	210800646812	150
2105310000	2105310821	2105310870	210821273544	210800646812	150
2113500000	2113500038	2113500989	211762459630	211949734108	150
2113500000	2113500038	2113500989	211762459630	211949734108	150

2051500000	2051500324	2051500393	205324437748	205552118378	150
2051500000	2051500324	2051500393	205324437748	205552118378	150
2084310000	2084310393	2084310661	208925246898	208019403293	150
2084310000	2084310393	2084310661	208925246898	208019403293	150
2054500000	2054500793	2054500341	205364653299	205379059297	150
2054500000	2054500793	2054500341	205364653299	205379059297	150
2042500000	2042500552	2042500284	204861940557	204479840660	150
2042500000	2042500552	2042500284	204861940557	204479840660	150
2013400000	2013400022	2013400021	201565700200	201313048943	150
2013400000	2013400022	2013400021	201565700200	201313048943	150
2023400000	2023400182	2023400120	202560599389	202573400991	150
2023400000	2023400182	2023400120	202560599389	202573400991	150
1990500000	1990500692	1990500887	199407215103	199703407036	150
1990500000	1990500692	1990500887	199407215103	199703407036	150
2015400000	2015400445	2015400996	201998734739	201203140449	150
2015400000	2015400445	2015400996	201998734739	201203140449	150
2015500000	2015500646	2015500934	201975099891	201706938726	150
2015500000	2015500646	2015500934	201975099891	201706938726	150
2032400000	2032400087	2032400229	203091172421	203259094263	150
2032400000	2032400087	2032400229	203091172421	203259094263	150
2004500000	2004500363	2004500863	200538242635	200882701991	150
2004500000	2004500363	2004500863	200538242635	200882701991	150
2187410000	2187410668	2187410733	218287063069	218585287699	150
2187410000	2187410668	2187410733	218287063069	218585287699	150
2228400000	2228400172	2228400155	222416488440	222699538279	150
2228400000	2228400172	2228400155	222416488440	222699538279	150
2230500000	2230500815	2230500227	223070777791	223489727221	150
2230500000	2230500815	2230500227	223070777791	223489727221	150
2224400000	2224400792	2224400125	222357989997	222398683430	150
2224400000	2224400792	2224400125	222357989997	222398683430	150
2222400000	2222400947	2222400149	222773128532	222882279901	150
2222400000	2222400947	2222400149	222773128532	222882279901	150
2235400000	2235400788	2235400227	223311356920	223798594437	150
2235400000	2235400788	2235400227	223311356920	223798594437	150
2171600000	2171600217	2171600595	217204985496	217316170137	150
2171600000	2171600217	2171600595	217204985496	217316170137	150
2172400000	2172400269	2172400634	217211765548	217225027651	150
2172400000	2172400269	2172400634	217211765548	217225027651	150
2125400000	2125400592	2125400113	212096624652	212381289299	150
2125400000	2125400592	2125400113	212096624652	212381289299	150
2352210000	2352210532	2352210503	235477185395	235486117438	150
2352210000	2352210532	2352210503	235477185395	235486117438	150
2323610000	2323610016	2323610162	232552438422	232163121905	150
2323610000	2323610016	2323610162	232552438422	232163121905	150
2334500000	2334500582	2334500176	233775607726	233722901341	150
2334500000	2334500582	2334500176	233775607726	233722901341	150
2284310000	2284310382	2284310681	228957898285	228177127151	150

2284310000	2284310382	2284310681	228957898285	228177127151	150
2297400000	2297400729	2297400858	229376714700	229931208390	150
2297400000	2297400729	2297400858	229376714700	229931208390	150
2293500000	2293500210	2293500785	229426379671	229842847570	150
2293500000	2293500210	2293500785	229426379671	229842847570	150
2294400000	2294400249	2294400818	229150725987	229546594997	150
2294400000	2294400249	2294400818	229150725987	229546594997	150
2257400000	2257400297	2257400463	225690177887	225150367311	150
2257400000	2257400297	2257400463	225690177887	225150367311	150
2454500000	2454500864	2454500380	245076229796	245174560083	150
2454500000	2454500864	2454500380	245076229796	245174560083	150
2463400000	2463400284	2463400552	246434915456	246545818665	150
2463400000	2463400284	2463400552	246434915456	246545818665	150
2464500000	2464500229	2464500480	246762483541	246921652605	150
2464500000	2464500229	2464500480	246762483541	246921652605	150
2434500000	2434500602	2434500185	243456196462	243133720019	150
2434500000	2434500602	2434500185	243456196462	243133720019	150
2443400000	2443400688	2443400355	244837027921	244445573406	150
2443400000	2443400688	2443400355	244837027921	244445573406	150
2459400000	2459400975	2459400454	245361530497	245886246053	150
2459400000	2459400975	2459400454	245361530497	245886246053	150
2413500000	2413500088	2413500019	241527579704	241870536166	150
2413500000	2413500088	2413500019	241527579704	241870536166	150
2404400000	2404400599	2404400946	240336128148	240274485363	150
2404400000	2404400599	2404400946	240336128148	240274485363	150
2394500000	2394500151	2394500760	239912199300	239988163084	150
2394500000	2394500151	2394500760	239912199300	239988163084	150
2394800000	2394800750	2394800877	239382937930	239027223892	150
2394800000	2394800750	2394800877	239382937930	239027223892	150
2394800000	2394800750	2394800877	239093868858	239027223892	150
2394800000	2394800750	2394800877	239093868858	239027223892	150
2394800000	2394800750	2394800877	239686910271	239027223892	150
2394800000	2394800750	2394800877	239686910271	239027223892	150
2411500000	2411500849	2411500038	241999841753	241691630097	150
2411500000	2411500849	2411500038	241999841753	241691630097	150
2424500000	2424500409	2424500089	242728053241	242033069154	150
2424500000	2424500409	2424500089	242728053241	242033069154	150
2388400000	2388400972	2388400754	238842712889	238468728985	150
2388400000	2388400972	2388400754	238842712889	238468728985	150
2367400000	2367400475	2367400573	236618854064	236032858389	150
2367400000	2367400475	2367400573	236618854064	236032858389	150
2367410000	2367410520	2367410556	236472328397	236215048379	150
2367410000	2367410520	2367410556	236472328397	236215048379	150
2374400000	2374400089	2374400629	237607864863	237507271502	150
2374400000	2374400089	2374400629	237607864863	237507271502	150
2571500000	2571500669	2571500643	257140165928	257311973027	150
2571500000	2571500669	2571500643	257140165928	257311973027	150

2583400000	2583400120	2583400762	258332627378	258336462264	150
2583400000	2583400120	2583400762	258332627378	258336462264	150
2583600000	2583600770	2583600720	258811758418	258378805168	150
2583600000	2583600770	2583600720	258811758418	258378805168	150
2606400000	2606400763	2606400968	260338047354	260775270374	150
2606400000	2606400763	2606400968	260338047354	260775270374	150
2563500000	2563500495	2563500519	256990492285	256561091756	150
2563500000	2563500495	2563500519	256990492285	256561091756	150
2534500000	2534500619	2534500195	253430883642	253349958636	150
2534500000	2534500619	2534500195	253430883642	253349958636	150
2525400000	2525400659	2525400155	252831082821	252911938073	150
2525400000	2525400659	2525400155	252831082821	252911938073	150
2505400000	2505400360	2505400947	250919244422	250319651155	150
2505400000	2505400360	2505400947	250919244422	250319651155	150
2535400000	2535400845	2535400259	253199458379	253346850019	150
2535400000	2535400845	2535400259	253199458379	253346850019	150
2699400000	2699400496	2699400871	269517572952	269933258993	150
2699400000	2699400496	2699400871	269517572952	269933258993	150
2693400000	2693400297	2693400869	269152673678	269282009407	150
2693400000	2693400297	2693400869	269152673678	269282009407	150
2677700000	2677700116	2677700661	267852403263	267674168641	150
2677700000	2677700116	2677700661	267852403263	267674168641	150
2729400000	2729400544	2729400188	272962364736	272020325757	150
2729400000	2729400544	2729400188	272962364736	272020325757	150
2713700000	2713700328	2713700119	271169079562	271650301644	150
2637400000	2637400160	2637400306	263578778317	263295825812	150
2637400000	2637400160	2637400306	263578778317	263295825812	150
2650500000	2650500000	2650500464	265291841853	265811228936	150
2650500000	2650500000	2650500464	265291841853	265811228936	150
2625500000	2625500890	2625500107	262260001421	262146381500	150
2625500000	2625500890	2625500107	262260001421	262146381500	150
2642500000	2642500670	2642500344	264893946794	264212963333	150
2642500000	2642500670	2642500344	264893946794	264212963333	150
2672400000	2672400838	2672400684	267141636062	267892311507	150
2672400000	2672400838	2672400684	267141636062	267892311507	150
2852500000	2852500587	2852500463	285708382457	285778951301	150
2852500000	2852500587	2852500463	285708382457	285778951301	150
2815500000	2815500759	2815500026	281185488943	281075220421	150
2815500000	2815500759	2815500026	281185488943	281075220421	150
2832400000	2832400093	2832400305	283860658261	283160250146	150
2832400000	2832400093	2832400305	283860658261	283160250146	150
2835400000	2835400900	2835400290	283627524321	283559236458	150
2835400000	2835400900	2835400290	283627524321	283559236458	150
2857400000	2857400398	2857400523	285640660237	285732418331	150
2857400000	2857400398	2857400523	285640660237	285732418331	150
2832500000	2832500515	2832500264	283205927851	283963881641	150
2832500000	2832500515	2832500264	283205927851	283963881641	150

2783400000	2783400155	2783400781	278368594866	278583492976	150
2783400000	2783400155	2783400781	278368594866	278583492976	150
2783500000	2783500975	2783500734	278910914419	278666996949	150
2783500000	2783500975	2783500734	278910914419	278666996949	150
2786400000	2786400884	2786400807	278931621102	278546864107	150
2786400000	2786400884	2786400807	278931621102	278546864107	150
2759400000	2759400029	2759400482	275001169224	275877605260	150
2759400000	2759400029	2759400482	275001169224	275877605260	150
2749400000	2749400861	2749400386	274215078427	274302507949	150
2749400000	2749400861	2749400386	274215078427	274302507949	150
2765400000	2765400265	2765400581	276538457845	276494183013	150
2765400000	2765400265	2765400581	276538457845	276494183013	150
2956400000	2956400552	2956400511	295230161291	295782416571	150
2956400000	2956400552	2956400511	295230161291	295782416571	150
2972500000	2972500782	2972500674	297721404006	297767070131	150
2972500000	2972500782	2972500674	297721404006	297767070131	150
2957410000	2957410453	2957410515	295486512508	295625491514	150
2957410000	2957410453	2957410515	295486512508	295625491514	150
2924500000	2924500509	2924500138	292731931195	292529214671	150
2924500000	2924500509	2924500138	292731931195	292529214671	150
2952500000	2952500605	2952500473	295986322463	295501361679	150
2952500000	2952500605	2952500473	295986322463	295501361679	150
2931500000	2931500213	2931500285	293073715631	293728776906	150
2931500000	2931500213	2931500285	293073715631	293728776906	150
2968400000	2968400813	2968400615	296060333341	296429337023	150
2968400000	2968400813	2968400615	296060333341	296429337023	150
2889400000	2889400369	2889400790	288854636011	288318219539	150
2889400000	2889400369	2889400790	288854636011	288318219539	150
3097410000	3097410659	3097410824	309565819425	309307288078	150
3097410000	3097410659	3097410824	309565819425	309307288078	150
3068400000	3068400612	3068400528	306176357116	306266086000	150
3068400000	3068400612	3068400528	306176357116	306266086000	150
3104500000	3104500383	3104500874	310036523483	310938562173	150
3104500000	3104500383	3104500874	310036523483	310938562173	150
3107400000	3107400002	3107400959	310753408085	310017651777	150
3107400000	3107400002	3107400959	310753408085	310017651777	150
3070500000	3070500220	3070500603	307202933854	307812987937	150
3070500000	3070500220	3070500603	307202933854	307812987937	150
3046400000	3046400205	3046400310	304362306888	304553119386	150
3046400000	3046400205	3046400310	304362306888	304553119386	150
3055500000	3055500611	3055500345	305882472601	305647929757	150
3055500000	3055500611	3055500345	305882472601	305647929757	150
3094400000	3094400217	3094400799	309387504362	309392466308	150
3094400000	3094400217	3094400799	309387504362	309392466308	150
3048400000	3048400385	3048400333	304304366435	304263549804	150
3048400000	3048400385	3048400333	304304366435	304263549804	150
2984400000	2984400199	2984400788	298498627652	298773471076	150

3004400000	3004400534	3004400908	300399514448	300358984792	150
3004400000	3004400534	3004400908	300399514448	300358984792	150
3021610000	3021610801	3021610158	302410259412	302002879535	150
3021610000	3021610801	3021610158	302410259412	302002879535	150
3038400000	3038400317	3038400234	303814198100	303305861811	150
3038400000	3038400317	3038400234	303814198100	303305861811	150
2991500000	2991500016	2991500874	299357669940	299397702009	150
2991500000	2991500016	2991500874	299357669940	299397702009	150
3024500000	3024500157	3024500051	302920348828	302846324684	150
3024500000	3024500157	3024500051	302920348828	302846324684	150
2993500000	2993500343	2993500853	299594280416	299203944002	150
2993500000	2993500343	2993500853	299594280416	299203944002	150
3009400000	3009400181	3009400922	300525563844	300755592010	150
3009400000	3009400181	3009400922	300525563844	300755592010	150
2997400000	2997400846	2997400926	299268602815	299699920311	150
2997400000	2997400846	2997400926	299268602815	299699920311	150
2994500000	2994500475	2994500820	299873369690	299369428472	150
2994500000	2994500475	2994500820	299873369690	299369428472	150
3202400000	3202400786	3202400953	320069505882	320554712121	150
3202400000	3202400786	3202400953	320069505882	320554712121	150
3218400000	3218400051	3218400056	321026309535	321216514991	150
3218400000	3218400051	3218400056	321026309535	321216514991	150
3221500000	3221500989	3221500118	322908171209	322746792844	150
3221500000	3221500989	3221500118	322908171209	322746792844	150
3192500000	3192500854	3192500792	319364470172	319278847497	150
3192500000	3192500854	3192500792	319364470172	319278847497	150
3208400000	3208400895	3208400957	320362134279	320961877976	150
3208400000	3208400895	3208400957	320362134279	320961877976	150
3194410000	3194410106	3194410822	319749959998	319557846385	150
3194410000	3194410106	3194410822	319749959998	319557846385	150
3197400000	3197400714	3197400850	319617046429	319606324394	150
3197400000	3197400714	3197400850	319617046429	319606324394	150
3216400000	3216400809	3216400029	321690753027	321028643477	150
3216400000	3216400809	3216400029	321690753027	321028643477	150
3166400000	3166400587	3166400533	316126772746	316501079880	150
3166400000	3166400587	3166400533	316126772746	316501079880	150
3131500000	3131500066	3131500208	313431360633	313816435693	150
3131500000	3131500066	3131500208	313431360633	313816435693	150
3138400000	3138400337	3138400244	313492987027	313683365657	150
3138400000	3138400337	3138400244	313492987027	313683365657	150
3154400000	3154400719	3154400412	315212233947	315834407685	150
3154400000	3154400719	3154400412	315212233947	315834407685	150
3148400000	3148400401	3148400343	314361531945	314976031259	150
3148400000	3148400401	3148400343	314361531945	314976031259	150
3127400000	3127400068	3127400159	312333877387	312336656361	150
3127400000	3127400068	3127400159	312333877387	312336656361	150
3316400000	3316400822	3316400039	331039366755	331877678254	150

3316400000	3316400822	3316400039	331039366755	331877678254	150
3317400000	3317400183	3317400081	331180503689	331822099679	150
3317400000	3317400183	3317400081	331180503689	331822099679	150
3350500000	3350500951	3350500435	335370982891	335443766837	150
3350500000	3350500951	3350500435	335370982891	335443766837	150
3307400000	3307400031	3307400981	330894252768	330786463047	150
3307400000	3307400031	3307400981	330894252768	330786463047	150
3326400000	3326400986	3326400138	332732842351	332969098073	150
3326400000	3326400986	3326400138	332732842351	332969098073	150
3354700000	3354700463	3354700458	335605005273	335733294456	150
3354700000	3354700463	3354700458	335605005273	335733294456	150
3336400000	3336400092	3336400236	333396002581	333952005278	150
3336400000	3336400092	3336400236	333396002581	333952005278	150
3329400000	3329400487	3329400149	332389153595	332958108362	150
3329400000	3329400487	3329400149	332389153595	332958108362	150
3300500000	3300500462	3300500942	330822812576	330035053795	150
3300500000	3300500462	3300500942	330822812576	330035053795	150
3282400000	3282400942	3282400743	328020622862	328178585644	150
3282400000	3282400942	3282400743	328020622862	328178585644	150
3292400000	3292400260	3292400843	329769074564	329801112029	150
3292400000	3292400260	3292400843	329769074564	329801112029	150
3287410000	3287410687	3287410744	328928073498	328400467061	150
3287410000	3287410687	3287410744	328928073498	328400467061	150
3287700000	3287700539	3287700720	328766559451	328034946071	150
3287700000	3287700539	3287700720	328766559451	328034946071	150
3238400000	3238400355	3238400254	323735204959	323655315179	150
3238400000	3238400355	3238400254	323735204959	323655315179	150
3254700000	3254700444	3254700448	325751937598	325977878390	150
3254700000	3254700444	3254700448	325751937598	325977878390	150
3231500000	3231500084	3231500218	323599894104	323438881536	150
3231500000	3231500084	3231500218	323599894104	323438881536	150
3293400000	3293400237	3293400830	329444334920	329524422827	150
3293400000	3293400237	3293400830	329444334920	329524422827	150
3293500000	3293500212	3293500786	329851478176	329536474115	150
3293500000	3293500212	3293500786	329851478176	329536474115	150
3234500000	3234500566	3234500168	323104872308	323460848467	150
3234500000	3234500566	3234500168	323104872308	323460848467	150
3458610000	3458610358	3458610412	345222436125	345563799148	150
3458610000	3458610358	3458610412	345222436125	345563799148	150
3468400000	3468400719	3468400566	346864677786	346382642376	150
3468400000	3468400719	3468400566	346864677786	346382642376	150
3405400000	3405400344	3405400938	340361580330	340703364450	150
3405400000	3405400344	3405400938	340361580330	340703364450	150
3382500000	3382500713	3382500715	338422571322	338371490607	150
3382500000	3382500713	3382500715	338422571322	338371490607	150
3383400000	3383400087	3383400743	338424277962	338507555002	150
3383400000	3383400087	3383400743	338424277962	338507555002	150

3387510000	3387510489	3387510811	338709016828	338767654344	150
3387510000	3387510489	3387510811	338709016828	338767654344	150
3410500000	3410500659	3410500051	341342018248	341382430842	150
3410500000	3410500659	3410500051	341342018248	341382430842	150
3580500000	3580500510	3580500751	358104899284	358968768247	150
3580500000	3580500510	3580500751	358104899284	358968768247	150
3584400000	3584400273	3584400749	358090928433	358269960304	150
3584400000	3584400273	3584400749	358090928433	358269960304	150
3574500000	3574500426	3574500584	357972622851	357726475137	150
3574500000	3574500426	3574500584	357972622851	357726475137	150
3565400000	3565400233	3565400562	356526283193	356250579132	150
3565400000	3565400233	3565400562	356526283193	356250579132	150
3538400000	3538400406	3538400284	353884478592	353654195618	150
3538400000	3538400406	3538400284	353884478592	353654195618	150
3522400000	3522400000	3522400180	352187381155	352554984303	150
3522400000	3522400000	3522400180	352187381155	352554984303	150
3508410000	3508410895	3508410974	350398032426	350835159012	150
3508410000	3508410895	3508410974	350398032426	350835159012	150
3525500000	3525500876	3525500098	352389188749	352033052894	150
3525500000	3525500876	3525500098	352389188749	352033052894	150
3545400000	3545400965	3545400363	354705061387	354975265962	150
3545400000	3545400965	3545400363	354705061387	354975265962	150
3504400000	3504400613	3504400957	350986329037	350847479419	150
3504400000	3504400613	3504400957	350986329037	350847479419	150
3713400000	3713400133	3713400092	371734516250	371621023115	150
3713400000	3713400133	3713400092	371734516250	371621023115	150
3725400000	3725400701	3725400177	372794633455	372489909118	150
3725400000	3725400701	3725400177	372794633455	372489909118	150
3725710000	3725710617	3725710109	372485350047	372934143118	150
3725710000	3725710617	3725710109	372485350047	372934143118	150
3684500000	3684500039	3684500692	368787113751	368748547803	150
3684500000	3684500039	3684500692	368787113751	368748547803	150
3704400000	3704400644	3704400977	370417687553	370336454102	150
3704400000	3704400644	3704400977	370417687553	370336454102	150
3714400000	3714400718	3714400077	371742349971	371758120075	150
3714400000	3714400718	3714400077	371742349971	371758120075	150
3671500000	3671500567	3671500654	367677082176	367089775222	150
3671500000	3671500567	3671500654	367677082176	367089775222	150
3652400000	3652400000	3652400484	365592871341	365345229167	150
3652400000	3652400000	3652400484	365592871341	365345229167	150
3618400000	3618400115	3618400096	361996727935	361629823582	150
3618400000	3618400115	3618400096	361996727935	361629823582	150
3653400000	3653400892	3653400475	365894196441	365129994520	150
3653400000	3653400892	3653400475	365894196441	365129994520	150
3613400000	3613400119	3613400082	361989554058	361958650314	150
3613400000	3613400119	3613400082	361989554058	361958650314	150
3802400000	3802400890	3802400012	380460610173	380102388004	150

3802400000	3802400890	3802400012	380460610173	380102388004	150
3846400000	3846400369	3846400393	384182274060	384198367235	150
3846400000	3846400369	3846400393	384182274060	384198367235	150
3854500000	3854500933	3854500421	385809714553	385620525538	150
3854500000	3854500933	3854500421	385809714553	385620525538	150
3792500000	3792500960	3792500852	379023920387	379907440908	150
3792500000	3792500960	3792500852	379023920387	379907440908	150
3740500000	3740500941	3740500375	374049722490	374888101066	150
3740500000	3740500941	3740500375	374049722490	374888101066	150
3794400000	3794400337	3794400869	379499497522	379456454584	150
3794400000	3794400337	3794400869	379499497522	379456454584	150
3950500000	3950500095	3950500494	395666685119	395462004065	150
3950500000	3950500095	3950500494	395666685119	395462004065	150
3935400000	3935400856	3935400301	393548368126	393921808957	150
3935400000	3935400856	3935400301	393548368126	393921808957	150
3959400000	3959400068	3959400503	395226319292	395332526025	150
3959400000	3959400068	3959400503	395226319292	395332526025	150
3984500000	3984500086	3984500722	398908083405	398798274023	150
3984500000	3984500086	3984500722	398908083405	398798274023	150
3982400000	3982400053	3982400813	398133933294	398096329785	150
3982400000	3982400053	3982400813	398133933294	398096329785	150
3955700000	3955700742	3955700506	395449663813	395076535895	150
3955700000	3955700742	3955700506	395449663813	395076535895	150
3926400000	3926400026	3926400197	392686085922	392582124859	150
3926400000	3926400026	3926400197	392686085922	392582124859	150
3938400000	3938400471	3938400323	393584764981	393735603156	150
3938400000	3938400471	3938400323	393584764981	393735603156	150
3904500000	3904500960	3904500947	390659324171	390752360740	150
3904500000	3904500960	3904500947	390659324171	390752360740	150
3897700000	3897700785	3897700879	389336413582	389844239307	150
3897700000	3897700785	3897700879	389336413582	389844239307	150
3884500000	3884500072	3884500712	388716779198	388569222682	150
3884500000	3884500072	3884500712	388716779198	388569222682	150
3901500000	3901500763	3901500989	390772625437	390841987682	150
3901500000	3901500763	3901500989	390772625437	390841987682	150
3891500000	3891500999	3891500865	389312437520	389538280618	150
3891500000	3891500999	3891500865	389312437520	389538280618	150
3894500000	3894500462	3894500811	389612932374	389383457007	150
3894500000	3894500462	3894500811	389612932374	389383457007	150
4083500000	4083500859	4083500668	408639141167	408309599429	150
4083500000	4083500859	4083500668	408639141167	408309599429	150
4042400000	4042400130	4042400326	404521605705	404542867209	150
4042400000	4042400130	4042400326	404521605705	404542867209	150
4047400000	4047400227	4047400346	404760025335	404484093012	150
4047400000	4047400227	4047400346	404760025335	404484093012	150
4093400000	4093400207	4093400812	409434452936	409913825628	150
4093400000	4093400207	4093400812	409434452936	409913825628	150

4069400000	4069400085	4069400514	406740679393	406124699309	150
4069400000	4069400085	4069400514	406740679393	406124699309	150
4094310000	4094310530	4094310762	409295441311	409965027159	150
4094310000	4094310530	4094310762	409295441311	409965027159	150
4054700000	4054700405	4054700429	405051883041	405782245305	150
4054700000	4054700405	4054700429	405051883041	405782245305	150
3987410000	3987410640	3987410813	398997744642	398500128563	150
3987410000	3987410640	3987410813	398997744642	398500128563	150
3987700000	3987700676	3987700790	398413478955	398375046951	150
3987700000	3987700676	3987700790	398413478955	398375046951	150
3987700000	3987700676	3987700790	398269898332	398375046951	150
3987700000	3987700676	3987700790	398269898332	398375046951	150
3987700000	3987700676	3987700790	398099777332	398375046951	150
4210500000	4210500625	4210500032	421223553325	421551180824	150
4210500000	4210500625	4210500032	421223553325	421551180824	150
4165400000	4165400172	4165400523	416624234142	416753338564	150
4165400000	4165400172	4165400523	416624234142	416753338564	150
4164400000	4164400879	4164400512	416913571323	416674361212	150
4164400000	4164400879	4164400512	416913571323	416674361212	150
4198400000	4198400119	4198400835	419670611688	419545899328	150
4198400000	4198400119	4198400835	419670611688	419545899328	150
4209510000	4209510206	4209510995	420064304202	420956983641	150
4209510000	4209510206	4209510995	420064304202	420956983641	150
4219400000	4219400315	4219400042	421464967739	421013908282	150
4219400000	4219400315	4219400042	421464967739	421013908282	150
4173500000	4173500706	4173500581	417022876052	417205819565	150
4173500000	4173500706	4173500581	417022876052	417205819565	150
4103400000	4103400410	4103400934	410079742578	410930301207	150
4103400000	4103400410	4103400934	410079742578	410930301207	150
4322400000	4322400969	4322400161	432417068949	432321324512	150
4322400000	4322400969	4322400161	432417068949	432321324512	150
4136400000	4136400059	4136400218	413750225273	413696125723	150
4136400000	4136400059	4136400218	413750225273	413696125723	150
4123400000	4123400202	3123400131	412777985119	412224881257	150
4123400000	4123400202	3123400131	412777985119	412224881257	150
4152410000	4152410191	4152410437	415233896658	415293432600	150
4152410000	4152410191	4152410437	415233896658	415293432600	150
4124610000	4124610945	4124610137	412233407979	412908751116	150
4124610000	4124610945	4124610137	412233407979	412908751116	150
4156400000	4156400423	4156400427	415985896643	415370412108	150
4156400000	4156400423	4156400427	415985896643	415370412108	150
4309400000	4309400236	4309400953	430704731497	430468460589	150
4309400000	4309400236	4309400953	430704731497	430468460589	150
4312400000	4312400975	3312400062	431600672854	431230764687	150
4312400000	4312400975	3312400062	431600672854	431230764687	150
4294800000	4294800739	4294800869	429201842845	429685240878	150
4294800000	4294800739	4294800869	429201842845	429685240878	150

4344400000	4344400002	4344400334	434791958808	434132899261	150
4344400000	4344400002	4344400334	434791958808	434132899261	150
4301500000	4301500761	4301500930	430771354568	430467467187	150
4301500000	4301500761	4301500930	430771354568	430467467187	150
4323700000	4323700424	4323700178	432691696749	432650320000	150
4323700000	4323700424	4323700178	432691696749	432650320000	150
4279410000	4279410103	4279410628	427148473272	427078255030	150
4279410000	4279410103	4279410628	427148473272	427078255030	150
4257500000	4257500330	4257500368	425858136061	425447004042	150
4257500000	4257500330	4257500368	425858136061	425447004042	150
4259400000	4259400946	4259400437	425859039921	425111348681	150
4259400000	4259400946	4259400437	425859039921	425111348681	150
4261500000	4261500429	4261500515	426671051878	426583632792	150
4261500000	4261500429	4261500515	426671051878	426583632792	150
4232500000	4232500408	4232500205	423716100653	423635575339	150
4232500000	4232500408	4232500205	423716100653	423635575339	150
4255500000	4255500642	4255500367	425769037531	425635411634	150
4255500000	4255500642	4255500367	425769037531	425635411634	150
4253400000	4253400824	4253400436	425195687527	425640956595	150
4253400000	4253400824	4253400436	425195687527	425640956595	150
4426500000	4426500695	4426500103	442969082386	442245216094	150
4426500000	4426500695	4426500103	442969082386	442245216094	150
4458400000	4458400640	4458400470	445307575633	445732994671	150
4458400000	4458400640	4458400470	445307575633	445732994671	150
4444500000	4444500693	4444500285	444458512914	444233989290	150
4444500000	4444500693	4444500285	444458512914	444233989290	150
4431500000	4431500124	4431500238	443204736359	443381651567	150
4431500000	4431500124	4431500238	443204736359	443381651567	150
4440500000	4440500894	4440500346	444149925603	444210364998	150
4440500000	4440500894	4440500346	444149925603	444210364998	150
4456700000	4456700902	4456700446	445910022302	445510447454	150
4456700000	4456700902	4456700446	445910022302	445510447454	150
4438400000	4438400392	4438400275	443118485410	443510143856	150
4438400000	4438400392	4438400275	443118485410	443510143856	150
4457400000	4457400333	4457400485	445884081850	445323218689	150
4457400000	4457400333	4457400485	445884081850	445323218689	150
4384600000	4384600349	4384600696	438079321876	438324510973	150
4384600000	4384600349	4384600696	438079321876	438324510973	150
4393400000	4393400257	4393400841	439528918524	439045989269	150
4393400000	4393400257	4393400841	439528918524	439045989269	150
4391500000	4391500897	4391500816	439967699359	439290276614	150
4391500000	4391500897	4391500816	439967699359	439290276614	150
4564400000	4564400943	4564400552	456699958583	456150463735	150
4564400000	4564400943	4564400552	456699958583	456150463735	150
4558400000	4558400656	4558400480	455938532782	455632222312	150
4558400000	4558400656	4558400480	455938532782	455632222312	150
4558400000	4558400656	4558400480	455934680469	455632222312	150

4558400000	4558400656	4558400480	455934680469	455632222312	150
4558400000	4558400656	4558400480	455141874662	455632222312	150
4558400000	4558400656	4558400480	455141874662	455632222312	150
4567400000	4567400513	4567400595	456554967305	456438034093	150
4567400000	4567400513	4567400595	456554967305	456438034093	150
4568500000	4568500510	4568500516	456210456941	456211680421	150
4568500000	4568500510	4568500516	456210456941	456211680421	150
4577400000	4577400542	4577400694	457219164569	457619049769	150
4577400000	4577400542	4577400694	457219164569	457619049769	150
4565710000	4565710006	4565710485	456976645451	456210319208	150
4565710000	4565710006	4565710485	456976645451	456210319208	150
4543400000	4543400710	4543400367	454055193602	454418808756	150
4543400000	4543400710	4543400367	454055193602	454418808756	150
4587400000	4587400717	4587400792	458074043412	458518344756	150
4587400000	4587400717	4587400792	458074043412	458518344756	150
4484310000	4484310421	4484310702	448493844943	448301426377	150
4484310000	4484310421	4484310702	448493844943	448301426377	150
4476400000	4476400750	4476400670	447987031942	447484552315	150
4476400000	4476400750	4476400670	447987031942	447484552315	150
4469500000	4469500677	4469500528	446966936544	446194610408	150
4469500000	4469500677	4469500528	446966936544	446194610408	150
4494500000	4494500401	4494500772	449378754413	449497198586	150
4494500000	4494500401	4494500772	449378754413	449497198586	150
4473400000	4473400445	4473400654	447403085911	447361447350	150
4473400000	4473400445	4473400654	447403085911	447361447350	150
4502400000	4502400836	4502400984	450338024865	450000733288	150
4502400000	4502400836	4502400984	450338024865	450000733288	150
4683400000	4683400139	4683400773	468782467991	468142417648	150
4683400000	4683400139	4683400773	468782467991	468142417648	150
4710500000	4710500584	4710500081	471395698090	471072762975	150
4710500000	4710500584	4710500081	471395698090	471072762975	150
4715400000	4715400568	4715400073	471403264768	471187061174	150
4715400000	4715400568	4715400073	471403264768	471187061174	150
4594800000	4594800780	4594800900	459796165786	459285903884	150
4594800000	4594800780	4594800900	459796165786	459285903884	150
4600500000	4600500511	4600500973	460576158319	460509537766	150
4600500000	4600500511	4600500973	460576158319	460509537766	150
4615500000	4615500728	4615500006	461947486257	461237500392	150
4615500000	4615500728	4615500006	461947486257	461237500392	150
4634400000	4634400892	4634400266	463045473899	463681173030	150
4634400000	4634400892	4634400266	463045473899	463681173030	150
4609400000	4609400282	4609400982	460792260628	460969925658	150
4609400000	4609400282	4609400982	460792260628	460969925658	150
4595400000	4595400584	4595400861	459766809345	459824487261	150
4595400000	4595400584	4595400861	459766809345	459824487261	150
4607400000	4607400082	4607400012	460241292016	460417063968	150
4607400000	4607400082	4607400012	460241292016	460417063968	150

4807400000	4807400113	4807400032	480528622317	480272901692	150
4807400000	4807400113	4807400032	480528622317	480272901692	150
4815400000	4815400587	4815400085	481869413119	481361094687	150
4815400000	4815400587	4815400085	481869413119	481361094687	150
4817400000	4817400028	4817400130	481427777695	481659128239	150
4817400000	4817400028	4817400130	481427777695	481659128239	150
4834500000	4834500676	4834500227	483020193727	483070252793	150
4834500000	4834500676	4834500227	483020193727	483070252793	150
4829400000	4829400615	4829400200	482879964222	482735837691	150
4829400000	4829400615	4829400200	482879964222	482735837691	150
4784800000	4784800666	4784800820	478556708833	478498231986	150
4784800000	4784800666	4784800820	478556708833	478498231986	150
4767400000	4767400547	4767400615	476628210628	476443483053	150
4767400000	4767400547	4767400615	476628210628	476443483053	150
4719400000	4719400392	4719400092	471716930558	471862514694	150
4719400000	4719400392	4719400092	471716930558	471862514694	150
4720500000	4720500741	4720500179	472809356572	472206168718	150
4720500000	4720500741	4720500179	472809356572	472206168718	150
4744500000	4744500744	4744500314	474819381206	474652940943	150
4744500000	4744500744	4744500314	474819381206	474652940943	150
4927400000	4927400188	4927400238	492931154535	492485913532	150
4927400000	4927400188	4927400238	492931154535	492485913532	150
4923500000	4923500223	4923500168	492709759712	492553054415	150
4923500000	4923500223	4923500168	492709759712	492553054415	150
4929400000	4929400634	4929400209	492470016711	492295542626	150
4929400000	4929400634	4929400209	492470016711	492295542626	150
4939400000	4939400803	4939400308	493958343856	493985860266	150
4939400000	4939400803	4939400308	493958343856	493985860266	150
4915500000	4915500777	4915500039	491468297475	491434155483	150
4915500000	4915500777	4915500039	491468297475	491434155483	150
4908400000	4908400002	4908400027	490693119803	490076969163	150
4908400000	4908400002	4908400027	490693119803	490076969163	150
4934400000	4934400937	4934400294	493574259353	493472440750	150
4934400000	4934400937	4934400294	493574259353	493472440750	150
4957400000	4957400421	4957400535	495673636295	495980533877	150
4957400000	4957400421	4957400535	495673636295	495980533877	150
4922400000	4922400072	4922400221	492507036726	492448139431	150
4922400000	4922400072	4922400221	492507036726	492448139431	150
4904400000	4904400678	4904400998	490025729069	490444025505	150
4904400000	4904400678	4904400998	490025729069	490444025505	150
4882600000	4882600823	4882600758	488334463712	488783948686	150
4882600000	4882600823	4882600758	488334463712	488783948686	150
4902400000	4902400909	4902400023	490090543229	490431527908	150
4902400000	4902400909	4902400023	490090543229	490431527908	150
4845400000	4845400017	4845400394	484989629593	484174221646	150
4845400000	4845400017	4845400394	484989629593	484174221646	150
4903400000	4903400010	4903400013	490683141763	490696263550	150

4903400000	4903400010	4903400013	490683141763	490696263550	150
4844400000	4844400092	4844400384	484039715945	484156831004	150
4844400000	4844400092	4844400384	484039715945	484156831004	150
4852400000	4852400037	4852400505	485877474964	485917203105	150
4852400000	4852400037	4852400505	485877474964	485917203105	150
4873400000	4873400503	4873400694	487412960081	487545739289	150
4873400000	4873400503	4873400694	487412960081	487545739289	150
5059400000	5059400912	5059400419	505045883056	505060543360	150
5059400000	5059400912	5059400419	505045883056	505060543360	150
5062400000	5062400075	5062400526	506704403989	506402304670	150
5062400000	5062400075	5062400526	506704403989	506402304670	150
5025400000	5025400626	5025400105	502458480681	502456963312	150
5025400000	5025400626	5025400105	502458480681	502456963312	150
5043500000	5043500635	5043500277	504684230135	504163550047	150
5043500000	5043500635	5043500277	504684230135	504163550047	150
5008700000	5008700825	5008700901	500403619939	500672360227	150
5008700000	5008700825	5008700901	500403619939	500672360227	150
4989400000	4989400388	4989400802	498541197149	498706035653	150
4989400000	4989400388	4989400802	498541197149	498706035653	150
5014500000	5014500982	5014500959	501074399706	501088989396	150
5014500000	5014500982	5014500959	501074399706	501088989396	150
4971500000	4971500627	4971500684	497634863327	497513146456	150
4971500000	4971500627	4971500684	497634863327	497513146456	150
4964400000	4964400027	4964400591	496431967930	496914744888	150
4964400000	4964400027	4964400591	496431967930	496914744888	150
5194310000	5194310551	5194310773	519883158870	519568564877	150
5194310000	5194310551	5194310773	519883158870	519568564877	150
5194500000	5194500124	5194500744	519190997420	519634932904	150
5194500000	5194500124	5194500744	519190997420	519634932904	150
5182400000	5182400927	5182400735	518248225058	518882083431	150
5182400000	5182400927	5182400735	518248225058	518882083431	150
5197410000	5197410680	5197410836	519526198567	519764223510	150
5197410000	5197410680	5197410836	519526198567	519764223510	150
5199400000	5199400422	5199400823	519043440515	519964806136	150
5157400000	5157400283	5157400456	515882596158	515640091095	150
5157400000	5157400283	5157400456	515882596158	515640091095	150
5205310000	5205310848	5205310883	520808360723	520685217309	150
5205310000	5205310848	5205310883	520808360723	520685217309	150
5160500000	5160500129	5160500516	516535836880	516036709466	150
5160500000	5160500129	5160500516	516535836880	516036709466	150
5193600000	5193600900	5193600783	519807159608	519711197188	150
5193600000	5193600900	5193600783	519807159608	519711197188	150
5152210000	5152210500	5152210486	515910016429	515601269118	150
5152210000	5152210500	5152210486	515910016429	515601269118	150
5133400000	5133400563	5133400231	513621307770	513800247345	150
5133400000	5133400563	5133400231	513621307770	513800247345	150
5136610000	5136610472	5136610214	513195094542	513589004989	150

5136610000	5136610472	5136610214	513195094542	513589004989	150
5147400000	5147400246	5147400356	514675852492	514507471005	150
5147400000	5147400246	5147400356	514675852492	514507471005	150
5094800000	5094800709	5094800851	509205576601	509474393814	150
5094800000	5094800709	5094800851	509205576601	509474393814	150
5102500000	5102500065	5102500897	510374459417	510964616926	150
5102500000	5102500065	5102500897	510374459417	510964616926	150
5122400000	5122400933	5122400142	512451894902	512353751418	150
5122400000	5122400933	5122400142	512451894902	512353751418	150
5314500000	5314500038	5314500988	531408663748	531515671850	150
5314500000	5314500038	5314500988	531408663748	531515671850	150
5325500000	5325500846	5325500080	532798543540	532299721750	150
5325500000	5325500846	5325500080	532798543540	532299721750	150
5287510000	5287510476	5287510803	528365302645	528263161961	150
5287510000	5287510476	5287510803	528365302645	528263161961	150
5273500000	5273500726	5273500592	527164509528	527461471914	150
5273500000	5273500726	5273500592	527164509528	527461471914	150
5305400000	5305400329	5305400930	530174681229	530021018391	150
5305400000	5305400329	5305400930	530174681229	530021018391	150
5211500000	5211500822	5211500021	521867077039	521745621409	150
5211500000	5211500822	5211500021	521867077039	521745621409	150
5419400000	5419400346	5419400063	541591537708	541713640195	150
5419400000	5419400346	5419400063	541591537708	541713640195	150
5436610000	5436610518	5436610242	543513297157	543493020823	150
5436610000	5436610518	5436610242	543513297157	543493020823	150
5407400000	5407400050	5407400994	540524650551	540188638491	150
5407400000	5407400050	5407400994	540524650551	540188638491	150
5406400000	5406400735	5406400951	540795588108	540598329142	150
5406400000	5406400735	5406400951	540795588108	540598329142	150
5413400000	5413400090	5413400064	541356685073	541890002091	150
5413400000	5413400090	5413400064	541356685073	541890002091	150
5426400000	5426400003	5426400150	542185965814	542108470041	150
5426400000	5426400003	5426400150	542185965814	542108470041	150
5457500000	5457500367	5457500389	545374979166	545994981264	150
5457500000	5457500367	5457500389	545374979166	545994981264	150
5339400000	5339400702	5339400250	533177108016	533756635369	150
5339400000	5339400702	5339400250	533177108016	533756635369	150
5348400000	5348400442	5348400365	534568355184	534491337260	150
5348400000	5348400442	5348400365	534568355184	534491337260	150
5351500000	5351500393	5351500426	535795691802	535074216255	150
5351500000	5351500393	5351500426	535795691802	535074216255	150
5354500000	5354500853	5354500373	535468209794	535258469330	150
5354500000	5354500853	5354500373	535468209794	535258469330	150
5372500000	5372500691	5372500617	537682886047	537580475817	150
5372500000	5372500691	5372500617	537682886047	537580475817	150
5334400000	5334400844	5334400237	533903269169	533272869483	150
5334400000	5334400844	5334400237	533903269169	533272869483	150

5392600000	5392600828	5392600809	539596749683	539773385299	150
5392600000	5392600828	5392600809	539596749683	539773385299	150
5573400000	5573400459	5573400665	557026867687	557743207320	150
5573400000	5573400459	5573400665	557026867687	557743207320	150
5573500000	5573500778	5573500621	557662125738	557783629829	150
5573500000	5573500778	5573500621	557662125738	557783629829	150
5544400000	5544400041	5544400355	554469360140	554392365919	150
5544400000	5544400041	5544400355	554469360140	554392365919	150
5574400000	5574400124	5574400652	557467244713	557808856003	150
5574400000	5574400124	5574400652	557467244713	557808856003	150
5546400000	5546400323	5546400364	554632270900	554226616929	150
5546400000	5546400323	5546400364	554632270900	554226616929	150
5568400000	5568400741	5568400578	556518067785	556167837070	150
5568400000	5568400741	5568400578	556518067785	556167837070	150
5534400000	5534400876	5534400257	553261073267	553244930280	150
5534400000	5534400876	5534400257	553261073267	553244930280	150
5556400000	5556400492	5556400471	555027533826	555933738639	150
5556400000	5556400492	5556400471	555027533826	555933738639	150
5523700000	5523700461	5523700198	552429570237	552681658774	150
5523700000	5523700461	5523700198	552429570237	552681658774	150
5572400000	5572400828	5572400677	557608203600	557299867376	150
5572400000	5572400828	5572400677	557608203600	557299867376	150
5505500000	5505500572	5505500884	550876614596	550626617969	150
5505500000	5505500572	5505500884	550876614596	550626617969	150
5512500000	5512500219	5512500034	551667980193	551661233853	150
5512500000	5512500219	5512500034	551667980193	551661233853	150
5471500000	5471500654	5471500636	547910121973	547908054513	150
5471500000	5471500654	5471500636	547910121973	547908054513	150
5474400000	5474400108	5474400642	547860672905	547710619299	150
5474400000	5474400108	5474400642	547860672905	547710619299	150
5492600000	5492600847	5492600819	549251968251	549866502931	150
5492600000	5492600847	5492600819	549251968251	549866502931	150
5519400000	5519400360	5519400073	551151295348	551067333104	150
5519400000	5519400360	5519400073	551151295348	551067333104	150
5504500000	5504500457	5504500912	550560789287	550836845665	150
5504500000	5504500457	5504500912	550560789287	550836845665	150
5693500000	5693500290	5693500827	569495450957	569297312802	150
5693500000	5693500290	5693500827	569495450957	569297312802	150
5684800000	5684800654	5684800811	568384187054	568760625249	150
5684800000	5684800654	5684800811	568384187054	568760625249	150
5662500000	5662500571	5662500546	566363191278	566268883936	150
5662500000	5662500571	5662500546	566363191278	566268883936	150
5627400000	5627400148	5627400209	562938659577	562012357517	150
5627400000	5627400148	5627400209	562938659577	562012357517	150
5588400000	5588400011	5588400776	558648376764	558022650527	150
5588400000	5588400011	5588400776	558648376764	558022650527	150
5615400000	5615400551	5615400064	561560524623	561472199955	150

5615400000	5615400551	5615400064	561560524623	561472199955	150
5631500000	5631500166	5631500259	563525752371	563570090520	150
5631500000	5631500166	5631500259	563525752371	563570090520	150
5644500000	5644500733	5644500305	564709268851	564980342896	150
5644500000	5644500733	5644500305	564709268851	564980342896	150
5644700000	5644700329	5644700393	564973869858	564198817204	150
5644700000	5644700329	5644700393	564973869858	564198817204	150
5626400000	5626400032	5626400169	562932446979	562946616922	150
5626400000	5626400032	5626400169	562932446979	562946616922	150
5635410000	5635410471	5635410277	563011837042	563629024397	150
5635410000	5635410471	5635410277	563011837042	563629024397	150
5799400000	5799400514	5799400884	579244570657	579309301268	150
5799400000	5799400514	5799400884	579244570657	579309301268	150
5784600000	5784600674	5784600737	578946921936	578178541851	150
5784600000	5784600674	5784600737	578946921936	578178541851	150
5813400000	5813400153	5813400104	581607950854	581854856393	150
5813400000	5813400153	5813400104	581607950854	581854856393	150
5794500000	5794500450	5794500803	579389526578	579655218632	150
5794500000	5794500450	5794500803	579389526578	579655218632	150
5784400000	5784400174	5784400771	578398628227	578088464845	150
5784400000	5784400174	5784400771	578398628227	578088464845	150
5784500000	5784500059	5784500704	578201382088	578150716448	150
5784500000	5784500059	5784500704	578201382088	578150716448	150
5736400000	5736400160	5736400280	573800063436	573600266944	150
5736400000	5736400160	5736400280	573800063436	573600266944	150
5725500000	5725500914	5725500120	572144530436	572463061940	150
5725500000	5725500914	5725500120	572144530436	572463061940	150
5728400000	5728400267	5728400206	572685347102	572058177267	150
5728400000	5728400267	5728400206	572685347102	572058177267	150
5751500000	5751500471	5751500467	575672108191	575918719719	150
5751500000	5751500471	5751500467	575672108191	575918719719	150
5761500000	5761500523	5761500566	576177809777	576610016209	150
5761500000	5761500523	5761500566	576177809777	576610016209	150
5932400000	5932400115	5932400317	593789349684	593122343451	150
5932400000	5932400115	5932400317	593789349684	593122343451	150
5894800000	5894800827	5894800934	589538555981	589550210700	150
5894800000	5894800827	5894800934	589538555981	589550210700	150
5897410000	5897410786	5897410905	589590504844	589075652322	150
5897410000	5897410786	5897410905	589590504844	589075652322	150
5856400000	5856400539	5856400503	585398273154	585679094002	150
5856400000	5856400539	5856400503	585398273154	585679094002	150
5884400000	5884400187	5884400781	588942152310	588163689785	150
5884400000	5884400187	5884400781	588942152310	588163689785	150
5837400000	5837400199	5837400327	583270933091	583983583790	150
5837400000	5837400199	5837400327	583270933091	583983583790	150
5857500000	5857500428	5857500430	585391808364	585025098796	150
5857500000	5857500428	5857500430	585391808364	585025098796	150

5848400000	5848400532	5848400413	584927274878	584345494039	150
5848400000	5848400532	5848400413	584927274878	584345494039	150
6040500000	6040500832	6040500308	604184200735	604679778636	150
6040500000	6040500832	6040500308	604184200735	604679778636	150
6026400000	6026400942	6026400111	602482498464	602191945239	150
6026400000	6026400942	6026400111	602482498464	602191945239	150
6024500000	6024500166	6024500054	602564803558	602633370927	150
6024500000	6024500166	6024500054	602564803558	602633370927	150
6034400000	6034400920	6034400208	603904009739	603995702432	150
6034400000	6034400920	6034400208	603904009739	603995702432	150
6017400000	6017400143	6017400054	601273881893	601199286753	150
6017400000	6017400143	6017400054	601273881893	601199286753	150
5995400000	5995400653	5995400901	599411438987	599494624395	150
5995400000	5995400653	5995400901	599411438987	599494624395	150
5999400000	5999400402	5999400904	599448161439	599404581086	150
5999400000	5999400402	5999400904	599448161439	599404581086	150
5954400000	5954400847	5954400493	595495524818	595400377754	150
5954400000	5954400847	5954400493	595495524818	595400377754	150
5994400000	5994400372	5994400891	599716119122	599357818331	150
5994400000	5994400372	5994400891	599716119122	599357818331	150
6010500000	6010500593	6010500014	601264913333	601017048566	150
6010500000	6010500593	6010500014	601264913333	601017048566	150
6149400000	6149400833	6149400330	614176610913	614211779005	150
6149400000	6149400833	6149400330	614176610913	614211779005	150
6183400000	6183400056	6183400726	618708440175	618452968015	150
6183400000	6183400056	6183400726	618708440175	618452968015	150
6159400000	6159400932	6159400430	615238800295	615570260700	150
6159400000	6159400932	6159400430	615238800295	615570260700	150
6143500000	6143500656	6143500288	614542464506	614266623009	150
6143500000	6143500656	6143500288	614542464506	614266623009	150
6192600000	6192600785	6192600790	619191509082	619825999843	150
6192600000	6192600785	6192600790	619191509082	619825999843	150
6168400000	6168400655	6168400540	616317715592	616130656353	150
6168400000	6168400655	6168400540	616317715592	616130656353	150
6162500000	6162500650	6162500497	616636565541	616731836996	150
6162500000	6162500650	6162500497	616636565541	616731836996	150
6169400000	6169400103	6169400526	616484351949	616870456282	150
6169400000	6169400103	6169400526	616484351949	616870456282	150
6169500000	6169500633	6169500500	616253102676	616186851452	150
6169500000	6169500633	6169500500	616253102676	616186851452	150
6179400000	6179400188	6179400625	617704796633	617654903797	150
6179400000	6179400188	6179400625	617704796633	617654903797	150
6142500000	6142500580	6142500298	614387788373	614923834902	150
6142500000	6142500580	6142500298	614387788373	614923834902	150
6111500000	6111500805	6111500012	611304531041	611877541003	150
6111500000	6111500805	6111500012	611304531041	611877541003	150
6128400000	6128400207	6128400149	612260725931	612815058830	150

6128400000	6128400207	6128400149	612260725931	612815058830	150
6114400000	6114400714	6114400020	611985055680	611188611986	150
6114400000	6114400714	6114400020	611985055680	611188611986	150
6075400000	6075400321	6075400615	607186631120	607173428471	150
6075400000	6075400321	6075400615	607186631120	607173428471	150
6119400000	6119400301	6119400034	611590755470	611549676116	150
6119400000	6119400301	6119400034	611590755470	611549676116	150
6092600000	6092600865	6092600780	609864414232	609021372745	150
6092600000	6092600865	6092600780	609864414232	609021372745	150
6304400000	6304400589	6304400940	630907573066	630224483831	150
6304400000	6304400589	6304400940	630907573066	630224483831	150
6320500000	6320500680	6320500142	632361164333	632444548469	150
6320500000	6320500680	6320500142	632361164333	632444548469	150
6314400000	6314400750	6314400040	631319162247	631437082670	150
6314400000	6314400750	6314400040	631319162247	631437082670	150
6314500000	6314500040	6314500989	631532161806	631822880954	150
6314500000	6314500040	6314500989	631532161806	631822880954	150
6296400000	6296400964	6296400864	629219519723	629397795083	150
6296400000	6296400964	6296400864	629219519723	629397795083	150
6291500000	6291500998	6291500808	629450199712	629411322036	150
6291500000	6291500998	6291500808	629450199712	629411322036	150
6245400000	6245400916	6245400336	624177073696	624680020508	150
6245400000	6245400916	6245400336	624177073696	624680020508	150
6256400000	6256400443	6256400440	625423434535	625816880384	150
6256400000	6256400443	6256400440	625423434535	625816880384	150
6208410000	6208410854	6208410947	620010276280	620561281956	150
6208410000	6208410854	6208410947	620010276280	620561281956	150
6204500000	6204500406	6204500886	620601253248	620630845098	150
6204500000	6204500406	6204500886	620601253248	620630845098	150
6244500000	6244500659	6244500268	624013244400	624757992177	150
6244500000	6244500659	6244500268	624013244400	624757992177	150
6227400000	6227400089	6227400172	622153795842	622666901278	150
6227400000	6227400089	6227400172	622153795842	622666901278	150
6423610000	6423610043	6423610176	642371934407	642465276657	150
6423610000	6423610043	6423610176	642371934407	642465276657	150
6425500000	6425500865	6425500091	642931542034	642038655727	150
6425500000	6425500865	6425500091	642931542034	642038655727	150
6392400000	6392400284	6392400856	639116623496	639635940185	150
6392400000	6392400284	6392400856	639116623496	639635940185	150
6387410000	6387410708	6387410757	638741289073	638998177922	150
6387410000	6387410708	6387410757	638741289073	638998177922	150
6330500000	6330500835	6330500241	633517580684	633208347148	150
6330500000	6330500835	6330500241	633517580684	633208347148	150
6349610000	6349610303	6349610295	634126056969	634870439403	150
6349610000	6349610303	6349610295	634126056969	634870439403	150
6373500000	6373500746	6373500603	637697406414	637436627962	150
6373500000	6373500746	6373500603	637697406414	637436627962	150

6554500000	6554500887	6554500394	655088071612	655718544703	150
6554500000	6554500887	6554500394	655088071612	655718544703	150
6548400000	6548400482	6548400384	654275306126	654951460738	150
6548400000	6548400482	6548400384	654275306126	654951460738	150
6557400000	6557400352	6557400497	655630328181	655575502448	150
6557400000	6557400352	6557400497	655630328181	655575502448	150
6513700000	6513700300	6513700103	651717522410	651794756235	150
6513700000	6513700300	6513700103	651717522410	651794756235	150
6558610000	6558610377	6558610425	655493018350	655111924325	150
6558610000	6558610377	6558610425	655493018350	655111924325	150
6484800000	6484800773	6484800793	648914093364	648615985287	150
6484800000	6484800773	6484800793	648914093364	648615985287	150
6563400000	6563400306	6563400566	656282184178	656658662678	150
6563400000	6563400306	6563400566	656282184178	656658662678	150
6456710000	6456710830	6456710398	645267948808	645002258844	150
6456710000	6456710830	6456710398	645267948808	645002258844	150
6481500000	6481500726	6481500735	648311595813	648799975489	150
6481500000	6481500726	6481500735	648311595813	648799975489	150
6486510000	6486510400	6486510824	648465794641	648209910761	150
6486510000	6486510400	6486510824	648465794641	648209910761	150
6445400000	6445400953	6445400356	644945750578	644540839025	150
6445400000	6445400953	6445400356	644945750578	644540839025	150
6487400000	6487400702	6487400784	648868752819	648053004841	150
6487400000	6487400702	6487400784	648868752819	648053004841	150
6449610000	6449610319	6449610305	644472592707	644493945697	150
6449610000	6449610319	6449610305	644472592707	644493945697	150
6649610000	6649610354	6649610325	664517922983	664193670284	150
6649610000	6649610354	6649610325	664517922983	664193670284	150
6666400000	6666400612	6666400590	666080064623	666136981531	150
6666400000	6666400612	6666400590	666080064623	666136981531	150
6682400000	6682400010	6682400786	668882375925	668277601287	150
6682400000	6682400010	6682400786	668882375925	668277601287	150
6684400000	6684400158	6684400762	668444733976	668207489554	150
6684400000	6684400158	6684400762	668444733976	668207489554	150
6678400000	6678400848	6678400689	667035414118	667278797147	150
6678400000	6678400848	6678400689	667035414118	667278797147	150
6629400000	6629400536	6629400182	662277064057	662923095802	150
6629400000	6629400536	6629400182	662277064057	662923095802	150
6632400000	6632400195	6632400292	663831296322	663037140980	150
6632400000	6632400195	6632400292	663831296322	663037140980	150
6648400000	6648400499	6648400394	664033735487	664427401019	150
6648400000	6648400499	6648400394	664033735487	664427401019	150
6654400000	6654400801	6654400465	665839389914	665201472623	150
6654400000	6654400801	6654400465	665839389914	665201472623	150
6689400000	6689400344	6689400774	668839240925	668149633863	150
6689400000	6689400344	6689400774	668839240925	668149633863	150
6584500000	6584500027	6584500685	658812030712	658163115022	150

6584500000	6584500027	6584500685	658812030712	658163115022	150
6614400000	6614400706	6614400070	661934646808	661414485396	150
6614400000	6614400706	6614400070	661934646808	661414485396	150
6614500000	6614500093	6614500016	661821395267	661971319549	150
6614500000	6614500093	6614500016	661821395267	661971319549	150
6601500000	6601500721	6601500962	660545516823	660426601485	150
6601500000	6601500721	6601500962	660545516823	660426601485	150
6612500000	6612500240	6612500045	661739906135	661352424402	150
6612500000	6612500240	6612500045	661739906135	661352424402	150
6793500000	6793500311	6793500838	679609752539	679145744032	150
6793500000	6793500311	6793500838	679609752539	679145744032	150
6805500000	6805500621	6805500915	680370687292	680880227892	150
6805500000	6805500621	6805500915	680370687292	680880227892	150
6754400000	6754400816	6754400474	675453375498	675931498136	150
6754400000	6754400816	6754400474	675453375498	675931498136	150
6783600000	6783600822	6783600744	678395224381	678186839759	150
6783600000	6783600822	6783600744	678395224381	678186839759	150
6772500000	6772500756	6772500658	677455919296	677590922488	150
6772500000	6772500756	6772500658	677455919296	677590922488	150
6782500000	6782500792	6782500757	678842036274	678069221952	150
6782500000	6782500792	6782500757	678842036274	678069221952	150
6764500000	6764500291	6764500511	676753444230	676646946666	150
6764500000	6764500291	6764500511	676753444230	676646946666	150
6733400000	6733400659	6733400290	673333662769	673068987169	150
6733400000	6733400659	6733400290	673333662769	673068987169	150
6743400000	6743400743	6743400389	674996320620	674313573568	150
6743400000	6743400743	6743400389	674996320620	674313573568	150
6723500000	6723500190	6723500150	672204944079	672518398291	150
6723500000	6723500190	6723500150	672204944079	672518398291	150
6692400000	6692400336	6692400886	669820195900	669069426286	150
6692400000	6692400336	6692400886	669820195900	669069426286	150
6716400000	6716400896	6716400081	671179055714	671891879521	150
6716400000	6716400896	6716400081	671179055714	671891879521	150
6707400000	6707400102	6707400024	670649532367	670316895236	150
6707400000	6707400102	6707400024	670649532367	670316895236	150
6913400000	6913400171	6913400114	691069508707	691990052206	150
6913400000	6913400171	6913400114	691069508707	691990052206	150
6876400000	6876400813	6876400716	687253191984	687727708510	150
6876400000	6876400813	6876400716	687253191984	687727708510	150
6886400000	6886400905	6886400822	688928938028	688084883871	150
6886400000	6886400905	6886400822	688928938028	688084883871	150
6861500000	6861500544	6861500577	686606171544	686220329388	150
6861500000	6861500544	6861500577	686606171544	686220329388	150
6844500000	6844500765	6844500326	684213612560	684685869220	150
6844500000	6844500765	6844500326	684213612560	684685869220	150
6862400000	6862400224	6862400607	686063192371	686668959258	150
6862400000	6862400224	6862400607	686063192371	686668959258	150

6853400000	6853400935	6853400496	685696688855	685297005335	150
6853400000	6853400935	6853400496	685696688855	685297005335	150
6853500000	6853500374	6853500456	685274745002	685148862360	150
6853500000	6853500374	6853500456	685274745002	685148862360	150
7015400000	7015400455	7015400002	701093216766	701225747740	150
7015400000	7015400455	7015400002	701093216766	701225747740	150
7015500000	7015500653	7015500940	701460122539	701851192960	150
7015500000	7015500653	7015500940	701460122539	701851192960	150
7052210000	7052210487	7052210478	705407419805	705704487251	150
7052210000	7052210487	7052210478	705407419805	705704487251	150
7052500000	7052500445	7052500389	705123061260	705421048820	150
7052500000	7052500445	7052500389	705123061260	705421048820	150
7024400000	7024400767	7024400110	702513559308	702160930645	150
7024400000	7024400767	7024400110	702513559308	702160930645	150
7019400000	7019400288	7019400025	701598422252	701984971934	150
7019400000	7019400288	7019400025	701598422252	701984971934	150
7054500000	7054500802	7054500346	705271238756	705557472942	150
7054500000	7054500802	7054500346	705271238756	705557472942	150
6987400000	6987400684	6987400833	698324246548	698365294548	150
6987400000	6987400684	6987400833	698324246548	698365294548	150
6958400000	6958400599	6958400521	695784750300	695849283656	150
6958400000	6958400599	6958400521	695784750300	695849283656	150
6991400000	6991400917	6991400926	699801961219	699414940422	150
6991400000	6991400917	6991400926	699801961219	699414940422	150
7166700000	7166700023	7166700519	716977453552	716710903681	150
7166700000	7166700023	7166700519	716977453552	716710903681	150
7167400000	7167400455	7167400558	716596262285	716901649650	150
7167400000	7167400455	7167400558	716596262285	716901649650	150
7125400000	7125400600	7125400118	712001790008	712781347309	150
7125400000	7125400600	7125400118	712001790008	712781347309	150
7162400000	7162400100	7162400538	716712931067	716677648213	150
7162400000	7162400100	7162400538	716712931067	716677648213	150
7121610000	7121610830	7121610172	712414264438	712849451883	150
7121610000	7121610830	7121610172	712414264438	712849451883	150
7123500000	7123500086	7123500092	712771402043	712720159944	150
7123500000	7123500086	7123500092	712771402043	712720159944	150
7115400000	7115400471	7115400012	711705037496	711865686194	150
7115400000	7115400471	7115400012	711705037496	711865686194	150
7115500000	7115500667	7115500952	711707340611	711157674940	150
7115500000	7115500667	7115500952	711707340611	711157674940	150
7094500000	7094500107	7094500736	709351068446	709206601116	150
7094500000	7094500107	7094500736	709351068446	709206601116	150
7085400000	7085400383	7085400716	708228125348	708577781052	150
7085400000	7085400383	7085400716	708228125348	708577781052	150
7298400000	7298400044	7298400847	729223185197	729995053743	150
7298400000	7298400044	7298400847	729223185197	729995053743	150
7292500000	7292500877	7292500806	729221784468	729905943717	150

7292500000	7292500877	7292500806	729221784468	729905943717	150
7287400000	7287400667	7287400765	728785623402	728382570134	150
7287400000	7287400667	7287400765	728785623402	728382570134	150
7299400000	7299400442	7299400836	729091235281	729751789009	150
7299400000	7299400442	7299400836	729091235281	729751789009	150
7246400000	7246400250	7246400336	724378768568	724437033274	150
7246400000	7246400250	7246400336	724378768568	724437033274	150
7207400000	7207400022	7207400975	720850999871	720530682313	150
7207400000	7207400022	7207400975	720850999871	720530682313	150
7202400000	7202400793	7202400957	720046356595	720549518686	150
7202400000	7202400793	7202400957	720046356595	720549518686	150
7182500000	7182500823	7182500699	718215653726	718967899336	150
7182500000	7182500823	7182500699	718215653726	718967899336	150
7208400000	7208400901	7208400961	720229330917	720252098040	150
7208400000	7208400901	7208400961	720229330917	720252098040	150
7222610000	7222610264	7222610170	722358213796	722862539553	150
7222610000	7222610264	7222610170	722358213796	722862539553	150
7225500000	7225500834	7225500072	722083065100	722138711409	150
7225500000	7225500834	7225500072	722083065100	722138711409	150
7386510000	7386510384	7386510815	738373158415	738897178187	150
7386510000	7386510384	7386510815	738373158415	738897178187	150
7421800000	7421800676	7421800122	742204411811	742577735083	150
7421800000	7421800676	7421800122	742204411811	742577735083	150
7422500000	7422500400	7422500127	742726866579	742310668202	150
7422500000	7422500400	7422500127	742726866579	742310668202	150
7397400000	7397400757	7397400873	739500501361	739305571474	150
7397400000	7397400757	7397400873	739500501361	739305571474	150
7342400000	7342400185	7342400359	734831292366	734838202203	150
7342400000	7342400185	7342400359	734831292366	734838202203	150
7332400000	7332400144	7332400264	733151248197	733807847071	150
7332400000	7332400144	7332400264	733151248197	733807847071	150
7332500000	7332500432	7332500218	733171090797	733698423413	150
7332500000	7332500432	7332500218	733171090797	733698423413	150
7338400000	7338400381	7338400268	733158586326	733551181891	150
7338400000	7338400381	7338400268	733158586326	733551181891	150
7323400000	7323400239	7323400154	732428211822	732888040093	150
7323400000	7323400239	7323400154	732428211822	732888040093	150
7352400000	7352400356	7352400458	735380010249	735653916208	150
7352400000	7352400356	7352400458	735380010249	735653916208	150
7355500000	7355500663	7355500380	735776731241	735870491066	150
7355500000	7355500663	7355500380	735776731241	735870491066	150
7514400000	7514400692	7514400061	751073707173	751072805723	150
7514400000	7514400692	7514400061	751073707173	751072805723	150
7514500000	7514500076	7514500007	751826575206	751977101626	150
7514500000	7514500076	7514500007	751826575206	751977101626	150
7450500000	7450500975	7450500449	745795117690	745106226668	150
7450500000	7450500975	7450500449	745795117690	745106226668	150

7483400000	7483400111	7483400757	748418776725	748259321494	150
7483400000	7483400111	7483400757	748418776725	748259321494	150
7447400000	7447400290	7447400388	744111926601	744354519786	150
7447400000	7447400290	7447400388	744111926601	744354519786	150
7475400000	7475400288	7475400656	747759042264	747359537872	150
7475400000	7475400288	7475400656	747759042264	747359537872	150
7432400000	7432400159	7432400274	743967056451	743700152975	150
7432400000	7432400159	7432400274	743967056451	743700152975	150
7472400000	7472400815	7472400669	747878597642	747841203951	150
7472400000	7472400815	7472400669	747878597642	747841203951	150
7443500000	7443500703	7443500318	744912841147	744180288060	150
7443500000	7443500703	7443500318	744912841147	744180288060	150
7488400000	7488400999	7488400769	748397848181	748687736149	150
7488400000	7488400999	7488400769	748397848181	748687736149	150
7625400000	7625400687	7625400170	762816057667	762806278745	150
7625400000	7625400687	7625400170	762816057667	762806278745	150
7626500000	7626500731	7626500126	762643332839	762434841063	150
7626500000	7626500731	7626500126	762643332839	762434841063	150
7664500000	7664500275	7664500503	766248056956	766118175635	150
7664500000	7664500275	7664500503	766248056956	766118175635	150
7628400000	7628400252	7628400198	762706175321	762910712955	150
7628400000	7628400252	7628400198	762706175321	762910712955	150
7656400000	7656400510	7656400484	765498513622	765963333329	150
7656400000	7656400510	7656400484	765498513622	765963333329	150
7636400000	7636400144	7636400272	763585317881	763322624276	150
7636400000	7636400144	7636400272	763585317881	763322624276	150
7635400000	7635400874	7635400274	763061935466	763849827504	150
7635400000	7635400874	7635400274	763061935466	763849827504	150
7598400000	7598400100	7598400877	759281242286	759512726083	150
7598400000	7598400100	7598400877	759281242286	759512726083	150
7604500000	7604500915	7604500923	760545247510	760740780239	150
7604500000	7604500915	7604500923	760545247510	760740780239	150
7569400000	7569400090	7569400567	756387603543	756744440338	150
7569400000	7569400090	7569400567	756387603543	756744440338	150
7578400000	7578400832	7578400680	757472264436	757295666935	150
7578400000	7578400832	7578400680	757472264436	757295666935	150
7596400000	7596400016	7596400897	759645666490	759134625446	150
7596400000	7596400016	7596400897	759645666490	759134625446	150
7579400000	7579400258	7579400665	757292236012	757931252157	150
7579400000	7579400258	7579400665	757292236012	757931252157	150
7567410000	7567410562	7567410581	756338698415	756763331411	150
7567410000	7567410562	7567410581	756338698415	756763331411	150
7586510000	7586510424	7586510835	758108521440	758314525116	150
7586510000	7586510424	7586510835	758108521440	758314525116	150
7612400000	7612400035	7612400094	761093063499	761768357322	150
7612400000	7612400035	7612400094	761093063499	761768357322	150
7603500000	7603500964	7603500945	760608774143	760273335785	150

7603500000	7603500964	7603500945	760608774143	760273335785	150
7584800000	7584800642	7584800804	758952320278	758251899647	150
7584800000	7584800642	7584800804	758952320278	758251899647	150
7754500000	7754500921	7754500415	775669753491	775887020087	150
7754500000	7754500921	7754500415	775669753491	775887020087	150
7792400000	7792400353	7792400897	779736779175	779898061633	150
7792400000	7792400353	7792400897	779736779175	779898061633	150
7741500000	7741500276	7741500368	774144874509	774079047197	150
7741500000	7741500276	7741500368	774144874509	774079047197	150
7763500000	7763500536	7763500544	776309245262	776218720785	150
7763500000	7763500536	7763500544	776309245262	776218720785	150
7691400000	7691400875	7691400897	769465996424	769727392985	150
7691400000	7691400875	7691400897	769465996424	769727392985	150
7673500000	7673500799	7673500632	767980762710	767519281542	150
7673500000	7673500799	7673500632	767980762710	767519281542	150
7715500000	7715500750	7715500020	771462941012	771148294423	150
7715500000	7715500750	7715500020	771462941012	771148294423	150
7875400000	7875400351	7875400696	787086288481	787332157995	150
7875400000	7875400351	7875400696	787086288481	787332157995	150
7960500000	7960500212	7960500597	796941487000	796898183286	150
7960500000	7960500212	7960500597	796941487000	796898183286	150
7827610000	7827610527	7827610171	782254573742	782088140278	150
7827610000	7827610527	7827610171	782254573742	782088140278	150
7815500000	7815500767	7815500032	781742613514	781898238071	150
7815500000	7815500767	7815500032	781742613514	781898238071	150
7884500000	7884500078	7884500716	788897191808	788109180766	150
7884500000	7884500078	7884500716	788897191808	788109180766	150
7834400000	7834400927	7834400289	783371443489	783224309329	150
7834400000	7834400927	7834400289	783371443489	783224309329	150
7874600000	7874600260	7874600650	787533808500	787147147847	150
7826500000	7826500762	7826500146	782436195855	782253679597	150
7826500000	7826500762	7826500146	782436195855	782253679597	150
7881500000	7881500894	7881500772	788575091784	788490335885	150
7881500000	7881500894	7881500772	788575091784	788490335885	150
7814500000	7814500129	7814500036	781715786735	781741072616	150
7814500000	7814500129	7814500036	781715786735	781741072616	150
7909400000	7909400334	7909400015	790515758847	790656104597	150
7909400000	7909400334	7909400015	790515758847	790656104597	150
7867400000	7867400434	7867400627	786328745565	786465735659	150
7867400000	7867400434	7867400627	786328745565	786465735659	150
7803500000	7803500998	7803500965	780763824054	780133395731	150
7803500000	7803500998	7803500965	780763824054	780133395731	150
7804400000	7804400667	7804400991	780280706965	780927684692	150
7804400000	7804400667	7804400991	780280706965	780927684692	150
7871500000	7871500611	7871500677	787095677625	787006741082	150
7871500000	7871500611	7871500677	787095677625	787006741082	150
8022400000	8022400920	8022400135	802710712663	802262581123	150

8022400000	8022400920	8022400135	802710712663	802262581123	150
8022500000	8022500321	8022500088	802187250893	802443668382	150
8022500000	8022500321	8022500088	802187250893	802443668382	150
7925400000	7925400742	7925400202	792913637762	792178667657	150
7925400000	7925400742	7925400202	792913637762	792178667657	150
7997410000	7997410805	7997410917	799462444858	799007683777	150
7997410000	7997410805	7997410917	799462444858	799007683777	150
7953500000	7953500391	7953500467	795577151759	795625969624	150
7953500000	7953500391	7953500467	795577151759	795625969624	150
8039400000	8039400657	8039400223	803190421106	803939727270	150
8039400000	8039400657	8039400223	803190421106	803939727270	150
8001500000	8001500718	8001500904	800960024988	800719651557	150
8001500000	8001500718	8001500904	800960024988	800719651557	150
7973500000	7973500848	7973500661	797788909569	797230527779	150
7973500000	7973500848	7973500661	797788909569	797230527779	150
7926500000	7926500776	7926500156	792866309606	792440121357	150
7926500000	7926500776	7926500156	792866309606	792440121357	150
7974400000	7974400189	7974400694	797340608737	797591898691	150
7974400000	7974400189	7974400694	797340608737	797591898691	150
8055500000	8055500617	8055500350	805868814414	805487747658	150
8055500000	8055500617	8055500350	805868814414	805487747658	150
8155400000	8155400081	8155400427	815995187050	815894486991	150
8155400000	8155400081	8155400427	815995187050	815894486991	150
8151500000	8151500356	8151500409	815116994825	815122171523	150
8151500000	8151500356	8151500409	815116994825	815122171523	150
8134400000	8134400938	8134400220	813523511887	813000592777	150
8134400000	8134400938	8134400220	813523511887	813000592777	150
8152500000	8152500466	8152500400	815658467860	815310166201	150
8152500000	8152500466	8152500400	815658467860	815310166201	150
8125500000	8125500818	8125500063	812405480059	812705802569	150
8125500000	8125500818	8125500063	812405480059	812705802569	150
8083400000	8083400043	8083400718	808317255852	808509273352	150
8083400000	8083400043	8083400718	808317255852	808509273352	150
8142400000	8142400151	8142400340	814328508305	814287668697	150
8142400000	8142400151	8142400340	814328508305	814287668697	150
8074500000	8074500340	8074500539	807361116053	807939867315	150
8074500000	8074500340	8074500539	807361116053	807939867315	150
8144500000	8144500644	8144500260	814368299907	814634840434	150
8144500000	8144500644	8144500260	814368299907	814634840434	150
8062500000	8062500631	8062500489	806623191253	806680047531	150
8062500000	8062500631	8062500489	806623191253	806680047531	150
8136610000	8136610477	8136610217	813415868859	813570232869	150
8136610000	8136610477	8136610217	813415868859	813570232869	150
8108700000	8108700845	8108700914	810290555254	810763431478	150
8108700000	8108700845	8108700914	810290555254	810763431478	150
8110610000	8110610425	8110610084	811105033796	811274727873	150
8110610000	8110610425	8110610084	811105033796	811274727873	150

8082400000	8082400916	8082400728	808436950527	808653169964	150
8082400000	8082400916	8082400728	808436950527	808653169964	150
8082500000	8082500808	8082500690	808318344257	808651221155	150
8082500000	8082500808	8082500690	808318344257	808651221155	150
8214400000	8214400735	8214400032	821425168931	821453445757	150
8214400000	8214400735	8214400032	821425168931	821453445757	150
8255400000	8255400099	8255400437	825893549973	825249038950	150
8255400000	8255400099	8255400437	825893549973	825249038950	150
8205500000	8205500530	8205500857	820533114378	820085932062	150
8205500000	8205500530	8205500857	820533114378	820085932062	150
8222500000	8222500359	8222500108	822744090288	822692710313	150
8222500000	8222500359	8222500108	822744090288	822692710313	150
8236610000	8236610494	8236610227	823326989543	823655999813	150
8236610000	8236610494	8236610227	823326989543	823655999813	150
8224400000	8224400801	8224400131	822106066379	822935579374	150
8224400000	8224400801	8224400131	822106066379	822935579374	150
8284500000	8284500976	8284500659	828059178765	828267496797	150
8284500000	8284500976	8284500659	828059178765	828267496797	150
8174400000	8174400067	8174400615	817606165171	817702510289	150
8174400000	8174400067	8174400615	817606165171	817702510289	150
8223400000	8223400225	8223400145	822069597910	822715938881	150
8223400000	8223400225	8223400145	822069597910	822715938881	150
8269500000	8269500649	8269500512	826487775467	826428942617	150
8269500000	8269500649	8269500512	826487775467	826428942617	150
8295400000	8295400539	8295400835	829243538557	829989814383	150
8295400000	8295400539	8295400835	829243538557	829989814383	150
8324610000	8324610882	8324610160	832891215661	832102447451	150
8324610000	8324610882	8324610160	832891215661	832102447451	150
8333400000	8333400599	8333400252	833963597180	833660293476	150
8333400000	8333400599	8333400252	833963597180	833660293476	150
8319400000	8319400337	8319400056	831644048100	831326398369	150
8319400000	8319400337	8319400056	831644048100	831326398369	150
8402500000	8402500127	8402500930	840631557815	840920339523	150
8402500000	8402500127	8402500930	840631557815	840920339523	150
8335400000	8335400820	8335400245	833266654535	833292339273	150
8335400000	8335400820	8335400245	833266654535	833292339273	150
8322500000	8322500381	8322500118	832229231077	832478679285	150
8322500000	8322500381	8322500118	832229231077	832478679285	150
8397410000	8397410715	8397410858	839610791081	839215779304	150
8397410000	8397410715	8397410858	839610791081	839215779304	150
8384400000	8384400249	7384400734	838569539708	838184720072	150
8384400000	8384400249	7384400734	838569539708	838184720072	150
8413500000	8413500098	8413500025	841956648293	841548391081	150
8413500000	8413500098	8413500025	841956648293	841548391081	150
8303400000	8303400447	8303400958	830279771089	830044258260	150
8303400000	8303400447	8303400958	830279771089	830044258260	150
8303500000	8303500915	8303500916	830081119269	830453370966	150

8303500000	8303500915	8303500916	830081119269	830453370966	150
8433400000	8433400616	8433400262	843294223392	843366938942	150
8433400000	8433400616	8433400262	843294223392	843366938942	150
8532400000	8532400179	8532400284	853670495807	853791223308	150
8532400000	8532400179	8532400284	853670495807	853791223308	150
8430500000	8430500743	8430500251	843735120348	843817856321	150
8430500000	8430500743	8430500251	843735120348	843817856321	150
8536610000	8536610537	8536610255	853146123582	853508238813	150
8536610000	8536610537	8536610255	853146123582	853508238813	150
8425400000	8425400653	8425400151	842696329913	842672586497	150
8425400000	8425400653	8425400151	842696329913	842672586497	150
8521500000	8521500976	8521500153	852015784857	852949928421	150
8521500000	8521500976	8521500153	852015784857	852949928421	150
8653500000	8653500341	8653500438	865775884761	865978333769	150
8653500000	8653500341	8653500438	865775884761	865978333769	150
8574500000	8574500437	8574500589	857253888608	857163376528	150
8574500000	8574500437	8574500589	857253888608	857163376528	150
8611500000	8611500893	8611500064	861521837837	861307066297	150
8611500000	8611500893	8611500064	861521837837	861307066297	150
8561500000	8561500490	8561500549	856869242663	856507282193	150
8561500000	8561500490	8561500549	856869242663	856507282193	150
8594500000	8594500426	8594500786	859475772703	859536047499	150
8594500000	8594500426	8594500786	859475772703	859536047499	150
8587700000	8587700612	8587700755	858390108156	858022375499	150
8587700000	8587700612	8587700755	858390108156	858022375499	150
8643500000	8643500740	8643500338	864732869258	864977911788	150
8643500000	8643500740	8643500338	864732869258	864977911788	150
8684310000	8684310463	8684310726	868184307239	868094870753	150
8684310000	8684310463	8684310726	868184307239	868094870753	150
8775400000	8775400337	8775400687	877963753961	877042524472	150
8775400000	8775400337	8775400687	877963753961	877042524472	150
8682500000	8682500777	8682500749	868674312266	868063705250	150
8682500000	8682500777	8682500749	868674312266	868063705250	150
8722400000	8722400047	8722400205	872433422588	872850064291	150
8722400000	8722400047	8722400205	872433422588	872850064291	150
8693400000	8693400308	8693400875	869339474944	869842778901	150
8693400000	8693400308	8693400875	869339474944	869842778901	150
8748400000	8748400520	8748400406	874449418681	874318945266	150
8748400000	8748400520	8748400406	874449418681	874318945266	150
8784310000	8784310480	8784310736	878943874518	878719457734	150
8784310000	8784310480	8784310736	878943874518	878719457734	150
8712400000	8712400052	8712400105	871243867430	871409901514	150
8712400000	8712400052	8712400105	871243867430	871409901514	150
8684800000	8684800657	8684800814	868286835843	868199100637	150
8684800000	8684800657	8684800814	868286835843	868199100637	150
8755400000	8755400111	8755400487	875297783024	875476141560	150
8755400000	8755400111	8755400487	875297783024	875476141560	150

8741500000	8741500278	8741500369	874144066619	874481590839	150
8741500000	8741500278	8741500369	874144066619	874481590839	150
8673400000	8673400477	8673400678	867634748739	867573485594	150
8673400000	8673400477	8673400678	867634748739	867573485594	150
8787410000	8787410781	8787410798	878898460004	878645368606	150
8787410000	8787410781	8787410798	878898460004	878645368606	150
8832500000	8832500524	8832500270	883390191592	883516195412	150
8832500000	8832500524	8832500270	883390191592	883516195412	150
8883600000	8883600847	8883600756	888844958255	888782981155	150
8883600000	8883600847	8883600756	888844958255	888782981155	150
8812400000	8812400069	8812400115	881998106896	881657178562	150
8812400000	8812400069	8812400115	881998106896	881657178562	150
8912500000	8912500303	8912500078	891727155410	891033836656	150
8912500000	8912500303	8912500078	891727155410	891033836656	150
8802500000	8802500202	8802500969	880872283882	880161627300	150
8802500000	8802500202	8802500969	880872283882	880161627300	150
8846400000	8846400378	8846400399	884783458926	884680999333	150
8846400000	8846400378	8846400399	884783458926	884680999333	150
8862500000	8862500610	8862500569	886706338679	886298415292	150
8862500000	8862500610	8862500569	886706338679	886298415292	150
8833500000	8833500605	8833500260	883620751460	883795488229	150
8833500000	8833500605	8833500260	883620751460	883795488229	150
8821800000	8821800746	8821800168	882963177289	882834702817	150
8821800000	8821800746	8821800168	882963177289	882834702817	150
9044400000	9044400960	9044400309	904993587238	904690505719	150
9044400000	9044400960	9044400309	904993587238	904690505719	150
9005400000	9005400395	9005400904	900083625099	900430082533	150
9005400000	9005400395	9005400904	900083625099	900430082533	150
8977410000	8977410646	8977410719	897873987857	897081449687	150
8977410000	8977410646	8977410719	897873987857	897081449687	150
8947500000	8947500293	8947500342	894775543718	894461302682	150
8947500000	8947500293	8947500342	894775543718	894461302682	150
8979400000	8979400321	8979400706	897247804250	897240929420	150
8979400000	8979400321	8979400706	897247804250	897240929420	150
9037400000	9037400212	9037400253	903176880833	903528306630	150
9037400000	9037400212	9037400253	903176880833	903528306630	150
9025500000	9025500802	9025500054	902951054038	902381981885	150
9025500000	9025500802	9025500054	902951054038	902381981885	150
8972400000	8972400903	8972400719	897305915871	897891494653	150
8972400000	8972400903	8972400719	897305915871	897891494653	150
8974500000	8974500923	8974500630	897842552619	897586646960	150
8974500000	8974500923	8974500630	897842552619	897586646960	150
9045400000	9045400886	9045400318	904097835811	904847279628	150
9045400000	9045400886	9045400318	904097835811	904847279628	150
9020500000	9020500642	9020500116	902054967690	902825337138	150
9020500000	9020500642	9020500116	902054967690	902825337138	150
9006400000	9006400676	9006400915	900295032813	900526094654	150

9006400000	9006400676	9006400915	900295032813	900526094654	150
8948400000	8948400555	8948400426	894352307855	894484132151	150
8948400000	8948400555	8948400426	894352307855	894484132151	150
9008410000	9008410827	9008410929	900825554627	900714449222	150
9008410000	9008410827	9008410929	900825554627	900714449222	150
8967400000	8967400451	8967400638	896474107612	896406113050	150
8967400000	8967400451	8967400638	896474107612	896406113050	150
9055400000	9055400063	9055400419	905945401530	905943828883	150
9055400000	9055400063	9055400419	905945401530	905943828883	150
9055500000	9055500619	9055500351	905446930896	905968958889	150
9055500000	9055500619	9055500351	905446930896	905968958889	150
9150500000	9150500927	9150500420	915438362119	915761277388	150
9150500000	9150500927	9150500420	915438362119	915761277388	150
9124500000	9124500189	9124500066	912249786154	912648525804	150
9124500000	9124500189	9124500066	912249786154	912648525804	150
9101500000	9101500738	9101500915	910686139831	910040335481	150
9101500000	9101500738	9101500915	910686139831	910040335481	150
9105400000	9105400412	9105400914	910359409624	910303348502	150
9105400000	9105400412	9105400914	910359409624	910303348502	150
9167410000	9167410499	9167410542	916008140591	916483644149	150
9167410000	9167410499	9167410542	916008140591	916483644149	150
9132400000	9132400114	9132400246	913557508881	913459617846	150
9132400000	9132400114	9132400246	913557508881	913459617846	150
9124810000	9124810467	9124810189	912156323761	912085449929	150
9124810000	9124810467	9124810189	912156323761	912085449929	150
9077400000	9077400468	9077400649	907308705083	907640796150	150
9077400000	9077400468	9077400649	907308705083	907640796150	150
9166400000	9166400599	9166400540	916013034932	916765908447	150
9166400000	9166400599	9166400540	916013034932	916765908447	150
9094500000	9094500111	9094500738	909872164056	909961078453	150
9094500000	9094500111	9094500738	909872164056	909961078453	150
9272400000	9272400300	9272400651	927629227585	927995365971	150
9272400000	9272400300	9272400651	927629227585	927995365971	150
9274500000	9274500381	9274500560	927356076279	927322900626	150
9274500000	9274500381	9274500560	927356076279	927322900626	150
9205400000	9205400428	9205400924	920755703874	920622814118	150
9205400000	9205400428	9205400924	920755703874	920622814118	150
9178400000	9178400866	9178400642	917862111668	917817288091	150
9178400000	9178400866	9178400642	917862111668	917817288091	150
9269400000	9269400123	9269400539	926972518063	926375837820	150
9269400000	9269400123	9269400539	926972518063	926375837820	150
9176400000	9176400697	9176400646	917634794456	917877825045	150
9176400000	9176400697	9176400646	917634794456	917877825045	150
9235610000	9235610764	9235610241	923063971750	923008354997	150
9235610000	9235610764	9235610241	923063971750	923008354997	150
9264500000	9264500205	9264500467	926381870521	926000049256	150
9264500000	9264500205	9264500467	926381870521	926000049256	150

9283400000	9283400078	9283400739	928144980648	928677790491	150
9283400000	9283400078	9283400739	928144980648	928677790491	150
9213400000	9213400065	9213400048	921102768356	921937322793	150
9213400000	9213400065	9213400048	921102768356	921937322793	150
9415500000	9415500704	9415500987	941471795099	941457844430	150
9415500000	9415500704	9415500987	941471795099	941457844430	150
9310610000	9310610461	9310610105	931885329408	931072445652	150
9310610000	9310610461	9310610105	931885329408	931072445652	150
9379400000	9379400226	9379400648	937836221785	937726735805	150
9379400000	9379400226	9379400648	937836221785	937726735805	150
9365400000	9365400213	9365400548	936515878106	936108883867	150
9365400000	9365400213	9365400548	936515878106	936108883867	150
9308400000	9308400922	9308400973	930762187328	930563497338	150
9308400000	9308400922	9308400973	930762187328	930563497338	150
9381500000	9381500714	9381500728	938332832856	938606664217	150
9381500000	9381500714	9381500728	938332832856	938606664217	150
9325500000	9325500853	9325500084	932638041644	932128290146	150
9325500000	9325500853	9325500084	932638041644	932128290146	150
9355400000	9355400119	9355400448	935582206229	935196922414	150
9355400000	9355400119	9355400448	935582206229	935196922414	150
9387600000	9387600952	9387600678	938384748238	938804614928	150
9387600000	9387600952	9387600678	938384748238	938804614928	150
9305500000	9305500549	9305500868	930306330939	930689551423	150
9305500000	9305500549	9305500868	930306330939	930689551423	150
9356400000	9356400467	9356400454	935890973804	935342732123	150
9356400000	9356400467	9356400454	935890973804	935342732123	150
9429400000	9429400511	9429400165	942843444705	942940871708	150
9429400000	9429400511	9429400165	942843444705	942940871708	150
9454500000	9454500873	9454500387	945803173399	945091003947	150
9454500000	9454500873	9454500387	945803173399	945091003947	150
9504400000	9504400623	9504400963	950028871134	950322880389	150
9504400000	9504400623	9504400963	950028871134	950322880389	150
9521600000	9521600739	9521600135	952639592084	952225082435	150
9521600000	9521600739	9521600135	952639592084	952225082435	150
9521800000	9521800696	9521800135	952553685228	952413499366	150
9521800000	9521800696	9521800135	952553685228	952413499366	150
9523400000	9523400272	9523400176	952315964027	952587906322	150
9523400000	9523400272	9523400176	952315964027	952587906322	150
9465710000	9465710996	9465710480	946258600416	946520214674	150
9465710000	9465710996	9465710480	946258600416	946520214674	150
9523500000	9523500160	9523500133	952739154531	952988209447	150
9523500000	9523500160	9523500133	952739154531	952988209447	150
9497410000	9497410731	9497410869	949123331000	949200476792	150
9497410000	9497410731	9497410869	949123331000	949200476792	150
9452400000	9452400375	9452400470	945963222841	945078997537	150
9452400000	9452400375	9452400470	945963222841	945078997537	150
9543500000	9543500725	9543500329	954401256640	954288497008	150

9543500000	9543500725	9543500329	954401256640	954288497008	150
9499400000	9499400477	9499400858	949829792208	949251586763	150
9499400000	9499400477	9499400858	949829792208	949251586763	150
9425500000	9425500870	9425500094	942416968980	942697170335	150
9425500000	9425500870	9425500094	942416968980	942697170335	150
9467410000	9467410549	9467410573	946689371709	946850338599	150
9467410000	9467410549	9467410573	946689371709	946850338599	150
9453500000	9453500305	9453500419	945287667125	945793347461	150
9453500000	9453500305	9453500419	945287667125	945793347461	150
9441500000	9441500224	9441500342	944124950845	944748995763	150
9441500000	9441500224	9441500342	944124950845	944748995763	150
9542400000	9542400223	9542400381	954519154875	954330673114	150
9542400000	9542400223	9542400381	954519154875	954330673114	150
9498400000	9498400084	9498400869	949347420974	949388285997	150
9498400000	9498400084	9498400869	949347420974	949388285997	150
9644400000	9644400064	9644400369	964594188111	964798252892	150
9644400000	9644400064	9644400369	964594188111	964798252892	150
9672500000	9672500743	9672500651	967664756653	967784864946	150
9615500000	9615500736	9615500011	961845319015	961739395830	150
9615500000	9615500736	9615500011	961845319015	961739395830	150
9617400000	9617400006	9617400115	961395005998	961397025535	150
9617400000	9617400006	9617400115	961395005998	961397025535	150
9605500000	9605500596	9605500897	960545201160	960803385420	150
9605500000	9605500596	9605500897	960545201160	960803385420	150
9677410000	9677410603	9677410690	967002359136	967213049957	150
9677410000	9677410603	9677410690	967002359136	967213049957	150
9563500000	9563500506	9563500526	956094479058	956778476224	150
9563500000	9563500506	9563500526	956094479058	956778476224	150
9637400000	9637400172	9637400313	963772549284	963554960065	150
9637400000	9637400172	9637400313	963772549284	963554960065	150
9584310000	9584310446	9584310717	958427799941	958665390721	150
9584310000	9584310446	9584310717	958427799941	958665390721	150
9557500000	9557500391	9557500405	955095667306	955630968641	150
9557500000	9557500391	9557500405	955095667306	955630968641	150
9586400000	9586400867	9586400793	958167528900	958648135433	150
9586400000	9586400867	9586400793	958167528900	958648135433	150
9657400000	9657400376	9657400510	965429018636	965004555680	150
9657400000	9657400376	9657400510	965429018636	965004555680	150
9657410000	9657410416	9657410492	965348209860	965900155676	150
9657410000	9657410416	9657410492	965348209860	965900155676	150
9564400000	9564400951	9564400557	956947009507	956182314622	150
9564400000	9564400951	9564400557	956947009507	956182314622	150
9608410000	9608410814	9608410990	960574733197	960721959687	150
9608410000	9608410814	9608410990	960574733197	960721959687	150
9696400000	9696400036	9696400910	969674840419	969496803362	150
9696400000	9696400036	9696400910	969674840419	969496803362	150
9798400000	9798400141	9798400899	979888546227	979994152758	150

9798400000	9798400141	9798400899	979888546227	979994152758	150
9798510000	9798510130	9798510950	979356458307	979550518063	150
9798510000	9798510130	9798510950	979356458307	979550518063	150
9771500000	9771500596	9771500669	977054633838	977556184129	150
9771500000	9771500596	9771500669	977054633838	977556184129	150
9691500000	9691500970	9691500851	969274598713	969788986466	150
9691500000	9691500970	9691500851	969274598713	969788986466	150
9708700000	9708700954	9708700973	970484703613	970634523644	150
9708700000	9708700954	9708700973	970484703613	970634523644	150
9725400000	9725400710	9725400183	972199138265	972172716394	150
9725400000	9725400710	9725400183	972199138265	972172716394	150
9785400000	9785400499	9785400786	978157393231	978309218645	150
9785400000	9785400499	9785400786	978157393231	978309218645	150
9773500000	9773500817	9773500644	977169229176	977090556190	150
9773500000	9773500817	9773500644	977169229176	977090556190	150
9777410000	9777410617	9777410700	977453950726	977146125400	150
9777410000	9777410617	9777410700	977453950726	977146125400	150
9684500000	9684500048	9684500698	968172262500	968907206932	150
9684500000	9684500048	9684500698	968172262500	968907206932	150
9768500000	9768500498	9768500544	976490551814	976923022297	150
9768500000	9768500498	9768500544	976490551814	976923022297	150
9714500000	9714500114	9714500028	971698808034	971775784285	150
9714500000	9714500114	9714500028	971698808034	971775784285	150
9833400000	9833400681	9833400303	983920311095	983218362804	150
9833400000	9833400681	9833400303	983920311095	983218362804	150
9822500000	9822500344	9822500170	982951704470	982049541818	150
9822500000	9822500344	9822500170	982951704470	982049541818	150
9882400000	9882400047	9882400809	988461675506	988719050464	150
9882400000	9882400047	9882400809	988461675506	988719050464	150
9840500000	9840500967	9840500391	984659562548	984517816680	150
9840500000	9840500967	9840500391	984659562548	984517816680	150
9873500000	9873500835	9873500653	987338649033	987652143952	150
9873500000	9873500835	9873500653	987338649033	987652143952	150
9861700000	9861700969	9861700206	986038664801	986651992047	150
9861700000	9861700969	9861700206	986038664801	986651992047	150
9861700000	9861700971	9861700481	986665702629	986651992047	150
9861700000	9861700971	9861700481	986665702629	986651992047	150
9861700000	9861700973	9861700498	986660865381	986651992047	150
9861700000	9861700973	9861700498	986660865381	986651992047	150
9861700000	9861700974	9861700021	986700706381	986651992047	150
9861700000	9861700975	9861700468	986111177790	986651992047	150
9903500000	9903500017	9903500976	990321889365	990452772793	150
9903500000	9903500017	9903500976	990321889365	990452772793	150
9861700000	9861700976	9861700421	986426910677	986651992047	150
9861700000	9861700977	9861700987	986138774975	986651992047	150
9861700000	9861700977	9861700987	986138774975	986651992047	150
9861700000	9861700978	9861700001	986010244906	986651992047	150

9854500000	9854500131	9854500427	985667335288	985260300766	150
9854500000	9854500131	9854500427	985667335288	985260300766	150
9883500000	9883500152	9883500751	988190454274	988207118943	150
9883500000	9883500152	9883500751	988190454274	988207118943	150
9841500000	9841500299	9841500380	984476224749	984500432815	150
9841500000	9841500299	9841500380	984476224749	984500432815	150
9812610000	9812610198	9812610132	981179513805	981615482314	150
9812610000	9812610198	9812610132	981179513805	981615482314	150
9921500000	9921500044	9921500193	992270874678	992185108466	150
9921500000	9921500044	9921500193	992270874678	992185108466	150
9898400000	9898400157	9898400909	989939072449	989938584583	150
9898400000	9898400157	9898400909	989939072449	989938584583	150
9902500000	9902500222	9902500979	990183230628	990006367155	150
9902500000	9902500222	9902500979	990183230628	990006367155	150
9965400000	9965400309	9965400608	996959816059	996502393399	150
9965400000	9965400309	9965400608	996959816059	996502393399	150
9943500000	9943500795	9943500369	994596338503	994546628463	150
9943500000	9943500795	9943500369	994596338503	994546628463	150
9980500000	9980500522	9980500796	998053111026	998862854336	150
9980500000	9980500522	9980500796	998053111026	998862854336	150
6914603845	6914603341	9739400293	691207239952	691385148841	150
6914603845	6914603341	9739400293	691207239952	691385148841	150
9970500000	9970500416	9970500698	997804342779	997732284816	150
9970500000	9970500416	9970500698	997804342779	997732284816	150
6961959135	6961959764	4993400900	696301232511	696223330563	150
6961959135	6961959764	4993400900	696301232511	696223330563	150
1812610000	1812610554	4102400944	181933452746	181924880769	150
1812610000	1812610554	4102400944	181933452746	181924880769	150
1795631490	1795631814	5794800923	179174983783	179312117910	150
1795631490	1795631814	5794800923	179174983783	179312117910	150
6242446723	6242446206	5444700373	624022936811	624081451252	150
6242446723	6242446206	5444700373	624022936811	624081451252	150
9861700000	9861700825	9861700646	986109614119	986651992047	150
5038454027	5038454732	8442400370	503319816214	503331536196	150
5038454027	5038454732	8442400370	503319816214	503331536196	150
5591641389	5591641435	3500302483	559802338126	559986129534	150
5591641389	5591641435	3500302483	559802338126	559986129534	150
660321636	660321727	131800191	66272937822	66834135229	150
660321636	660321727	131800191	66272937822	66834135229	150
3587947405	3587947653	3877400722	358576490326	358000933099	150
3587947405	3587947653	3877400722	358576490326	358000933099	150
7990492248	7990492159	1663400571	799905228134	799920509348	150
7990492248	7990492159	1663400571	799905228134	799920509348	150
7837516746	7837516211	2992910000	783390138345	783858213778	150
7837516746	7837516211	2992910000	783390138345	783858213778	150
4456441102	4456441353	5638400296	445896896964	445833373298	150
4456441102	4456441353	5638400296	445896896964	445833373298	150

6822584129	6822584668	6279959514	682778735862	682834707892	150
6822584129	6822584668	6279959514	682778735862	682834707892	150
9714400000	9714400622	3468500504	971867075102	971473545849	150
9714400000	9714400622	3468500504	971867075102	971473545849	150
3661423246	3661423200	9327400185	366892773303	366815835531	150
1909400000	1909400640	39444400393	190483894992	190153103965	150
1909400000	1909400640	39444400393	190483894992	190153103965	150
8916317444	8916317878	6742400398	891585896510	891193731139	150
8916317444	8916317878	6742400398	891585896510	891193731139	150
3108433950	3108433190	7270500627	310134213358	310990586009	150
3108433950	3108433190	7270500627	310134213358	310990586009	150
1682572973	1682572511	9493910000	168943575713	168784817694	150
1682572973	1682572511	9493910000	168943575713	168784817694	150
9306853254	9306853222	4493910000	930957241654	930657824564	150
9306853254	9306853222	4493910000	930957241654	930657824564	150
5962931605	5962931878	593910000	596943792387	596320198541	150
5962931605	5962931878	593910000	596943792387	596320198541	150
3074406251	3074406456	7493910000	307559413951	307744431128	150
3074406251	3074406456	7493910000	307559413951	307744431128	150
5938040345	5938040211	4562500535	593219480857	593386376007	150
5938040345	5938040211	4562500535	593219480857	593386376007	150
1938265261	1938265404	6983400804	193715460876	193086509056	150
1938265261	1938265404	6983400804	193715460876	193086509056	150
3468500000	3468500163	3593910000	346808336398	346583897992	150
3468500000	3468500163	3593910000	346808336398	346583897992	150
7307920069	7307920821	3890500879	730343241559	730642292749	150
7307920069	7307920821	3890500879	730343241559	730642292749	150
860681043	860681293	803400999	86034516108	86381889518	150
860681043	860681293	803400999	86034516108	86381889518	150
9861700000	9861700300	9861700365	986263300066	986651992047	150
9861700000	9861700300	9861700365	986263300066	986651992047	150
5917880508	5917880706	7427400193	591185820561	591165526207	150
5917880508	5917880706	7427400193	591185820561	591165526207	150
787379678	787379792	7494310805	78247352098	78128574910	150
787379678	787379792	7494310805	78247352098	78128574910	150
6405346065	6405346512	4308700929	640098616043	640095835114	150
6405346065	6405346512	4308700929	640098616043	640095835114	150
5323005453	5323005789	377400670	532016833190	532193589265	150
5323005453	5323005789	377400670	532016833190	532193589265	150
3327542204	3327542984	8044500250	332053215059	332618071837	150
3327542204	3327542984	8044500250	332053215059	332618071837	150
4756728920	4756728791	2493910000	475086346052	475045725865	150
4756728920	4756728791	2493910000	475086346052	475045725865	150
2677100000	2677100042	2215400017	267994413891	267166010784	150
2677100000	2677100042	2215400017	267994413891	267166010784	150
8923557979	8923557766	4693910000	892514557601	892722985887	150
8923557979	8923557766	4693910000	892514557601	892722985887	150

539510000	539510314	2434400244	53249095851	53297347023	150
539510000	539510314	2434400244	53249095851	53297347023	150
5687410000	5687410653	5687410785	568754447728	568298103550	150
5687410000	5687410653	5687410785	568754447728	568298103550	150
6288218585	6288218240	7212500007	628470244138	628293846482	150
6288218585	6288218240	7212500007	628470244138	628293846482	150
9396562666	9396562750	2214400026	939135526708	939990737347	150
9396562666	9396562750	2214400026	939135526708	939990737347	150
6692304266	6692304386	3668500527	669131054177	669841530449	150
6692304266	6692304386	3668500527	669131054177	669841530449	150
7109498414	7109498040	9714400083	710519492472	710787286722	150
7109498414	7109498040	9714400083	710519492472	710787286722	150
9396989969	9396989292	5153400427	939565529586	939379431509	150
9396989969	9396989292	5153400427	939565529586	939379431509	150
175310000	175310685	175310758	17314707607	17843537900	150
175310000	175310685	175310758	17314707607	17843537900	150
146134642	146134072	4944700421	14890504949	14186950255	150
146134642	146134072	4944700421	14890504949	14186950255	150
8185050432	8185050574	9982600773	818534763707	818823557187	150
8185050432	8185050574	9982600773	818534763707	818823557187	150
9861700000	9861700109	9861700104	986391058692	986651992047	150
2328639796	2328639412	2256710375	232991952219	232658621492	150
2328639796	2328639412	2256710375	232991952219	232658621492	150
886360793	886360137	9188400741	88816526766	88214881553	150
886360793	886360137	9188400741	88816526766	88214881553	150
2554016299	2554016426	7843910000	255100285065	255262307993	150
2554016299	2554016426	7843910000	255100285065	255262307993	150
301671542	301671486	5963500562	30126528181	30747812701	150
301671542	301671486	5963500562	30126528181	30747812701	150
8529758910	8529758003	4635610275	852345663597	852478293061	150
8529758910	8529758003	4635610275	852345663597	852478293061	150
4353505815	4353505602	1877700680	435737690534	435189486518	150
4353505815	4353505602	1877700680	435737690534	435189486518	150
1187079622	1187079326	9444500290	118250101837	118151302419	150
1187079622	1187079326	9444500290	118250101837	118151302419	150
7629452704	7629452322	7080500706	762675388392	762759073489	150
7629452704	7629452322	7080500706	762675388392	762759073489	150
2132177414	2132177167	4927610178	213987924146	213553017667	150
2132177414	2132177167	4927610178	213987924146	213553017667	150
175310000	175310071	5363910000	17419278088	17843537900	150
175310000	175310071	5363910000	17419278088	17843537900	150
752065354	752065250	5433500219	75896210891	75183604793	150
752065354	752065250	5433500219	75896210891	75183604793	150
1086130205	1086130908	3095400810	108399086675	108954084238	150
1086130205	1086130908	3095400810	108399086675	108954084238	150
7468884616	7468884302	2344500274	746369550725	746826885733	150
7468884616	7468884302	2344500274	746369550725	746826885733	150

4705400000	4705400103	4705400969	470583372036	470547038956	150
4705400000	4705400103	4705400969	470583372036	470547038956	150
7865020696	7865020000	3169500497	786029440256	786161610468	150
7865020696	7865020000	3169500497	786029440256	786161610468	150
9481447987	9481447323	7510610123	948559809658	948543735483	150
9481447987	9481447323	7510610123	948559809658	948543735483	150
9498972037	9498972598	806400986	949777360634	949880536828	150
9498972037	9498972598	806400986	949777360634	949880536828	150
3568229578	3568229037	3747400414	356474616754	356874007577	150
3568229578	3568229037	3747400414	356474616754	356874007577	150
34735206	34735924	1253500391	3347233244	3358076207	150
34735206	34735924	1253500391	3347233244	3358076207	150
7260179122	7260179300	7027400153	726238005330	726197745688	150
7260179122	7260179300	7027400153	726238005330	726197745688	150
6626374750	6626374198	1915400092	662378427534	662735425497	150
6626374750	6626374198	1915400092	662378427534	662735425497	150
7912046471	7912046454	9258400456	791971220067	791479552910	150
7912046471	7912046454	9258400456	791971220067	791479552910	150
1834329175	1834329125	9711500075	183300296556	183128204119	150
1834329175	1834329125	9711500075	183300296556	183128204119	150
8778880435	8778880128	2622500142	877299047783	877790160569	150
8778880435	8778880128	2622500142	877299047783	877790160569	150
3855800000	3855800386	3855800549	385909481407	385413289613	150
3855800000	3855800386	3855800549	385909481407	385413289613	150
3577777726	3577777172	9643400382	357116330802	357871269801	150
3577777726	3577777172	9643400382	357116330802	357871269801	150
3049930228	3049930884	2429400158	304682004749	304700514959	150
3049930228	3049930884	2429400158	304682004749	304700514959	150
7469819029	7469819026	8687400806	746474404353	746495353393	150
7469819029	7469819026	8687400806	746474404353	746495353393	150
7184449698	7184449376	1415400038	718258118919	718831461856	150
7184449698	7184449376	1415400038	718258118919	718831461856	150
8117793302	8117793164	7953400507	811621646885	811656726142	150
8117793302	8117793164	7953400507	811621646885	811656726142	150
6368406081	6368406125	9539400273	636203076661	636162496708	150
6368406081	6368406125	9539400273	636203076661	636162496708	150
7612183434	7612183297	6587510834	761543566103	761748513511	150
7612183434	7612183297	6587510834	761543566103	761748513511	150
9008114406	9008114667	2203400942	900151632757	900478380885	150
9008114406	9008114667	2203400942	900151632757	900478380885	150
3211105863	3211105007	7911500092	321948131660	321823920850	150
3211105863	3211105007	7911500092	321948131660	321823920850	150
950143014	950143750	7662400588	95550359213	95502937386	150
950143014	950143750	7662400588	95550359213	95502937386	150
3311506353	3311506466	9825400193	331607021255	331201112387	150
3311506353	3311506466	9825400193	331607021255	331201112387	150
2291500000	2291500802	2291500804	229265916044	229700986520	150

2291500000	2291500802	2291500804	229265916044	229700986520	150
7769088994	7769088510	5324500082	776010034504	776425534753	150
7769088994	7769088510	5324500082	776010034504	776425534753	150
5288643217	5288643411	78400623	528374604904	528978602756	150
5288643217	5288643411	78400623	528374604904	528978602756	150
6107927501	6107927587	1005500829	610596678935	610811142645	150
6469943206	6469943392	5012400034	646966057506	646531593242	150
6469943206	6469943392	5012400034	646966057506	646531593242	150
8243142612	8243142961	900020000	824582689710	824687397999	150
8243142612	8243142961	900020000	824582689710	824687397999	150
4628244270	4628244926	5797400911	462940202457	462361015931	150
4628244270	4628244926	5797400911	462940202457	462361015931	150
9558510000	9558510307	9558510533	955845244172	955199957974	150
9558510000	9558510307	9558510533	955845244172	955199957974	150
1992824519	1992824324	6170500616	199189638285	199688068760	150
1992824519	1992824324	6170500616	199189638285	199688068760	150
1684031363	1684031693	9341500332	168026728121	168905992868	150
1684031363	1684031693	9341500332	168026728121	168905992868	150
2394063707	2394063919	3515400050	239585319697	239167468917	150
2394063707	2394063919	3515400050	239585319697	239167468917	150
4216452858	4216452306	2389400740	421559348784	421776421802	150
4216452858	4216452306	2389400740	421559348784	421776421802	150
3859477176	3859477797	583500714	385631725848	385771653273	150
3859477176	3859477797	583500714	385631725848	385771653273	150
4998120265	4998120816	3891400913	499927290806	499293989364	150
4998120265	4998120816	3891400913	499927290806	499293989364	150
3772973916	3772973529	1240500323	377508548739	377273550587	150
3772973916	3772973529	1240500323	377508548739	377273550587	150
4957341734	4957341009	691500842	495399338892	495439728838	150
4957341734	4957341009	691500842	495399338892	495439728838	150
1187510000	1187510004	1187510789	118932344060	118138284674	150
1187510000	1187510004	1187510789	118932344060	118138284674	150
534842740	534842452	1826500140	53972340008	53306202088	150
534842740	534842452	1826500140	53972340008	53306202088	150
5820974667	5820974610	3508700947	582499506021	582374029980	150
5820974667	5820974610	3508700947	582499506021	582374029980	150
5824683407	5824683495	9674500600	582753638105	582657759885	150
5824683407	5824683495	9674500600	582753638105	582657759885	150
1849485482	1849485797	8181600701	184480519909	184992896926	150
1849485482	1849485797	8181600701	184480519909	184992896926	150
7431115929	7431115079	3194400809	743024481355	743255090803	150
7431115929	7431115079	3194400809	743024481355	743255090803	150
1157766387	1157766674	9853910000	115367504590	115065048513	150
1157766387	1157766674	9853910000	115367504590	115065048513	150
2929911695	2929911934	8905500929	292600187621	292225412208	150
2929911695	2929911934	8905500929	292600187621	292225412208	150
1737703506	1737703788	494500768	173060132137	173329151596	150

1737703506	1737703788	494500768	173060132137	173329151596	150
4080000202	4080000135	4678794679	408599527981	408517856742	150
4080000202	4080000135	4678794679	408599527981	408517856742	150
9028287753	9028287846	8032500189	902956825383	902126082302	150
9028287753	9028287846	8032500189	902956825383	902126082302	150
2270553440	2270553039	823400197	227066624400	227223412722	150
2270553440	2270553039	823400197	227066624400	227223412722	150
8316144173	8316144355	363400540	831489501363	831732923431	150
8316144173	8316144355	363400540	831489501363	831732923431	150
4081909931	4081909807	8624610190	408889372278	408618017052	150
4081909931	4081909807	8624610190	408889372278	408618017052	150
3225915227	3225915694	8053910000	322845106982	322918688066	150
3225915227	3225915694	8053910000	322845106982	322918688066	150
1640594010	1640594833	8816400093	164819043977	164710280592	150
1640594010	1640594833	8816400093	164819043977	164710280592	150
860955431	860955749	3774039950	86473364505	86559787134	150
860955431	860955749	3774039950	86473364505	86559787134	150
3449423855	3449423111	5232400252	344939471168	344488439724	150
3449423855	3449423111	5232400252	344939471168	344488439724	150
4134323945	4134323806	7683600735	413273781195	413850273102	150
4134323945	4134323806	7683600735	413273781195	413850273102	150
295108546	295108634	5912400122	29087324826	29006182307	150
295108546	295108634	5912400122	29087324826	29006182307	150
2996296758	2996296681	4225400125	299950813792	299208717594	150
2996296758	2996296681	4225400125	299950813792	299208717594	150
9160911166	9160911757	6556700458	916736542135	916256781940	150
9160911166	9160911757	6556700458	916736542135	916256781940	150
8334998323	8334998522	9061500500	833780918769	833247473064	150
8334998323	8334998522	9061500500	833780918769	833247473064	150
4586601540	4586601214	8782400798	458747574113	458557127120	150
4586601540	4586601214	8782400798	458747574113	458557127120	150
5389070009	5389070346	4368400557	538874211007	538434721234	150
5389070009	5389070346	4368400557	538874211007	538434721234	150
4817274682	4817274329	3655400472	481004572679	481616734568	150
4817274682	4817274329	3655400472	481004572679	481616734568	150
4307296393	4307296613	7962400618	430098757615	430606150824	150
4307296393	4307296613	7962400618	430098757615	430606150824	150
9948554350	9948554902	7594400853	994843905470	994197689707	150
9948554350	9948554902	7594400853	994843905470	994197689707	150
2568887174	2568887896	3462400564	256877198694	256927726674	150
2568887174	2568887896	3462400564	256877198694	256927726674	150
5458611620	5458611019	8613500045	545335556088	545495520667	150
5458611620	5458611019	8613500045	545335556088	545495520667	150
476180784	476180557	5663500532	47245769116	47145162576	150
476180784	476180557	5663500532	47245769116	47145162576	150
6188243181	6188243448	3788400794	618878460661	618632003221	150
6188243181	6188243448	3788400794	618878460661	618632003221	150

2024892767	2024892959	8863500555	202653192372	202237348812	150
2024892767	2024892959	8863500555	202653192372	202237348812	150
5548190456	5548190302	9977510777	554607592815	554480729515	150
5548190456	5548190302	9977510777	554607592815	554480729515	150
4695262050	4695262060	821800158	469028272431	469245623759	150
4695262050	4695262060	821800158	469028272431	469245623759	150
6155796438	6155796525	955400499	615706346478	615701273283	150
6155796438	6155796525	955400499	615706346478	615701273283	150
2277522194	2277522990	725500115	227585762021	227821791539	150
2277522194	2277522990	725500115	227585762021	227821791539	150
4056520460	4056520229	983400798	405824611745	405246366453	150
4056520460	4056520229	983400798	405824611745	405246366453	150
3520862296	3520862663	5454700470	352316240045	352088947021	150
3520862296	3520862663	5454700470	352316240045	352088947021	150
5779713638	5779713183	2484800789	577050421789	577703011757	150
5779713638	5779713183	2484800789	577050421789	577703011757	150
9522238445	9522238545	4023610135	952444672677	952360998008	150
9522238445	9522238545	4023610135	952444672677	952360998008	150
3340405063	3340405633	4892133075	334134351933	334659734623	150
3340405063	3340405633	4892133075	334134351933	334659734623	150
5915862624	5915862797	1909400009	591113378584	591065265827	150
5915862624	5915862797	1909400009	591113378584	591065265827	150
6361334332	6361334386	1974500623	636397398332	636452117599	150
6361334332	6361334386	1974500623	636397398332	636452117599	150
8160033997	8160033859	2454400441	816886583159	816056191474	150
8160033997	8160033859	2454400441	816886583159	816056191474	150
3602874391	3602874513	423610170	360675322867	360117417211	150
3602874391	3602874513	423610170	360675322867	360117417211	150
6541228863	6541228067	7196400854	654846232175	654547022361	150
6541228863	6541228067	7196400854	654846232175	654547022361	150
3007400000	3007400826	3007400948	300927232136	300903961553	150
3007400000	3007400826	3007400948	300927232136	300903961553	150
2377433853	2377433601	5088400727	237148665000	237678542366	150
2377433853	2377433601	5088400727	237148665000	237678542366	150
734659440	734659291	3108400947	73952824584	73175297684	150
734659440	734659291	3108400947	73952824584	73175297684	150
7304414570	7304414512	3035400208	730720597716	730918691775	150
7304414570	7304414512	3035400208	730720597716	730918691775	150
609064725	609064713	1397410851	60186054925	60862823919	150
609064725	609064713	1397410851	60186054925	60862823919	150
5343745048	5343745392	8921800179	534777594370	534035430656	150
5343745048	5343745392	8921800179	534777594370	534035430656	150
3511951149	3511951396	9470500649	351839337758	351509562467	150
3511951149	3511951396	9470500649	351839337758	351509562467	150
4890019334	4890019358	2223610153	489659493560	489514754337	150
4890019334	4890019358	2223610153	489659493560	489514754337	150
4783465768	4783465104	1503500929	478727498783	478487910830	150

4783465768	4783465104	1503500929	478727498783	478487910830	150
3656724977	3656724654	624500106	365903790084	365367634693	150
3656724977	3656724654	624500106	365903790084	365367634693	150
3045254010	3045254726	6175400625	304234859924	304717055137	150
3045254010	3045254726	6175400625	304234859924	304717055137	150
4023500000	4023500124	4023500079	402830642003	402426086679	150
4023500000	4023500124	4023500079	402830642003	402426086679	150
3834923739	3834923960	6998510967	383028963591	383631599036	150
3834923739	3834923960	6998510967	383028963591	383631599036	150
7374500000	7374500809	7374500569	737333427826	737827392835	150
8113621759	8113621330	2263500491	811937552646	811767800307	150
8113621759	8113621330	2263500491	811937552646	811767800307	150
6867891671	6867891095	8192400838	686996690002	686922005964	150
6867891671	6867891095	8192400838	686996690002	686922005964	150
6272479059	6272479661	5171500606	627270681530	627277206340	150
6272479059	6272479661	5171500606	627270681530	627277206340	150
7057055560	7057055351	1919400109	705016414536	705820040603	150
7057055560	7057055351	1919400109	705016414536	705820040603	150
8072952763	8072952290	8185400727	807823206078	807560554818	150
8072952763	8072952290	8185400727	807823206078	807560554818	150
3160804132	3160804557	6549610315	316061171978	316192918665	150
3160804132	3160804557	6549610315	316061171978	316192918665	150
9288558063	9288558075	8172500599	928820736840	928896339870	150
9288558063	9288558075	8172500599	928820736840	928896339870	150
7048425168	7048425263	8079400617	704647242552	704760429430	150
7048425168	7048425263	8079400617	704647242552	704760429430	150
9261751370	9261751154	9432500230	926517747919	926971503579	150
9261751370	9261751154	9432500230	926517747919	926971503579	150
5830271028	5830271492	7252210498	583549090712	583691566141	150
3979830186	3979830050	7642400389	397461720371	397034679739	150
3979830186	3979830050	7642400389	397461720371	397034679739	150
7108955975	7108955357	1203500899	710161485124	710100883635	150
7108955975	7108955357	1203500899	710161485124	710100883635	150
9378302415	9378302715	6271500617	937702287884	937906624524	150
9378302415	9378302715	6271500617	937702287884	937906624524	150
8287700000	8287700945	8287700725	828213389368	828144754574	150
8287700000	8287700945	8287700725	828213389368	828144754574	150
1959283798	1959283449	1818400114	195391665691	195907229000	150
1959283798	1959283449	1818400114	195391665691	195907229000	150
321192206	321192468	7855700500	32562301988	32139724137	150
321192206	321192468	7855700500	32562301988	32139724137	150
425978838	425978348	7603400986	42523106874	42661746969	150
425978838	425978348	7603400986	42523106874	42661746969	150
9940702688	9940702557	6005500834	994999572355	994192087310	150
9940702688	9940702557	6005500834	994999572355	994192087310	150
906431738	906431491	3195400820	90376368691	90403144966	150
906431738	906431491	3195400820	90376368691	90403144966	150

5462156427	5462156388	4582500735	546715725391	546959069302	150
5462156427	5462156388	4582500735	546715725391	546959069302	150
3980884202	3980884712	790500866	398812958561	398339819757	150
3980884202	3980884712	790500866	398812958561	398339819757	150
7939546319	7939546950	8117400066	793905306894	793808372371	150
7939546319	7939546950	8117400066	793905306894	793808372371	150
323237107	323237428	3493400850	32640636996	32068296315	150
323237107	323237428	3493400850	32640636996	32068296315	150
5643554489	5643554729	8493910000	564163259128	564489287835	150
5643554489	5643554729	8493910000	564163259128	564489287835	150
3991492439	3991492672	4618400097	399218316735	399290344738	150
3991492439	3991492672	4618400097	399218316735	399290344738	150
4145416964	4145416110	3937400335	414659005070	414570275734	150
4145416964	4145416110	3937400335	414659005070	414570275734	150
8411677760	8411677937	9818400122	841235370294	841473076234	150
8411677760	8411677937	9818400122	841235370294	841473076234	150
3441217956	3441217030	4067400545	344305144175	344382579016	150
3441217956	3441217030	4067400545	344305144175	344382579016	150
6436510000	6436510831	1092400821	643663616568	643220962561	150
6436510000	6436510831	1092400821	643663616568	643220962561	150
1103890146	1103890760	4594310812	110712644867	110279215602	150
1103890146	1103890760	4594310812	110712644867	110279215602	150
2729936476	2729936228	3913500068	272754316267	272263407651	150
2729936476	2729936228	3913500068	272754316267	272263407651	150
5803499606	5803499744	3813500058	580196756037	580903466454	150
5803499606	5803499744	3813500058	580196756037	580903466454	150
1598098759	1598098363	664500496	159388158182	159076332466	150
1965352289	1965352674	6280500725	196307134083	196966898987	150
1965352289	1965352674	6280500725	196307134083	196966898987	150
2995688491	2995688526	6575400665	299993988722	299830976682	150
2995688491	2995688526	6575400665	299993988722	299830976682	150
5030150273	5030150682	1943400404	503309331169	503945712752	150
5030150273	5030150682	1943400404	503309331169	503945712752	150
6967251933	6967251268	8023700153	696387628364	696326408338	150
6967251933	6967251268	8023700153	696387628364	696326408338	150
4791610000	4791610701	4636610261	479557307735	479359895900	150
4791610000	4791610701	4636610261	479557307735	479359895900	150
9607389308	9607389152	2562400573	960200908571	960851494030	150
9607389308	9607389152	2562400573	960200908571	960851494030	150
5637694705	5637694208	704500926	563129144145	563785962306	150
5637694705	5637694208	704500926	563129144145	563785962306	150
812253912	812253409	2377410654	81443115605	81707302932	150
812253912	812253409	2377410654	81443115605	81707302932	150
3291516692	3291516431	4425400147	329621182261	329056725756	150
3291516692	3291516431	4425400147	329621182261	329056725756	150
2414408952	2414408784	6273400636	241918531632	241717476708	150
2414408952	2414408784	6273400636	241918531632	241717476708	150

8595852788	8595852278	5983600763	859594116361	859901376987	150
8595852788	8595852278	5983600763	859594116361	859901376987	150
119239619	119239188	4234400226	11127113760	11375260702	150
119239619	119239188	4234400226	11127113760	11375260702	150
6772400000	6772400166	6772400698	677619788580	677206868598	150
6772400000	6772400166	6772400698	677619788580	677206868598	150
4812984699	4812984501	1105500840	481277194141	481261988668	150
4812984699	4812984501	1105500840	481277194141	481261988668	150
4855828035	4855828522	7239400242	485976366741	485497831011	150
4855828035	4855828522	7239400242	485976366741	485497831011	150
5992956164	5992956702	742410391	599952246112	599357411972	150
5992956164	5992956702	742410391	599952246112	599357411972	150
1236332230	1236332343	4305500863	123143212764	123828198293	150
1236332230	1236332343	4305500863	123143212764	123828198293	150
5854531287	5854531600	3065400512	585551900381	585435649901	150
5854531287	5854531600	3065400512	585551900381	585435649901	150
67515789	67515439	624610182	6268743936	6155070737	150
67515789	67515439	624610182	6268743936	6155070737	150
2368195815	2368195250	9912610142	236176209876	236356938250	150
2368195815	2368195250	9912610142	236176209876	236356938250	150
3034558502	3034558370	5081500695	303150631624	303987623152	150
3034558502	3034558370	5081500695	303150631624	303987623152	150
3149830333	3149830935	1694810043	314909978416	314445727630	150
3149830333	3149830935	1694810043	314909978416	314445727630	150
3201030945	3201030461	4513400073	320554014158	320628050499	150
3201030945	3201030461	4513400073	320554014158	320628050499	150
8424314367	8424314476	5621800142	842108146248	842060235484	150
8424314367	8424314476	5621800142	842108146248	842060235484	150
9896400000	9896400737	9896400932	989445323865	989515029015	150
9896400000	9896400737	9896400932	989445323865	989515029015	150
8283391987	8283391355	2602400992	828390174431	828456171493	150
8283391987	8283391355	2602400992	828390174431	828456171493	150
5212909773	5212909198	43400314	521855819401	521165959385	150
5212909773	5212909198	43400314	521855819401	521165959385	150
672105232	672105687	6864500519	67735985316	67788578139	150
672105232	672105687	6864500519	67735985316	67788578139	150
5778142309	5778142573	1028400134	577076015134	577465822387	150
5778142309	5778142573	1028400134	577076015134	577465822387	150
777797263	777797331	9184400716	77145940414	77038054281	150
777797263	777797331	9184400716	77145940414	77038054281	150
7082181799	7082181553	4881600765	708512074151	708464950316	150
7082181799	7082181553	4881600765	708512074151	708464950316	150
4834350288	4834350968	7021500102	483373572380	483633864278	150
4834350288	4834350968	7021500102	483373572380	483633864278	150
9075572637	9075572702	3524400155	907804651171	907935627668	150
9075572637	9075572702	3524400155	907804651171	907935627668	150
1069025489	1069025130	4453810511	106215214885	106456893872	150

1069025489	1069025130	4453810511	106215214885	106456893872	150
2068810960	2068810146	8505400953	206862793990	206374367891	150
2068810960	2068810146	8505400953	206862793990	206374367891	150
7172189345	7172189403	3018400036	717602436071	717043747814	150
7172189345	7172189403	3018400036	717602436071	717043747814	150
6016761163	6016761926	7484500677	601335663624	601518563992	150
6016761163	6016761926	7484500677	601335663624	601518563992	150
7655899501	7655899688	9871600672	765784326018	765402794514	150
7655899501	7655899688	9871600672	765784326018	765402794514	150
8136462003	8136462751	8684500697	813941117442	813674631502	150
8136462003	8136462751	8684500697	813941117442	813674631502	150
1657433884	1657433773	4622400191	165929333251	165301319762	150
1657433884	1657433773	4622400191	165929333251	165301319762	150
9979694066	9979694803	1577410673	997815107303	997289464896	150
9979694066	9979694803	1577410673	997815107303	997289464896	150
602571905	602571907	2774500603	60336947086	60229069628	150
602571905	602571907	2774500603	60336947086	60229069628	150
7854967941	7854967890	4321500129	785975611273	785768623102	150
7854967941	7854967890	4321500129	785975611273	785768623102	150
2317506479	2317506332	6118400049	231252577530	231248155246	150
2317506479	2317506332	6118400049	231252577530	231248155246	150
7331557469	7331557777	4087700702	733622247964	733275372795	150
7331557469	7331557777	4087700702	733622247964	733275372795	150
7718365231	7718365720	9872400710	771868222006	771979197569	150
7718365231	7718365720	9872400710	771868222006	771979197569	150
593361599	593361935	7294500755	59987963869	59505134289	150
593361599	593361935	7294500755	59987963869	59505134289	150
1956406870	1956406247	1805500910	195261780922	195727720007	150
1956406870	1956406247	1805500910	195261780922	195727720007	150
2629398992	2629398841	6146400324	262803536027	262065431728	150
2629398992	2629398841	6146400324	262803536027	262065431728	150
1173644506	1173644433	1121810167	117757707557	117098868059	150
1173644506	1173644433	1121810167	117757707557	117098868059	150
9995430890	9995430394	6391500818	999983630999	999387420333	150
9995430890	9995430394	6391500818	999983630999	999387420333	150
7400823730	7400823039	3399400842	740633858809	740169397733	150
7400823730	7400823039	3399400842	740633858809	740169397733	150
2432497356	2432497595	6892500865	243916606077	243390423884	150
2432497356	2432497595	6892500865	243916606077	243390423884	150
8067489797	8067489840	9698510940	806260172398	806447898049	150
8067489797	8067489840	9698510940	806260172398	806447898049	150
3756677278	3756677755	1724400173	375999470467	375470075044	150
3756677278	3756677755	1724400173	375999470467	375470075044	150
1247652036	1247652593	2484600704	124995955947	124548285000	150
1247652036	1247652593	2484600704	124995955947	124548285000	150
8260506275	8260506705	8416400054	826360349500	826821932459	150
8260506275	8260506705	8416400054	826360349500	826821932459	150

9448961109	9448961861	6934310263	944820017719	944461903713	150
9448961109	9448961861	6934310263	944820017719	944461903713	150
8468196400	8468196552	4549400368	846192539679	846513715136	150
8468196400	8468196552	4549400368	846192539679	846513715136	150
4484887830	4484887769	2365710464	448668244311	448662520189	150
4484887830	4484887769	2365710464	448668244311	448662520189	150
3445055240	3445055948	1315500967	344256708499	344220728221	150
3445055240	3445055948	1315500967	344256708499	344220728221	150
7521304689	7521304922	6724500122	752885406217	752319715786	150
7521304689	7521304922	6724500122	752885406217	752319715786	150
5975686716	5975686472	9774500610	597671628902	597212943176	150
5975686716	5975686472	9774500610	597671628902	597212943176	150
8773956956	8773956049	9686510847	877209133379	877556468232	150
8773956956	8773956049	9686510847	877209133379	877556468232	150
5672983497	5672983059	9049400323	567727662553	567045752206	150
5672983497	5672983059	9049400323	567727662553	567045752206	150
4675585833	4675585356	4838400315	467692828921	467073627098	150
4675585833	4675585356	4838400315	467692828921	467073627098	150
6980206940	6980206215	6753400487	698371380497	698806024685	150
6980206940	6980206215	6753400487	698371380497	698806024685	150
6185558823	6185558069	2053400414	618244214415	618069256510	150
6185558823	6185558069	2053400414	618244214415	618069256510	150
557852882	557852000	4413700091	55296381802	55759052058	150
557852882	557852000	4413700091	55296381802	55759052058	150
4829465554	4829465260	7867410610	482387071220	482094553284	150
4829465554	4829465260	7867410610	482387071220	482094553284	150
4590486798	4590486965	3537400297	459889956588	459439040070	150
4590486798	4590486965	3537400297	459889956588	459439040070	150
3527692440	3527692549	6428400179	352238800783	352832981977	150
3527692440	3527692549	6428400179	352238800783	352832981977	150
1760536051	1760536824	2584500681	176418915714	176045181363	150
1760536051	1760536824	2584500681	176418915714	176045181363	150
5364202076	5364202335	1157500355	536132773310	536071441659	150
5364202076	5364202335	1157500355	536132773310	536071441659	150
4192438184	4192438149	9461500540	419491089846	419035957191	150
4192438184	4192438149	9461500540	419491089846	419035957191	150
1439885878	1439885484	7756700479	143445249869	143369410482	150
1439885878	1439885484	7756700479	143445249869	143369410482	150
919954323	919954473	3000500912	91162960221	91490079744	150
919954323	919954473	3000500912	91162960221	91490079744	150
3952034861	3952034170	6706410003	395928156842	395413569464	150
3952034861	3952034170	6706410003	395928156842	395413569464	150
3775154815	3775154517	2956700494	377124294780	377442944081	150
3775154815	3775154517	2956700494	377124294780	377442944081	150
7382297518	7382297239	7684600729	738352074518	738022828816	150
7382297518	7382297239	7684600729	738352074518	738022828816	150
7736923478	7736923496	5452210516	773505429888	773510855914	150

7736923478	7736923496	5452210516	773505429888	773510855914	150
3969282512	3969282127	1036400205	396427090449	396311029878	150
3969282512	3969282127	1036400205	396427090449	396311029878	150
9082725958	9082725965	481600722	908303231601	908317445785	150
9082725958	9082725965	481600722	908303231601	908317445785	150
3915450005	3915450993	7697400903	391659763291	391262874360	150
3915450005	3915450993	7697400903	391659763291	391262874360	150
9866410437	9866410905	5427610130	986355191792	986031908472	150
9866410437	9866410905	5427610130	986355191792	986031908472	150
5470179654	5470179973	5639400279	547107646785	547727946163	150
5470179654	5470179973	5639400279	547107646785	547727946163	150
2866033142	2866033283	4921500188	286381940388	286250557914	150
2866033142	2866033283	4921500188	286381940388	286250557914	150
3959393054	3959393401	1032500182	395864227099	395654727776	150
3959393054	3959393401	1032500182	395864227099	395654727776	150
6365426204	6365426267	6703500954	636850260859	636974043750	150
6365426204	6365426267	6703500954	636850260859	636974043750	150
391221560	391221870	3959710427	39260058195	39032834976	150
391221560	391221870	3959710427	39260058195	39032834976	150
9662137832	9662137226	3994800942	966244352787	966249348747	150
9662137832	9662137226	3994800942	966244352787	966249348747	150
8858437578	8858437445	6509910000	885877044801	885595109157	150
8858437578	8858437445	6509910000	885877044801	885595109157	150
6237420854	6237420599	758610439	623650936311	623233788574	150
6237420854	6237420599	758610439	623650936311	623233788574	150
9714461043	9714461405	9512400086	971482709937	971280806797	150
9714461043	9714461405	9512400086	971482709937	971280806797	150
1199630589	1199630826	5608400998	119407438125	119841085439	150
1199630589	1199630826	5608400998	119407438125	119841085439	150
1790458490	1790458923	942500372	179954526364	179572887646	150
1790458490	1790458923	942500372	179954526364	179572887646	150
1614621879	1614621941	3493500806	161439359213	161150584772	150
1614621879	1614621941	3493500806	161439359213	161150584772	150
1891788798	1891788849	453500410	189964359490	189534524330	150
1891788798	1891788849	453500410	189964359490	189534524330	150
8801303730	8801303253	3627610147	880134479672	880435330612	150
8801303730	8801303253	3627610147	880134479672	880435330612	150
3497060505	3497060174	3357500377	349825900229	349752804421	150
3497060505	3497060174	3357500377	349825900229	349752804421	150
622720369	622720691	602500943	62384990168	62690720309	150
622720369	622720691	602500943	62384990168	62690720309	150
2540237846	2540237770	1465710472	254890119545	254369783854	150
2540237846	2540237770	1465710472	254890119545	254369783854	150
3395409960	3395409837	8793500840	339689485887	339604602360	150
3395409960	3395409837	8793500840	339689485887	339604602360	150
5663329285	5663329058	3735400280	566074292907	566717701106	150
5663329285	5663329058	3735400280	566074292907	566717701106	150

9576571626	9576571878	4906400000	957360615417	957075554031	150
9576571626	9576571878	4906400000	957360615417	957075554031	150
416747747	416747667	3394400829	41494097299	41391157195	150
416747747	416747667	3394400829	41494097299	41391157195	150
4760182475	4760182090	7487700744	476643012262	476860444334	150
4760182475	4760182090	7487700744	476643012262	476860444334	150
8143137257	8143137105	5164500453	814548857460	814128980201	150
8143137257	8143137105	5164500453	814548857460	814128980201	150
9537361969	9537361137	2654500400	953939710151	953862582745	150
9537361969	9537361137	2654500400	953939710151	953862582745	150
2893207297	2893207156	6589400764	289068047908	289430616256	150
2893207297	2893207156	6589400764	289068047908	289430616256	150
170901252	170901141	8448400376	17145307283	17237837240	150
170901252	170901141	8448400376	17145307283	17237837240	150
4203769051	4203769253	5385400744	420457107541	420421136657	150
4203769051	4203769253	5385400744	420457107541	420421136657	150
9639831109	9639831576	727610154	963067707353	963038147812	150
9639831109	9639831576	727610154	963067707353	963038147812	150
2643148735	2643148650	3357400474	264494084740	264862036360	150
2643148735	2643148650	3357400474	264494084740	264862036360	150
1376372024	1376372433	9642500351	137461787155	137093286895	150
1376372024	1376372433	9642500351	137461787155	137093286895	150
6831361794	6831361157	4386400766	683698495528	683646176866	150
6831361794	6831361157	4386400766	683698495528	683646176866	150
9295781872	9295781699	4762500555	929650868173	929242459552	150
9295781872	9295781699	4762500555	929650868173	929242459552	150
8268049761	8268049110	3996400937	826835494810	826353315684	150
8268049761	8268049110	3996400937	826835494810	826353315684	150
1612186561	1612186486	7202500909	161109894580	161421110017	150
1612186561	1612186486	7202500909	161109894580	161421110017	150
3221201784	3221201162	7370500637	322676673220	322591907678	150
3221201784	3221201162	7370500637	322676673220	322591907678	150
8596701315	8596701947	5074500536	859801994265	859685112721	150
8596701315	8596701947	5074500536	859801994265	859685112721	150
6746708053	6746708084	456710392	674938461707	674439955523	150
6746708053	6746708084	456710392	674938461707	674439955523	150
7098757588	7098757981	6702500957	709330247321	709389265839	150
7098757588	7098757981	6702500957	709330247321	709389265839	150
3292915577	3292915398	8581600740	329676141277	329474596788	150
3292915577	3292915398	8581600740	329676141277	329474596788	150
1260822933	1260822513	9112400048	126798530960	126828924472	150
1260822933	1260822513	9112400048	126798530960	126828924472	150
601986155	601986128	4112500994	60614459342	60793333675	150
601986155	601986128	4112500994	60614459342	60793333675	150
2475415985	2475415057	6474500577	247898676868	247763489398	150
2475415985	2475415057	6474500577	247898676868	247763489398	150
1689917178	1689917618	2061500493	168984649933	168248809107	150

1689917178	1689917618	2061500493	168984649933	168248809107	150
381298561	381298516	6084500638	38256894783	38111808531	150
381298561	381298516	6084500638	38256894783	38111808531	150
317789376	317789977	8747400419	31454996391	31432667541	150
317789376	317789977	8747400419	31454996391	31432667541	150
5831402813	5831402601	9243500301	583170468736	583261178574	150
5831402813	5831402601	9243500301	583170468736	583261178574	150
8769152768	8769152934	6077410628	876866980454	876234906117	150
8769152768	8769152934	6077410628	876866980454	876234906117	150
3601788007	3601788563	2064400500	360196793097	360300438884	150
3601788007	3601788563	2064400500	360196793097	360300438884	150
8293378644	8293378678	7294310785	829099157975	829997789421	150
8293378644	8293378678	7294310785	829099157975	829997789421	150
6593118392	6593118719	6983500758	659866403808	659940009487	150
6593118392	6593118719	6983500758	659866403808	659940009487	150
9223327335	9223327465	4220500130	922611408246	922044225824	150
9223327335	9223327465	4220500130	922611408246	922044225824	150
7882719585	7882719297	6404500905	788561948058	788318531041	150
7882719585	7882719297	6404500905	788561948058	788318531041	150
9251570964	9251570641	4487510822	925583310637	925356876441	150
9251570964	9251570641	4487510822	925583310637	925356876441	150
5313967552	5313967786	2325400134	531468477724	531591633043	150
5313967552	5313967786	2325400134	531468477724	531591633043	150
3692409321	3692409237	9622500150	369803598777	369519243336	150
3692409321	3692409237	9622500150	369803598777	369519243336	150
8589408230	8589408908	9574400656	858234333607	858672798942	150
8589408230	8589408908	9574400656	858234333607	858672798942	150
5055944711	5055944323	7375400646	505425937271	505891633234	150
5055944711	5055944323	7375400646	505425937271	505891633234	150
8688253954	8688253099	8533910000	868949263262	868158222900	150
5660425701	5660425807	1775400680	566965205979	566502639396	150
5660425701	5660425807	1775400680	566965205979	566502639396	150
5044960703	5044960461	1114500965	504614942505	504814068859	150
5044960703	5044960461	1114500965	504614942505	504814068859	150
4794924014	4794924259	2615400061	479847275721	479495762369	150
4794924014	4794924259	2615400061	479847275721	479495762369	150
7334619922	7334619824	8730500280	733287143735	733500147672	150
7334619922	7334619824	8730500280	733287143735	733500147672	150
3619758003	3619758045	3393500796	361824613726	361260077014	150
3619758003	3619758045	3393500796	361824613726	361260077014	150
4006902381	4006902658	7892400907	400275165954	400492165999	150
4006902381	4006902658	7892400907	400275165954	400492165999	150
6066582917	6066582123	9554400458	606785521469	606659338776	150
6066582917	6066582123	9554400458	606785521469	606659338776	150
8052082484	8052082241	126400115	805178543557	805678572765	150
8052082484	8052082241	126400115	805178543557	805678572765	150
6956607408	6956607380	1524610173	695214550906	695352180818	150

6956607408	6956607380	1524610173	695214550906	695352180818	150
3736266034	3736266163	1812610124	373080315336	373693291730	150
3736266034	3736266163	1812610124	373080315336	373693291730	150
6711602498	6711602512	6435610258	671942553953	671902170529	150
6711602498	6711602512	6435610258	671942553953	671902170529	150
6968303816	6968303276	4781500760	696824082662	696486249803	150
6968303816	6968303276	4781500760	696824082662	696486249803	150
1199666866	1199666823	2206400928	119267860345	119188205203	150
1199666866	1199666823	2206400928	119267860345	119188205203	150
9677708679	9677708181	8315500974	967327608485	967797928942	150
9677708679	9677708181	8315500974	967327608485	967797928942	150
9397324728	9397324520	4156710367	939599199519	939560399973	150
9397324728	9397324520	4156710367	939599199519	939560399973	150
7169839198	7169839357	1498400861	716058647128	716039203716	150
7169839198	7169839357	1498400861	716058647128	716039203716	150
1754418408	1754418356	9058400437	175011132912	175353461583	150
1754418408	1754418356	9058400437	175011132912	175353461583	150
415671926	415671487	9237400273	41942089540	41933573391	150
415671926	415671487	9237400273	41942089540	41933573391	150
2169083837	2169083637	3472810712	216595154974	216768764861	150
2169083837	2169083637	3472810712	216595154974	216768764861	150
1202091420	1202091419	9692400889	120832994387	120347950041	150
1202091420	1202091419	9692400889	120832994387	120347950041	150
5277404642	5277404928	1579400660	527703734893	527225568690	150
5277404642	5277404928	1579400660	527703734893	527225568690	150
5839009975	5839009520	1615500003	583611934223	583984262994	150
5839009975	5839009520	1615500003	583611934223	583984262994	150
3870353522	3870353740	9410610115	387139348541	387702085916	150
3870353522	3870353740	9410610115	387139348541	387702085916	150
8202376970	8202376315	5780500773	820326963457	820843675823	150
8202376970	8202376315	5780500773	820326963457	820843675823	150
905973005	905973363	7977700695	90565307176	90977948845	150
905973005	905973363	7977700695	90565307176	90977948845	150
6476482706	6476482963	6297700823	647129508456	647851353015	150
2592667964	2592667503	5978400717	259211682138	259381767105	150
2592667964	2592667503	5978400717	259211682138	259381767105	150
6279771702	6279771430	1264400519	627085074264	627494822619	150
6279771702	6279771430	1264400519	627085074264	627494822619	150
2521993413	2521993512	6752500457	252084150899	252382977380	150
2521993413	2521993512	6752500457	252084150899	252382977380	150
9784093578	9784093031	5870500684	978028776503	978336704763	150
9784093578	9784093031	5870500684	978028776503	978336704763	150
3937531808	3937531987	3553810520	393452460572	393375854745	150
3937531808	3937531987	3553810520	393452460572	393375854745	150
6805525905	6805525480	2315400028	680514190888	680142327040	150
6805525905	6805525480	2315400028	680514190888	680142327040	150
6486494972	6486494800	5576400682	648914302529	648732830961	150

6486494972	6486494800	5576400682	648914302529	648732830961	150
1028493044	1028493406	1584600713	102213470378	102199191366	150
1028493044	1028493406	1584600713	102213470378	102199191366	150
1920052532	1920052528	8598510929	192556325933	192991348198	150
1920052532	1920052528	8598510929	192556325933	192991348198	150
9898647916	9898647350	7704500932	989253717907	989383748238	150
9898647916	9898647350	7704500932	989253717907	989383748238	150
4021478198	4021478631	5003400925	402450388689	402871904520	150
4021478198	4021478631	5003400925	402450388689	402871904520	150
2318896334	2318896329	1572810720	231579575774	231691592361	150
2318896334	2318896329	1572810720	231579575774	231691592361	150
6951266969	6951266478	7353400449	695921109908	695259743653	150
6951266969	6951266478	7353400449	695921109908	695259743653	150
2212457735	2212457247	5698400885	221526741693	221208624198	150
2212457735	2212457247	5698400885	221526741693	221208624198	150
9556271913	9556271842	5952400516	955109869677	955429421149	150
9556271913	9556271842	5952400516	955109869677	955429421149	150
1943464926	1943464993	6224810196	194584286990	194907732854	150
1943464926	1943464993	6224810196	194584286990	194907732854	150
6665638470	6665638925	402400970	666713295903	666635680163	150
6665638470	6665638925	402400970	666713295903	666635680163	150
7652265810	7652265489	5356700438	765999973872	765987239915	150
7652265810	7652265489	5356700438	765999973872	765987239915	150
7073394845	7073394251	1222610164	707072989099	707313896590	150
9861700000	9861700926	9861700583	986092755045	986651992047	150
9861700000	9861700926	9861700583	986092755045	986651992047	150
2903670466	2903670723	8402810014	290586852804	290716173620	150
2319702431	2319702732	8612610111	231322712955	231773409728	150
2319702431	2319702732	8612610111	231322712955	231773409728	150
4746813363	4746813096	1292600795	474662806162	474117588995	150
4746813363	4746813096	1292600795	474662806162	474117588995	150
9773546721	9773546272	2564500489	977568894884	977782809630	150
9773546721	9773546272	2564500489	977568894884	977782809630	150
7752222700	7752222824	313500007	775745146136	775621074428	150
7752222700	7752222824	313500007	775745146136	775621074428	150
2035716185	2035716505	8472500630	203185580243	203677835210	150
2035716185	2035716505	8472500630	203185580243	203677835210	150
6302195502	6302195847	5272500607	630196659291	630610880703	150
7629911440	7629911694	1942400412	762469855312	762495065775	150
7629911440	7629911694	1942400412	762469855312	762495065775	150
5424107592	5424107738	5905400989	542196787557	542530783889	150
5424107592	5424107738	5905400989	542196787557	542530783889	150
4574249280	4574249394	3508400987	457559042267	457145281263	150
4574249280	4574249394	3508400987	457559042267	457145281263	150
7162901192	7162901999	1402810007	716677585160	716867031593	150
7162901192	7162901999	1402810007	716677585160	716867031593	150
6318505589	6318505577	3695400870	631905686056	631869777162	150

6318505589	6318505577	3695400870	631905686056	631869777162	150
4206111782	4206111434	2446400350	420929132305	420947530544	150
4206111782	4206111434	2446400350	420929132305	420947530544	150
7839683285	7839683290	9304500898	783554786367	783449954842	150
7839683285	7839683290	9304500898	783554786367	783449954842	150
6749767489	6749767452	6415400043	674673626192	674442921898	150
6749767489	6749767452	6415400043	674673626192	674442921898	150
7901068091	7901068517	226400125	790106189548	790123499955	150
7901068091	7901068517	226400125	790106189548	790123499955	150
3065319771	3065319716	9086400740	306052526559	306191555126	150
3065319771	3065319716	9086400740	306052526559	306191555126	150
3134886624	3134886632	3511610109	313531126405	313241461830	150
3134886624	3134886632	3511610109	313531126405	313241461830	150
1243328032	1243328808	1865400590	124005371567	124964368775	150
1243328032	1243328808	1865400590	124005371567	124964368775	150
9320121627	9320121316	2805400977	932656170571	932550452313	150
9320121627	9320121316	2805400977	932656170571	932550452313	150
2157465171	2157465766	1262445943	215468583894	215457805323	150
2157465171	2157465766	1262445943	215468583894	215457805323	150
2861354957	2861354458	1863400591	286540071786	286295007671	150
2861354957	2861354458	1863400591	286540071786	286295007671	150
6941786504	6941786108	9923986872	694724426768	694346854650	150
6941786504	6941786108	9923986872	694724426768	694346854650	150
7604599577	7604599702	1452500423	760573770360	760309700289	150
7604599577	7604599702	1452500423	760573770360	760309700289	150
6024795930	6024795566	7073500574	602294021528	602975189796	150
6024795930	6024795566	7073500574	602294021528	602975189796	150
7572705461	7572705325	4066700506	757197657998	757270144303	150
7572705461	7572705325	4066700506	757197657998	757270144303	150
128881461	128881531	9392500818	12106244400	12269272312	150
128881461	128881531	9392500818	12106244400	12269272312	150
4386414823	4386414240	9884800835	438147754615	438508486431	150
4386414823	4386414240	9884800835	438147754615	438508486431	150
797008837	797008405	4302400964	79966104006	79850544051	150
797008837	797008405	4302400964	79966104006	79850544051	150
2361653378	2361653208	284600683	236503941625	236994245568	150
2361653378	2361653208	284600683	236503941625	236994245568	150
5556162457	5556162858	143400324	555641781602	555716219756	150
5556162457	5556162858	143400324	555641781602	555716219756	150
8270828496	8270828740	4781600756	827082659970	827250881791	150
8270828496	8270828740	4781600756	827082659970	827250881791	150
556740005	556740008	755400479	55217644922	55137299014	150
556740005	556740008	755400479	55217644922	55137299014	150
7523705964	7523705479	24400104	752946138724	752519578008	150
7523705964	7523705479	24400104	752946138724	752519578008	150
9830514990	9830514671	3826400187	983452202229	983481786100	150
9830514990	9830514671	3826400187	983452202229	983481786100	150

2937372781	2937372059	3784500702	293401546750	293468262029	150
2937372781	2937372059	3784500702	293401546750	293468262029	150
8224431960	8224431059	9711610134	822256171814	822124249462	150
8224431960	8224431059	9711610134	822256171814	822124249462	150
8947540845	8947540691	2981600773	894535296288	894771645270	150
8947540845	8947540691	2981600773	894535296288	894771645270	150
8040110254	8040110539	2555400461	804308698148	804064538487	150
8040110254	8040110539	2555400461	804308698148	804064538487	150
1925871790	1925871807	8592500837	192032139717	192206282277	150
1925871790	1925871807	8592500837	192032139717	192206282277	150
9543343810	9543343333	1721800148	954871541777	954541965377	150
9543343810	9543343333	1721800148	954871541777	954541965377	150
9221967951	9221967047	2683500725	922943631128	922422727744	150
9221967951	9221967047	2683500725	922943631128	922422727744	150
5742448164	5742448962	7014400011	574328537115	574990565193	150
5742448164	5742448962	7014400011	574328537115	574990565193	150
4672578169	4672578173	964400587	467448218912	467647835304	150
4672578169	4672578173	964400587	467448218912	467647835304	150
5035827896	5035827473	7021610162	503090389906	503377645626	150
5035827896	5035827473	7021610162	503090389906	503377645626	150
3671305679	3671305917	2884500711	367933331259	367485451342	150
3671305679	3671305917	2884500711	367933331259	367485451342	150
9901932231	9901932267	7064500445	990476455708	990454863813	150
9901932231	9901932267	7064500445	990476455708	990454863813	150
4127292557	4127292904	6632500248	412079535044	412243797795	150
4127292557	4127292904	6632500248	412079535044	412243797795	150
8417938804	8417938542	6163400526	841914929728	841108210438	150
8417938804	8417938542	6163400526	841914929728	841108210438	150
607440288	607440007	1587410772	60970363076	60784953068	150
607440288	607440007	1587410772	60970363076	60784953068	150
8814278626	8814278502	5610610131	881696815341	881751229214	150
8814278626	8814278502	5610610131	881696815341	881751229214	150
1494277598	1494277272	1035710136	149403963967	149939307724	150
1494277598	1494277272	1035710136	149403963967	149939307724	150
8736470309	8736470226	9697700865	873664812387	873903410651	150
8736470309	8736470226	9697700865	873664812387	873903410651	150
5669446941	5669446616	1482500723	566184395162	566149505121	150
5669446941	5669446616	1482500723	566184395162	566149505121	150
6527755904	6527755784	1286400752	652583326458	652998199558	150
6527755904	6527755784	1286400752	652583326458	652998199558	150
2598231748	2598231699	4496400883	259036869991	259145914391	150
2598231748	2598231699	4496400883	259036869991	259145914391	150
2010996471	2010996698	7584083778	201485273338	201167109934	150
2010996471	2010996698	7584083778	201485273338	201167109934	150
5200159456	5209831098	6646400376	520239928378	520756167645	150
5200159456	5209831098	6646400376	520239928378	520756167645	150
2872502750	2878906108	4364400532	287780984660	287267673010	150

2872502750	2878906108	4364400532	287780984660	287267673010	150
7997217557	7997217567	6190500813	799074613424	799525953168	150
7997217557	7997217567	6190500813	799074613424	799525953168	150
7854065303	7854065876	7634500210	785411254009	785773314452	150
7854065303	7854065876	7634500210	785411254009	785773314452	150
9494450496	9494450677	4236500183	949032814914	949953138712	150
7080877032	7080877045	1593910000	708630420579	708060831741	150
7080877032	7080877045	1593910000	708630420579	708060831741	150
8963380503	8963380942	3340500335	896274825575	896965494223	150
8963380503	8963380942	3340500335	896274825575	896965494223	150
1363559548	1363559270	3859710417	136354790779	136938766299	150
1363559548	1363559270	3859710417	136354790779	136938766299	150
5703221598	5707418346	2252400443	570372668109	570479109542	150
325460071	329748833	4497700841	32559389198	32519561579	150
325460071	329748833	4497700841	32559389198	32519561579	150
3479591232	3479591903	9097700806	347336790584	347719502555	150
3479591232	3479591903	9097700806	347336790584	347719502555	150
3273284424	3273284911	8917400144	327867823508	327255635051	150
3273284424	3273284911	8917400144	327867823508	327255635051	150
3398833332	3391623085	9611610125	339641430531	339421750384	150
3398833332	3391623085	9611610125	339641430531	339421750384	150
9995218408	9998223430	3893400890	999603681046	999747161848	150
9995218408	9998223430	3893400890	999603681046	999747161848	150
6488079178	6484875283	8195400825	648588187900	648718593923	150
6488079178	6484875283	8195400825	648588187900	648718593923	150
1341233794	1346114487	3021810159	134120008553	134671721222	150
1341233794	1346114487	3021810159	134120008553	134671721222	150
9021870302	9024199059	9924500145	902136120366	902733328622	150
9021870302	9024199059	9924500145	902136120366	902733328622	150
2016937143	2016308220	6306400942	201062766570	201241616593	150
2016937143	2016308220	6306400942	201062766570	201241616593	150
3739115239	3733947271	8466400571	373893806311	373392284595	150
3739115239	3733947271	8466400571	373893806311	373392284595	150
6440379371	6444547943	5393500798	644592721789	644472061473	150
6440379371	6444547943	5393500798	644592721789	644472061473	150
5437874690	5431067470	2591500834	543124296431	543704049722	150
5437874690	5431067470	2591500834	543124296431	543704049722	150
6437228802	6439184395	9744700407	643829702896	643654427872	150
6437228802	6439184395	9744700407	643829702896	643654427872	150
305769219	303698828	578400673	30991716631	30564454018	150
305769219	303698828	578400673	30991716631	30564454018	150
9461085259	9460933029	4507400003	946467110314	946111637552	150
9461085259	9460933029	4507400003	946467110314	946111637552	150
6378052680	6374103353	6189400724	637778788092	637161366721	150
6378052680	6374103353	6189400724	637778788092	637161366721	150
2560142883	2561028218	7104500878	256740398086	256808944002	150
2560142883	2561028218	7104500878	256740398086	256808944002	150

5372787505	5373882458	6009510977	537480408704	537510553098	150
5372787505	5373882458	6009510977	537480408704	537510553098	150
1883440304	1889777912	6390500832	188598823563	188391451337	150
1883440304	1889777912	6390500832	188598823563	188391451337	150
611080491	616357255	520500156	61713548566	61287604564	150
611080491	616357255	520500156	61713548566	61287604564	150
3651733632	3650051501	640500362	365863208170	365399053522	150
3651733632	3650051501	640500362	365863208170	365399053522	150
4323638805	4326639956	1896400923	432436608067	432139634572	150
4323638805	4326639956	1896400923	432436608067	432139634572	150
681158977	685620748	994400886	68786738676	68623193330	150
681158977	685620748	994400886	68786738676	68623193330	150
2220579736	2222923850	7733500249	222967116503	222449337210	150
2220579736	2222923850	7733500249	222967116503	222449337210	150
8427784452	8422094858	2495400849	842118236980	842753800810	150
8427784452	8422094858	2495400849	842118236980	842753800810	150
647673209	640035982	6582400776	64178815679	64587499367	150
647673209	640035982	6582400776	64178815679	64587499367	150
792074021	795121635	8381600720	79101018620	79561776520	150
792074021	795121635	8381600720	79101018620	79561776520	150
6352372908	6357593480	6684500695	635679512885	635514173189	150
6352372908	6357593480	6684500695	635679512885	635514173189	150
9898125792	9898289488	5505310913	989517491935	989159337575	150
9898125792	9898289488	5505310913	989517491935	989159337575	150
5219467972	5217248955	4016400010	521138495517	521727296675	150
5219467972	5217248955	4016400010	521138495517	521727296675	150
614900000	614900055	614900088	61896394270	61149253958	150
614900000	614900055	614900088	61896394270	61149253958	150
1241900000	1241900560	1241900413	124503885586	124379549963	150
1241900000	1241900560	1241900413	124503885586	124379549963	150
1514110000	1514110435	1514110133	151918103866	151499352862	150
1514110000	1514110435	1514110133	151918103866	151499352862	150
2560500000	2560500193	2560500553	256242871458	256745770663	150
2560500000	2560500193	2560500553	256242871458	256745770663	150
5041900000	5041900534	5041900397	504183697368	504739294349	150
5041900000	5041900534	5041900397	504183697368	504739294349	150
5314110000	5314110409	5314110117	531810544609	531299481729	150
5314110000	5314110409	5314110117	531810544609	531299481729	150
5324900000	5324900162	5324900160	532990137613	532740124610	150
5324900000	5324900162	5324900160	532990137613	532740124610	150
5404900000	5404900915	5404900974	540538993220	540468550164	150
5404900000	5404900915	5404900974	540538993220	540468550164	150
5904900000	5904900964	5904900023	590566906905	590005295429	150
5904900000	5904900964	5904900023	590566906905	590005295429	150
6544010000	6544010183	6544010284	654798551252	654842817686	150
6544010000	6544010183	6544010284	654798551252	654842817686	150
7304900000	7304900903	7304900966	730268986234	730578655942	150

7304900000	7304900903	7304900966	730268986234	730578655942	150
7604900000	7604900924	7604900995	760619531422	760777419589	150
7604900000	7604900924	7604900995	760619531422	760777419589	150
8644010000	8644010210	8644010296	864112705516	864350649373	150
8644010000	8644010210	8644010296	864112705516	864350649373	150
9914900000	9914900109	9914900126	991704755554	991335768679	150
9914900000	9914900109	9914900126	991704755554	991335768679	150
5371759447	5371759838	5493900878	537452295851	537985316736	150
7675665270	7675665657	9665910000	767359316190	767415309517	150
7675665270	7675665657	9665910000	767359316190	767415309517	150
7464310401	7464310584	9793900909	746566396672	746221516352	150
7464310401	7464310584	9793900909	746566396672	746221516352	150
1171608842	1171608797	4314900062	117253554072	117867546801	150
1171608842	1171608797	4314900062	117253554072	117867546801	150
5268494534	5268494719	7893900917	526929702333	526418267375	150
5268494534	5268494719	7893900917	526929702333	526418267375	150
4140184111	4140184140	5614110147	414099417387	414684204765	150
4140184111	4140184140	5614110147	414099417387	414684204765	150
9915280978	9915280346	124900137	991498560241	991627960130	150
9915280978	9915280346	124900137	991498560241	991627960130	150
9615012481	9615012293	3944010321	961460236958	961740376278	150
9615012481	9615012293	3944010321	961460236958	961740376278	150
1813320622	1813320792	2214900050	181899494201	181714478351	150
4382412734	4382412129	204900949	438540194390	438132419173	150
4382412734	4382412129	204900949	438540194390	438132419173	150
1758724772	1758724063	3693900895	175984484865	175968857001	150
8894220566	8894220831	8744010306	889571172847	889389188622	150
4227868769	4227868049	6593900889	422395809560	422943485535	150
4227868769	4227868049	6593900889	422395809560	422943485535	150
8029250276	8020045713	1904900019	802494015633	802822685944	150
8029250276	8020045713	1904900019	802494015633	802822685944	150
6149000000	6149000056	614900088	61313158837	61149253958	150
1241900000	1241900561	1241900413	124925050286	124379549963	150
1514110000	1514110436	1514110133	151017162218	151499352862	150
2560500000	2560500194	2560500553	256503265057	256745770663	150
5041900000	5041900535	5041900397	504121526567	504739294349	150
5314110000	5314110410	5314110117	531189529041	531299481729	150
5324900000	5324900163	5324900160	532205212058	532740124610	150
5404900000	5404900916	5404900974	540421757546	540468550164	150
5904900000	5904900965	5904900023	590744588884	590005295429	150
6544010000	6544010184	6544010284	654414165440	654842817686	150
7304900000	7304900904	7304900966	730263942310	730578655942	150
7604900000	7604900925	7604900995	760923733402	760777419589	150
8644010000	8644010211	8644010296	864692078938	864350649373	150
9914900000	9914900110	9914900126	991010948163	991335768679	150
5371759447	5371759351	5493900878	537504307774	537985316736	150
7675665270	7675665982	9665910000	767440686665	767415309517	150

7464310401	7464310263	9793900909	746445588444	746221516352	150
1171608842	1171608920	4314900062	117550641823	117867546801	150
5268494534	5268494559	7893900917	526571812337	526418267375	150
9915280978	9915280595	124900137	991968821170	991627960130	150
4140184111	4140184993	5614110147	414550397464	414684204765	150
9615012481	9615012996	3944010321	961024857379	961740376278	150
1813320622	1813320051	2214900050	181731415431	181714478351	150
4382412734	4382412566	204900949	438880806357	438132419173	150
8894220566	8894220841	8744010306	889550774899	889389188622	150
4227868769	4227868203	6593900889	422723034186	422943485535	150
1758724772	1758724084	3693900895	175200137469	175968857001	150
8029250276	8025399442	1904900019	802192361049	802822685944	150
4104900000	4104900863	4104900944	410768365791	410983121278	150
4104900000	4104900863	4104900944	410768365791	410983121278	150
4104900000	4104900864	4104900944	410281957566	410983121278	150
5993900000	5993900831	5993900925	599786911717	599326800204	150
5993900000	5993900831	5993900925	599786911717	599326800204	150
5993900000	5993900832	5993900925	599223499702	599326800204	150
844500000	844500756	844500320	84649509926	84094086124	150
945400000	945400029	945400400	94770058601	94730213820	150
1626500000	1626500723	1626500120	162908580347	162236590480	150
2223700000	2223700404	2223700167	222602710368	222441811610	150
4395400000	4395400551	4395400841	439319335024	439720974678	150
5209400000	5209400221	5209400944	520050941170	520385144876	150
5412500000	5412500198	5412500025	541694723860	541154684193	150
5548510000	5548510521	5548510428	554021310115	554843027281	150
7244400000	7244400991	7244400327	724761002459	724968015944	150
7509400000	7509400273	7509400975	750167089340	750833523318	150
9657500000	9657500407	9657500414	965096315840	965330256357	150
1811568778	1811568280	708510046	181970262753	181679253534	150
3827202410	3827202690	2593400859	382403688429	382611217550	150
4834350288	4834350500	7021500102	483966978377	483016653690	150
9702689515	9702689753	6493500809	970958411426	970052988770	150
299813946	299813823	1455500384	29544634970	29371010795	150
458613328	458613210	3393600801	45576048917	45635162309	150
4256414179	4251467050	9682600743	425217872633	425078112936	150
1002189678	1001440701	6151610463	100635826558	100890734484	150
844500000	844500755	844500320	84636597036	84094086124	150
844500000	844500755	844500320	84636597036	84094086124	150
945400000	945400028	945400400	94579886751	94730213820	150
945400000	945400028	945400400	94579886751	94730213820	150
1626500000	1626500722	1626500120	162810976649	162236590480	150
2223700000	2223700403	2223700167	222414251266	222441811610	150
2223700000	2223700403	2223700167	222414251266	222441811610	150
4395400000	4395400550	4395400841	439428379687	439720974678	150
4395400000	4395400550	4395400841	439428379687	439720974678	150
5209400000	5209400220	5209400944	520607640256	520385144876	150

5209400000	5209400220	5209400944	520607640256	520385144876	150
5412500000	5412500197	5412500025	541107166560	541154684193	150
5412500000	5412500197	5412500025	541107166560	541154684193	150
5548510000	5548510520	5548510428	554348658727	554843027281	150
5548510000	5548510520	5548510428	554348658727	554843027281	150
7244400000	7244400990	7244400327	724702152560	724968015944	150
7244400000	7244400990	7244400327	724702152560	724968015944	150
7509400000	7509400272	7509400975	750183874073	750833523318	150
7509400000	7509400272	7509400975	750183874073	750833523318	150
9657500000	9657500406	9657500414	965896064849	965330256357	150
9657500000	9657500406	9657500414	965896064849	965330256357	150
1811568778	1811568556	708510046	181029411988	181679253534	150
3827202410	3827202851	2593400859	382683751950	382611217550	150
3827202410	3827202851	2593400859	382683751950	382611217550	150
4834350288	4834350968	7021500102	483680124861	483016653690	150
4834350288	4834350968	7021500102	483680124861	483016653690	150
9702689515	9702689249	6493500809	970415174686	970052988770	150
9702689515	9702689249	6493500809	970415174686	970052988770	150
299813946	299813561	1455500384	29159963089	29371010795	150
299813946	299813561	1455500384	29159963089	29371010795	150
458613328	458613985	3393600801	45119764663	45635162309	150
458613328	458613985	3393600801	45119764663	45635162309	150
4256414179	4256414260	9682600743	425374305035	425078112936	150
4256414179	4256414260	9682600743	425374305035	425078112936	150
1002189678	1009081685	6151610463	100213180293	100890734484	150
1002189678	1009081685	6151610463	100213180293	100890734484	150
4996310000	4996310143	4996310860	499001897128	499721718573	150
4996310000	4996310143	4996310860	499001897128	499721718573	150
4996310000	4996310144	4996310860	499074971601	499721718573	150
2161610000	2161610134	2161610558	216243006739	216251647507	150
8078648935	8079424407	3614510065	807174725046	807247038688	150
2161610000	2161610133	2161610558	216703996138	216251647507	150
8078648935	8077637291	3614510065	807556316132	807247038688	150
4996310000	4996310130	4996310883	499384844660	499721718573	150
4996310000	4996310130	4996310883	499384844660	499721718573	150
4996310000	4996310132	4996310896	499399364533	499721718573	150
4996310000	4996310132	4996310896	499399364533	499721718573	150
4996310000	4996310136	4996310933	499798605692	499721718573	150
4996310000	4996310136	4996310933	499798605692	499721718573	150
4996310000	4996310138	4996310943	499504018081	499721718573	150
4996310000	4996310140	4996310957	499031940258	499721718573	150
4996310000	4996310140	4996310957	499031940258	499721718573	150
4996310000	4996310145	4996310869	499403465859	499721718573	150
4996310000	4996310145	4996310869	499403465859	499721718573	150
4996310000	4996310147	4996310429	499227740203	499721718573	150
4996310000	4996310147	4996310429	499227740203	499721718573	150
4996310000	4996310131	4996310883	499750119669	499721718573	150

4996310000	4996310133	4996310896	499116919844	499721718573	150
4996310000	4996310137	4996310933	499281129129	499721718573	150
4996310000	4996310139	4996310943	499342947875	499721718573	150
4996310000	4996310141	4996310957	499592708560	499721718573	150
4996310000	4996310146	4996310869	499622443961	499721718573	150
4996310000	4996310134	4996310910	499810241816	499721718573	150
4996310000	4996310135	4996310920	499567036378	499721718573	150
4766500000	4766500212	4766500533	476865363947	476624341141	150
6694800000	6694800800	6694800913	669891952827	669718252168	150
5268494534	5268494719	7893900917	526280204029	526613543115	150
5268494534	5268494719	7893900917	526280204029	526613543115	150
5268494534	5268494559	7893900917	526984833319	526613543115	150
8494800000	8494800773	8494800893	849994940062	849747961389	150
8967410000	8967410631	8967410620	896296857559	896777693350	150
5558170231	5558170271	9673510662	555910170614	555338762111	150
2318896334	2318896401	1572810720	231630448348	231967519324	150
8967410000	8967410630	8967410620	896076945043	896777693350	150
8967410000	8967410630	8967410620	896076945043	896777693350	150
5558170231	5558170530	9673510662	555057347250	555338762111	150
2318896334	2318896329	1572810720	231375827677	231967519324	150
1174123650	1179999212	8967410620	117498367100	117379874757	150
1174123650	1178751471	8967410620	117744228349	117379874757	150
476628282	476628450	2318410054	47033907999	47247009275	150
476628282	476628952	2318410054	47709101386	47247009275	150
476628282	476628952	2318410054	47709101386	47247009275	150
1174123650	1179999212	8967410620	117217324863	117320602869	150
1174123650	1178751471	8967410620	117448239164	117320602869	150
1018410000	1018410865	1018410022	101653089535	101367454630	150
8202376970	8202376688	5780500773	820029429458	820989993948	150
1018410000	1018410864	1018410022	101798392814	101367454630	150
1018410000	1018410864	1018410022	101798392814	101367454630	150
8202376970	8202376315	5780500773	820207800822	820989993948	150
763400000	763400328	763400580	76113714697	76014217466	150
763400000	763400327	763400580	76980135589	76014217466	150
763400000	763400327	763400580	76980135589	76014217466	150
9672500000	9672500744	9672500651	967789717071	967894660758	150
9672500000	9672500744	9672500651	967942103299	967894660758	150
9672500000	9672500744	9672500651	967929906407	967894660758	150
9672500000	9672500744	9672500651	967905765681	967894660758	150
9672500000	9672500744	9672500651	967306442878	967894660758	150
9672500000	9672500744	9672500651	967722688807	967894660758	150
9672500000	9672500744	9672500651	967718042967	967894660758	150
9672500000	9672500744	9672500651	967633959134	967894660758	150
9672500000	9672500744	9672500651	967302403423	967894660758	150
9672500000	9672500744	9672500651	967166954014	967894660758	150
9672500000	9672500744	9672500651	967005772563	967894660758	150
9672500000	9672500743	9672500651	967934602417	967894660758	150

9672500000	9672500743	9672500651	967934602417	967894660758	150
9672500000	9672500743	9672500651	967988167698	967894660758	150
9672500000	9672500743	9672500651	967560433660	967894660758	150
9672500000	9672500743	9672500651	967866339172	967894660758	150
9672500000	9672500743	9672500651	967769152856	967894660758	150
9672500000	9672500743	9672500651	967118017599	967894660758	150
9672500000	9672500743	9672500651	967491733105	967894660758	150
9672500000	9672500743	9672500651	967285532829	967894660758	150
9672500000	9672500743	9672500651	967171861515	967894660758	150
9672500000	9672500743	9672500651	967161894229	967894660758	150
9672500000	9672500743	9672500651	967161894229	967894660758	150
9672500000	9672500743	9672500651	967101384377	967894660758	150
1755700000	1755700705	1755700484	175931576192	175746383615	150
1755700000	1755700705	1755700484	175099653476	175746383615	150
1755700000	1755700705	1755700484	175062998109	175746383615	150
1755700000	1755700705	1755700484	175820480352	175746383615	150
1755700000	1755700705	1755700484	175600112181	175746383615	150
1755700000	1755700705	1755700484	175545032702	175746383615	150
1755700000	1755700705	1755700484	175091105513	175746383615	150
1755700000	1755700705	1755700484	175008012351	175746383615	150
1755700000	1755700705	1755700484	175552414009	175746383615	150
3116510000	3116510551	3116510084	311073067590	311500262402	150
8247410000	8247410327	8247410353	824663130198	824232948956	150
1755700000	1755700704	1755700484	175497996818	175746383615	150
1755700000	1755700704	1755700484	175612774447	175746383615	150
1755700000	1755700704	1755700484	175594860562	175746383615	150
1755700000	1755700704	1755700484	175547544633	175746383615	150
1755700000	1755700704	1755700484	175733008805	175746383615	150
1755700000	1755700704	1755700484	175733008805	175746383615	150
1755700000	1755700704	1755700484	175241147476	175746383615	150
1755700000	1755700704	1755700484	175214768171	175746383615	150
1755700000	1755700704	1755700484	175130569009	175746383615	150
1755700000	1755700704	1755700484	175130569009	175746383615	150
1755700000	1755700704	1755700484	175126693201	175746383615	150
3116510000	3116510550	3116510084	311194632725	311500262402	150
3116510000	3116510550	3116510084	311194632725	311500262402	150
8247410000	8247410326	8247410353	824205076904	824232948956	150
8247410000	8247410326	8247410353	824205076904	824232948956	150
3819781984	3819781404	8347510420	381191734278	381587785990	150
3819781984	3819781404	8347510420	381632232736	381587785990	150
3819781984	3819781404	8347510420	381624556747	381587785990	150
3819781984	3819781258	8347510420	381196673418	381587785990	150
3819781984	3819781258	8347510420	381196673418	381587785990	150
3819781984	3819781258	8347510420	381928318828	381587785990	150
3819781984	3819781258	8347510420	381928318828	381587785990	150
3819781984	3819781258	8347510420	381301508108	381587785990	150
2179264195	2179264670	6261610572	217288452416	217270554545	150

2179264195	2179264184	6261610572	217196390189	217270554545	150
2179264195	2179264184	6261610572	217196390189	217270554545	150
799828474	799828311	8703774150	79608974848	79905391058	150
2862600000	2862600536	2862600559	286021900599	286005558280	150
2862600000	2862600536	2862600559	286021900599	286005558280	150
3813541512	3813541805	1541308116	381171583755	381191721305	150
3813541512	3813541805	1541308116	381171583755	381191721305	150
2862600000	2862600537	2862600559	286544053644	286005558280	150
3813541512	3813541570	1541308116	381290394020	381191721305	150
8639410000	8639410708	8639410273	863572505336	863058945246	150
8639410000	8639410707	8639410273	863281108655	863058945246	150
8639410000	8639410707	8639410273	863281108655	863058945246	150
48510000	48510428	48510372	4964480245	4001978614	150
33500000	33500234	33500174	3950825396	3244555920	150
5510000	5510074	5510911	588462472	411641875	150
19410000	19410333	19410008	1161380172	1475908933	150
56500000	56500016	56500359	5475621535	5726553630	150
11610000	11610695	11610058	1242001769	1335732196	150
46500000	46500856	46500258	4967671953	4482695479	150
28510000	28510220	28510174	2095299965	2572370709	150
10610000	10610500	10610066	1059838196	1856317515	150
610000	610350	610966	14113716	414367241	150
39510000	39510550	39510274	3128341684	3246561272	150
108410000	108410830	108410930	10631113905	10701669865	150
109410000	109410220	109410919	10205853402	10023099733	150
229410000	229410548	229410127	22252432715	22676525714	150
207410000	207410697	207410951	20130980407	20153668036	150
190610000	190610444	190610870	19922967119	19282086014	150
232510000	232510894	232510205	23338145357	23986562990	150
198410000	198410097	198410820	19661015835	19196064833	150
129410000	129410528	129410117	12593534682	12008174316	150
149410000	149410786	149410315	14397910197	14957526222	150
147410000	147410276	147410336	14641440698	14345450205	150
131510000	131510052	9031510194	13317467799	13273878667	150
351510000	351510025	351510409	35346208128	35710990891	150
358410000	358410511	358410445	35883657855	35815372285	150
325510000	325510328	325510149	32395553720	32303613637	150
349410000	349410825	349410335	34368313356	34168602052	150
356510000	356510002	356510501	35011408306	35598024692	150
321610000	321610854	321610185	32703289028	32201291207	150
288410000	288410932	288410729	28363255300	28416572826	150
291610000	291610219	291610865	29520843261	29579602619	150
267510000	267510274	267510600	26731730601	26094960788	150
285500000	285500259	285500664	28705669628	28535361340	150
278410000	278410781	278410630	27296856332	27196215050	150
270510000	270510247	270510609	27287776662	27192840104	150
249410000	249410806	249410325	24927441454	24718212822	150

437410000	437410240	437410270	43167205948	43533457739	150
436410000	436410801	436410268	43959922801	43532890437	150
453510000	453510468	453510435	45231803384	45779701035	150
479510000	479510119	479510708	47621407583	47388619284	150
443510000	443510288	443510333	44123359284	44411431216	150
459510000	459510903	459510511	45630643940	45574849397	150
396510000	396510556	396510908	39999091041	39902026781	150
416510000	416510597	416510110	41549713817	41873158803	150
410610000	410610464	410610106	41635084335	41222047510	150
426500000	426500689	426500099	42601957599	42660745460	150
397410000	397410704	397410850	39451552825	39168437735	150
376410000	376410317	376410659	37493288909	37654298888	150
427410000	427410028	427410171	42093261682	42120042172	150
378410000	378410797	378410640	37079043458	37090931400	150
590610000	590610516	590610909	59389906865	59027270994	150
597410000	597410734	597410870	59828825864	59352494346	150
618410000	618410967	618410081	61027898857	61856901956	150
575510000	575510068	575510710	57338998663	57691120480	150
616410000	616410514	616410088	61852521191	61125913817	150
585500000	585500234	585500695	58140070985	58091808028	150
586410000	586410506	586410781	58868758566	58341088742	150
543510000	543510306	543510343	54750259750	54860125336	150
546500000	546500937	546500309	54680735340	54412494976	150
556500000	556500017	556500409	55952738093	55697284031	150
495510000	495510336	495510910	49824580138	49047330757	150
549510000	549510753	549510421	54340025145	54303979297	150
527510000	527510906	527510228	52272052559	52791838562	150
497510000	497510872	497510916	49152838394	49091093791	150
525500000	525500873	525500095	52063883059	52593431008	150
498410000	498410109	498410850	49021658764	49365538400	150
702510000	702510430	702510952	70687303112	70011249863	150
717410000	717410838	717410102	71747198935	71419454251	150
706500000	706500486	706500928	70315948161	70020132298	150
709510000	709510286	709510042	70909302603	70629372329	150
691610000	691610291	691610905	69445689279	69294846246	150
725510000	725510392	725510191	72368196022	72898895839	150
646500000	646500955	646500319	64370859578	64180043219	150
681610000	681610116	681610805	68293272752	68914697453	150
672510000	672510162	672510646	67680548410	67097881251	150
658410000	658410569	658410475	65767428628	65730960231	150
637410000	637410286	637410290	63712653906	63905995263	150
667410000	667410568	667410584	66039979003	66653019679	150
638510000	638510422	638510332	63683808786	63107823105	150
676510000	676510324	676510737	67271706250	67076642643	150
836500000	836500827	836500238	83417893182	83890025249	150
839510000	839510692	839510351	83366237109	83165119633	150
843510000	843510360	843510374	84588636390	84377103181	150

861610000	861610776	861610626	86273780200	86510262666	150
837410000	837410199	9737410308	83262841409	83463012921	150
852510000	852510403	852510467	85165119522	85799039070	150
757510000	757510184	757510551	75365983421	75765468275	150
749410000	749410773	749410375	74679977666	74337098558	150
750510000	750510990	750510461	75133087133	75810990647	150
770610000	770610281	770610729	77189288891	77255814999	150
795510000	795510390	795510940	79043147010	79772504345	150
758410000	758410590	758410484	75435240435	75812328333	150
771610000	771610938	771610715	77919959006	77220649877	150
778410000	778410842	778410680	77139238628	77844535227	150
958410000	958410550	958410504	95026869421	95680673455	150
943510000	943510377	943510384	94406396333	94388190409	150
967510000	967510392	967510668	96427776553	96536374237	150
935510000	935510622	935510315	93971226521	93284450156	150
960610000	960610155	960610649	96543410047	96471117701	150
912510000	912510656	912510074	91515500937	91954382003	150
915510000	915510257	915510110	91746768700	91935130953	150
918410000	918410014	918410110	91876884793	91936672110	150
890510000	890510244	890510865	89326118262	89796203344	150
924510000	924510359	924510192	92986330151	92570778805	150
1095510000	1095510264	1095510870	109467185269	109063819622	150
929410000	929410567	929410196	92679766660	92839284886	150
896510000	896510647	896510958	89247147233	89009437170	150
885510000	885510224	885510849	88853290514	88131509235	150
1117510000	1117510772	1117510090	111408465310	111900198552	150
1107410000	1107410679	1107410941	110617792001	110281169845	150
1080610000	1080610261	1080610761	108981022122	108674395847	150
1059410000	1059410827	1059410406	105000400379	105047494089	150
1103510000	1103510785	1103510901	110174753310	110050049194	150
1016500000	1016500533	1016500960	101316439619	101825707949	150
1050510000	1050510862	1050510392	105546152047	105482594598	150
1025510000	1025510276	1025510121	102293659247	102018431350	150
1039410000	1039410584	1039410207	103222786309	103721859697	150
1055510000	1055510721	1055510437	105179718847	105435118942	150
1027510000	1027510814	1027510179	102325330007	102491419311	150
1211510000	1211510570	1211510007	121814588356	121259850649	150
1216410000	1216410454	1216410049	121172044358	121883715057	150
1193510000	1193510935	1193510806	119362298925	119463723760	150
1217510000	1217510791	1217510101	121619824917	121259096412	150
1187410000	1187410667	1187410732	118516390868	118568522226	150
1189510000	1189510152	1189510779	118533206611	118634508612	150
1239510000	1239510588	1239510294	123675957295	123627871610	150
1183510000	1183510771	1183510703	118706126389	118126712188	150
1197510000	1197510818	1197510888	119179707002	119582310973	150
1209510000	1209510201	1209510992	120496373802	120670485807	150
1241610000	1241610285	1241610369	124219752841	124589161066	150

1186410000	1186410447	1186410742	118477778138	118127728427	150
1139410000	1139410600	1139410217	113849556395	113193825818	150
1142510000	1142510902	1142510296	114532752981	114952846233	150
1126500000	1126500646	1126500070	112959264245	112810911522	150
1159410000	1159410845	1159410416	115965537871	115916994847	150
1146410000	1146410912	1146410339	114041832935	114947686890	150
1127510000	1127510834	1127510188	112654125116	112652903863	150
1135510000	1135510489	1135510235	113161312884	113606539110	150
1346410000	1346410943	1346410359	134181332939	134044244321	150
1309410000	1309410259	1309410940	130589812309	130461603335	150
1347510000	1347510089	1347510413	134747401519	134815760653	150
1326510000	1326510668	1326510203	132898073177	132635226316	150
1332510000	1332510914	1332510216	133973571711	133197469011	150
1335510000	1335510527	1335510256	133940726665	133332600741	150
1270610000	1270610205	1270610680	127230383839	127680954511	150
1298410000	1298410116	1298410831	129397480216	129412275485	150
1283510000	1283510787	1283510713	128994086118	128535433743	150
1263510000	1263510483	1263510513	126742463098	126046213315	150
1254510000	1254510646	1254510431	125642434940	125482960933	150
1435500000	1435500838	1435500184	143107717302	143680368270	150
1487410000	1487410718	1487410762	148716325598	148224301380	150
1441510000	1441510748	1441510322	144414970913	144660367988	150
1438410000	1438410209	1438410259	143818169119	143104330472	150
1476410000	1476410333	1476410670	147218269789	147898228856	150
1485500000	1485500219	1485500687	148083580764	148021765264	150
1446500000	1446500923	1446500300	144006973074	144109951553	150
1446510000	1446510914	1446510415	144729517037	144320699658	150
1405510000	1405510141	1405510955	140750568856	140546161591	150
1387410000	1387410700	1387410752	138069153287	138504450880	150
1425500000	1425500859	1425500086	142525347451	142928375841	150
1591510000	1591510697	1591510831	159412928142	159752913182	150
1606500000	1606500473	1606500919	160123176914	160126096121	150
1608510000	1608510974	1608510037	160815157274	160474719919	150
1595500000	1595500392	1595500808	159194230804	159386687991	150
1616500000	1616500628	1616500020	161651274304	161365185626	150
1579410000	1579410165	1579410654	157140328363	157490683207	150
1596510000	1596510595	1596510929	159464264473	159723463911	150
1569410000	1569410973	1569410555	156016575357	156718219162	150
1496510000	1496510576	1496510919	149936144122	149946485240	150
1509410000	1509410296	1509410960	150808995685	150102791121	150
1510610000	1510610483	1510610117	151822804816	151161459871	150
1537510000	1537510071	1537510330	153503520724	153370371681	150
1699510000	1699510288	1699510927	169008634092	169286247716	150
1715500000	1715500741	1715500014	171930751631	171328299003	150
1730510000	1730510799	1730510263	173207354942	173161041340	150
1716510000	1716510565	1716510143	171252757502	171220632968	150
1703510000	1703510800	1703510963	170032333829	170385202264	150

1725500000	1725500907	1725500116	172826333876	172329479227	150
1698510000	1698510102	1698510932	169921863893	169878792334	150
1710510000	1710510613	1710510066	171045858463	171833470777	150
1693510000	1693510955	1693510855	169371277098	169229824975	150
1638410000	1638410246	1638410280	163548007368	163591878966	150
1622510000	1622510790	1622510146	162358057957	162360965503	150
1671510000	1671510318	1671510641	167859347497	167589118665	150
1662510000	1662510554	1662510548	166570155854	166402253361	150
1647410000	1647410390	1647410383	164201746138	164048766315	150
1858410000	1858410533	1858410495	185323044699	185601620204	150
1863500000	1863500545	1863500548	186004195841	186948997096	150
1786510000	1786510450	1786510849	178324851874	178445129055	150
1803510000	1803510819	1803510973	180029966493	180464450347	150
1786410000	1786410471	1786410800	178479811456	178007196658	150
1802510000	1802510454	1802510963	180219133136	180200578286	150
1756500000	1756500052	1756500430	175812818118	175657846890	150
1772510000	1772510184	1772510657	177440065700	177553211508	150
1773500000	1773500805	1773500636	177663577701	177450315066	150
1968410000	1968410732	1968410602	196586746571	196441522777	150
1914600000	1914600133	1914600056	191375058075	191265835123	150
1879410000	1879410218	1879410684	187856858281	187568866801	150
1887410000	1887410787	1887410801	188359533379	188758075811	150
1873510000	1873510720	1873510673	187007784464	187953617410	150
1889510000	1889510263	1889510849	188240057313	188162854338	150
1926500000	1926500769	1926500150	192125907273	192776648115	150
1890610000	1890610490	1890610940	189659350884	189855482382	150
2077510000	2077510277	2077510680	207744111726	207346606809	150
2086510000	2086510397	2086510779	208161786589	208947273651	150
2088410000	2088410901	2088410711	208653720927	208725759115	150
2090510000	2090510088	2090510789	209600520262	209559364975	150
2084510000	2084510871	2084510713	208438618493	208128830037	150
2067510000	2067510239	2067510583	206459048256	206363954163	150
2098410000	2098410083	2098410812	209976148743	209347496055	150
2092510000	2092510586	2092510787	209808071317	209963896015	150
2068410000	2068410570	2068410515	206676778577	206433849543	150
2049410000	2049410771	2049410307	204535621399	204108269485	150
1991510000	1991510768	1991510872	199563041477	199885034189	150
1996510000	1996510663	1996510969	199450153122	199202108170	150
2041510000	2041510667	2041510285	204940883772	204011429181	150
2022510000	2022510679	2022510087	202243714598	202597553417	150
2191510000	2191510624	2191510792	219223891041	219966362207	150
2186510000	2186510416	2186510790	218554597617	218736729366	150
2218510000	2218510083	2218510097	221682203581	221228280882	150
2179510000	2179510077	2179510680	217879668726	217494351887	150
2209410000	2209410240	2209410931	220274494954	220250359960	150
2235500000	2235500808	2235500166	223533675581	223814771636	150
2168410000	2168410588	2168410525	216883664952	216954996039	150

2137410000	2137410179	2137410244	213753679802	213110388243	150
2339410000	2339410637	2339410237	233972085187	233807665531	150
2132510000	2132510879	2132510197	213402301500	213865064799	150
2158410000	2158410477	2158410428	215760369795	215647399936	150
2164510000	2164510678	2164510523	216576851598	216955164805	150
2156500000	2156500034	2156500371	215724456068	215790478444	150
2312510000	2312510545	2312510014	231070222672	231027684072	150
2348510000	2348510483	2348510405	234248306182	234950753760	150
2316410000	2316410472	2316410060	231900539179	231962077393	150
2357410000	2357410509	2357410455	235432927160	235867406802	150
2329410000	2329410572	2329410139	232037677062	232497016326	150
2329510000	2329510510	2329510206	232201826525	232092583817	150
2290510000	2290510126	2290510807	229671880570	229708435263	150
2258410000	2258410496	2258410437	225368555745	225927374109	150
2291510000	2291510643	2291510802	229687216786	229420093512	150
2293510000	2293510887	2293510817	229698264451	229656929573	150
2271610000	2271610852	2271610667	227614319261	227588820908	150
2285500000	2285500262	2285500666	228386395184	228169104693	150
2285510000	2285510126	2285510790	228402866422	228508735471	150
2250510000	2250510900	2250510413	225431286954	225572693275	150
2280610000	2280610298	2280610782	228521180708	228095237656	150
2456500000	2456500005	2456500401	245979623270	245025121400	150
2438510000	2438510393	2438510314	243067084103	243957646019	150
2479410000	2479410149	2479410645	247589640986	247280166971	150
2467510000	2467510308	2467510622	246020319569	246878734228	150
2489510000	2489510198	2489510810	248432774661	248647236372	150
2428510000	2428510215	2428510216	242203061548	242721718467	150
2442510000	2442510956	2442510328	244287397971	244926432234	150
2470610000	2470610235	2470610701	247653192920	247216243172	150
2458510000	2458510667	2458510516	245909034486	245621234608	150
2468510000	2468510761	2468510615	246808354212	246544247289	150
2488410000	2488410973	2488410751	248042808190	248831227761	150
2371510000	2371510260	2371510611	237435763758	237776177111	150
2363510000	2363510504	2363510524	236908365397	236112396627	150
2395500000	2395500362	2395500788	239672152382	239576751810	150
2377510000	2377510325	2377510710	237115002695	237316943168	150
2579510000	2579510138	2579510720	257836134718	257618796027	150
2597510000	2597510893	2597510928	259401819740	259563375430	150
2595510000	2595510359	2595510922	259412639540	259720193709	150
2555510000	2555510806	2555510491	255837597753	255643362881	150
2608410000	2608410910	2608410983	260618787638	260940711888	150
2580610000	2580610341	2580610812	258115957612	258373040471	150
2578410000	2578410807	2578410662	257506783661	257276389628	150
2591610000	2591610276	2591610897	259283022761	259615745953	150
2508410000	2508410894	2508410973	250216040614	250204098392	150
2532510000	2532510952	2532510238	253485340578	253173667993	150
2538410000	2538410228	2538410271	253057316066	253952808963	150

2491510000	2491510680	2491510822	249939247003	249952711948	150
2519410000	2519410430	2519410059	251749775058	251634449398	150
2533510000	2533510224	2533510246	253794719728	253852536932	150
2548410000	2548410362	2548410370	254921747276	254937743354	150
2539410000	2539410679	2539410257	253930408185	253669777727	150
2702610000	2702610023	2702610016	270244110690	270211844510	150
2684510000	2684510974	2684510773	268611762612	268943555099	150
2718410000	2718410987	2718410092	271337760566	271360749404	150
2697410000	2697410754	2697410882	269746051655	269247737886	150
2676410000	2676410365	2676410691	267320928035	267191172566	150
2641610000	2641610359	2641610409	264980757649	264149237331	150
2658510000	2658510621	2658510536	265956773223	265744332494	150
2668410000	2668410683	2668410573	266056481441	266481419943	150
2619410000	2619410445	2619410069	261366524565	261559598430	150
2656500000	2656500038	2656500421	265534310863	265124322940	150
2624510000	2624510309	2624510163	262338195343	262815592454	150
2627510000	2627510926	2627510240	262980115912	262951810961	150
2669410000	2669410992	2669410566	266047109951	266171859254	150
2805510000	2805510208	2805510996	280155989707	280439299479	150
2807510000	2807510722	2807510061	280193256583	280424537369	150
2818410000	2818410001	2818410102	281891334081	281485429435	150
2812510000	2812510638	2812510066	281059924259	281554777819	150
2816500000	2816500603	2816500041	281820598285	281326790106	150
2825500000	2825500928	2825500127	282410480093	282789274891	150
2834510000	2834510514	2834510286	283339291763	283558376400	150
2829410000	2829410554	2829410188	282740236712	282839959280	150
2763510000	2763510575	2763510564	276689438335	276933841195	150
2756510000	2756510074	2756510545	275675048525	275768274211	150
2748510000	2748510549	2748510445	274711123329	274375248472	150
2794510000	2794510024	2794510884	279297958476	279052377091	150
2765510000	2765510924	2765510624	276976600856	276371611937	150
2788510000	2788510039	2788510843	278868036152	278783704076	150
2766410000	2766410304	2766410601	276876537794	276894856706	150
2973510000	2973510741	2973510684	297589501486	297053807104	150
2979410000	2979410059	2979410695	297546236325	297652434251	150
2946510000	2946510937	2946510465	294397857924	294758788526	150
2935500000	2935500920	2935500235	293345174146	293319028215	150
2925500000	2925500946	2925500137	292568254168	292275439492	150
2891610000	2891610330	2891610927	289091643368	289273870257	150
2898410000	2898410178	2898410891	289863390172	289793885581	150
2900610000	2900610489	2900610058	290060868473	290899980301	150
2915500000	2915500775	2915500037	291848065458	291749173786	150
2919410000	2919410494	2919410099	291033649241	291458517907	150
2872510000	2872510208	2872510667	287175548901	287559134632	150
2911510000	2911510814	2911510078	291987441093	291177302303	150
2876410000	2876410396	2876410711	287212293437	287274143360	150
3057410000	3057410464	3057410426	305804342313	305586441782	150

3075510000	3075510982	3075510658	307389414800	307914264519	150
3078410000	3078410755	3078410613	307316840101	307534908656	150
3081610000	3081610994	3081610748	308296102242	308902221163	150
3051510000	3051510869	3051510382	305849255495	305225340311	150
3051610000	3051610945	3051610450	305278774700	305670882165	150
3069500000	3069500609	3069500487	306470758609	306664647959	150
3091510000	3091510608	3091510783	309952014683	309179763476	150
3074510000	3074510833	3074510614	307676223871	307697623449	150
3032510000	3032510863	3032510188	303626903035	303135105287	150
3035500000	3035500779	3035500148	303646389424	303635220371	150
3045500000	3045500940	3045500246	304022361257	304205706876	150
2984510000	2984510022	2984510803	298772615933	298352739402	150
3025500000	3025500795	3025500048	302799810370	302797827077	150
3028410000	3028410035	2028410122	302964432051	302738826537	150
3026510000	3026510619	3026510175	302448155513	302689329016	150
2997510000	2997510963	2997510968	299052301307	299578184750	150
3003510000	3003510771	3003510891	300570725754	300545110299	150
3013510000	3013510865	3013510997	301268926650	301254233064	150
3191610000	3191610205	3191610858	319815096022	319730364870	150
3222510000	3222510718	3222510107	322279220083	322083527904	150
3223510000	3223510094	3223510117	322415466188	322347571916	150
3177410000	3177410654	3177410635	317374714287	317190358022	150
3219410000	3219410375	3219410031	321584618295	321406602467	150
3227410000	3227410000	3227410154	322454974290	322701206521	150
3187510000	3187510456	3187510791	318530676272	318390419546	150
3150510000	3150510883	3150510404	315564411080	315615243338	150
3144510000	3144510568	3144510320	314306625028	314828005525	150
3119410000	3119410356	3119410021	311934161690	311010427199	150
3136410000	3136410760	3136410241	313791566068	313213889800	150
3133500000	3133500260	3133500187	313252984711	313594167610	150
3158510000	3158510617	3158510487	315684290329	315187385054	150
3118410000	3118410886	3118410034	311419725674	311237673714	150
3338510000	3338510378	3338510305	333686158388	333924326415	150
3319410000	3319410394	3319410041	331258414696	331986455204	150
3354510000	3354510665	3354510443	335299283777	335431099456	150
3300610000	3300610400	3300610999	330442410905	330100845849	150
3252510000	3252510108	3252510409	325073902042	325579142058	150
3286510000	3286510434	3286510801	328199263937	328236061993	150
3236510000	3236510703	3236510298	323014551348	323347855134	150
3273510000	3273510666	3273510616	327283657081	327751956291	150
3258410000	3258410498	3258410438	325632721719	325020511966	150
3245500000	3245500972	3245500265	324655142428	324329035617	150
3448410000	3448410345	3448410361	344733156653	344956866904	150
3470510000	3470510293	3470510632	347955466702	347589716689	150
3428410000	3428410048	3428410161	342136996642	342539063881	150
3429410000	3429410593	3429410149	342826481634	342645298183	150
3461510000	3461510240	3461510524	346355718672	346679230949	150

3461610000	3461610190	3461610589	346997213222	346829780651	150
3439510000	3439510628	3439510315	343212633746	343525870243	150
3478510000	3478510849	3478510713	347545226131	347150258388	150
3435500000	3435500842	3435500186	343342326543	343037005435	150
3401510000	3401510407	3401510929	340434249116	340159536364	150
3378410000	3378410803	3378410643	337859876928	337366508191	150
3375510000	3375510036	3375510692	337850721566	337785300795	150
3392510000	3392510643	3392510819	339734768879	339065779795	150
3406500000	3406500445	3406500901	340433820728	340106885225	150
3387410000	3387410704	3387410754	338708031465	338904530711	150
3383510000	3383510808	3383510727	338412689656	338807781844	150
3416500000	3416500599	3416500002	341512031685	341516673261	150
3552510000	3552510349	3552510440	355229240440	355502001302	150
3600610000	3600610445	3600610029	360439742079	360476278428	150
3550510000	3550510956	3550510444	355075297833	355917189451	150
3581510000	3581510515	3581510733	358894047114	358312042693	150
3547410000	3547410375	3547410376	354878401202	354453116733	150
3506500000	3506500462	3506500911	350881684752	350320038689	150
3512510000	3512510583	3512510036	351744618031	351955738307	150
3515510000	3515510195	3515510071	351969088883	351122020878	150
3529410000	3529410610	3529410159	352401528598	352240485234	150
3486410000	3486410495	3486410774	348389197300	348374436752	150
3545500000	3545500023	3545500295	354215410638	354439278032	150
3729410000	3729410537	3729410179	372917821751	372139192633	150
3712510000	3712510620	3712510056	371666962306	371490713291	150
3700610000	3700610460	3700610039	370735491139	370243256786	150
3657510000	3657510171	3657510544	365017588092	365586385630	150
3660510000	3660510132	3660510554	366661277212	366297386761	150
3664510000	3664510766	3664510575	366507895724	366963729894	150
3658410000	3658410576	3658410478	365808120881	365864479747	150
3609410000	3609410316	3609410972	360624630891	360482808353	150
3612510000	3612510603	3612510046	361779655680	361345327984	150
3625500000	3625500893	3625500108	362715135239	362508279768	150
3666500000	3666500198	3666500522	366935546928	366967401308	150
3659410000	3659410943	3659410467	365769091909	365712897704	150
3817510000	3817510781	3817510161	381555076347	381680236444	150
3801610000	3801610666	3801610041	380085092715	380448289774	150
3819410000	3819410481	3819410090	381817029804	381505944913	150
3804510000	3804510158	3804510982	380373808444	380398304008	150
3808410000	3808410838	3808410004	380608440237	380515805814	150
3797410000	3797410769	3797410893	379000762573	379962693579	150
3837510000	3837510009	3837510366	383526407898	383264089341	150
3769410000	3769410012	3769410577	376132487347	376100481818	150
3757410000	3757410422	3757410496	375218566897	375413197907	150
3767410000	3767410591	3767410596	376732916669	376075479479	150
3969410000	3969410054	3969410597	396368335665	396612664814	150
3939510000	3939510717	3939510364	393170515932	393455266606	150

3927510000	3927510980	3927510272	392804668430	392208800516	150
3860510000	3860510170	3860510573	386247462907	386955470083	150
3881610000	3881610152	3881610828	388637365569	388353455703	150
3882510000	3882510545	3882510768	388271100465	388455026427	150
3916500000	3916500617	3916500052	391684852793	391484150107	150
3888410000	3888410048	3888410793	388559847431	388938797969	150
3918410000	3918410018	3918410113	391729664252	391908416413	150
3895500000	3895500438	3895500841	389283863165	389472287428	150
4058410000	4058410463	4058410420	405709812617	405951216369	150
4042510000	4042510888	4042510289	404428568655	404872376398	150
4036500000	4036500788	4036500163	403247183540	403034678555	150
4090610000	4090610434	4090610864	409634272364	409085715477	150
4078510000	4078510862	4078510675	407838759284	407043949072	150
4065510000	4065510891	4065510548	406374604377	406451553827	150
4066500000	4066500104	4066500463	406569446937	406752275432	150
4069410000	4069410020	4069410508	406411617811	406684619142	150
4076510000	4076510227	4076510679	407261886448	407854535208	150
4049410000	4049410774	4049410309	404145654249	404675682337	150
4021510000	4021510840	4021510090	402865101041	402341965038	150
4006500000	4006500467	4006500864	400943370000	400379525709	150
4008410000	4008410818	4008410924	400175450451	400501240534	150
3995510000	3995510338	3995510963	399523931361	399628398054	150
4011610000	4011610704	4011610061	401895430982	401223694235	150
3998410000	3998410195	3998410902	399860392798	399474313310	150
3996410000	3996410648	3996410923	399105428420	399637716789	150
4002610000	4002610899	4002610949	400560122881	400840979154	150
4201510000	4201510369	4201510909	420914938990	420537453368	150
4165510000	4165510909	4165510560	416017426142	416749790191	150
4166500000	4166500121	4166500473	416866178380	416692500333	150
4189410000	4189410100	4189410717	418558011642	418202333211	150
4202510000	4202510347	4202510905	420715335815	420697635911	150
4175510000	4175510005	4175510671	417524412069	417392542444	150
4133510000	4133510155	4133510208	413962457104	413365122365	150
4136500000	4136500804	4136500173	413419901254	413281328639	150
4123510000	4123510076	4123510108	412498101992	412074114280	150
4129410000	4129410536	4129410121	412395847337	412642526386	150
4105510000	4105510098	4105510925	410972798060	410820584904	150
4112510000	4112510514	4112510995	411713566898	411702012111	150
4115510000	4115510263	4115510029	411544462442	411868979254	150
4125510000	4125510301	4125510133	412944194834	412769218074	150
4141610000	4141610274	4141610362	414001921710	414153777359	150
4318410000	4318410928	4318410055	431581048262	431723407940	150
4325500000	4325500845	4325500079	432386067174	432908328925	150
4306500000	4306500431	4306500892	430548019926	430965236129	150
4337510000	4337510046	4337510312	433706705795	433432407545	150
4290610000	4290610470	4290610884	429262733131	429623218981	150
4284510000	4284510907	4284510735	428015935871	428791917851	150

4342510000	4342510943	4342510319	434595940038	434844943625	150
4302610000	4302610951	4302610978	430677247007	430900866746	150
4272510000	4272510095	4272510613	427755231207	427160248303	150
4225510000	4225510318	4225510143	422173170987	422073983790	150
4242510000	4242510924	4242510309	424799673661	424653389910	150
4258510000	4258510637	4258510498	425557401417	425371058367	150
4445510000	4445510723	4445510374	444298039771	444624517831	150
4267410000	4267410508	4267410547	426247091046	426082256674	150
4239410000	4239410624	4239410230	423277947854	423461823808	150
4268410000	4268410611	4268410536	426289167457	426327100637	150
4246510000	4246510882	4246510399	424614291727	424055739945	150
4237410000	4237410209	4237410255	423495896054	423594824914	150
4417510000	4417510829	4417510124	441835236212	441679192908	150
4427410000	4427410035	4427410175	442166245946	442343442072	150
4409510000	4409510240	4409510015	440523760679	440378935878	150
4407510000	4407510656	4407510023	440394475298	440006660393	150
4425500000	4425500863	4425500089	442066132311	442928190524	150
4425510000	4425510350	4425510164	442831302979	442649600403	150
4346500000	4346500914	4346500293	434691683467	434217030927	150
4401610000	4401610599	4401610003	440391954596	440643823259	150
4361610000	4361610172	4361610580	436233926096	436284491304	150
4393510000	4393510907	4393510830	439499054320	439773927467	150
4380610000	4380610314	4380610794	438140062698	438749367749	150
4374510000	4374510886	4374510644	437283218749	437225398274	150
4404510000	4404510093	4404510941	440647033189	440592797196	150
4564510000	4564510748	4564510565	456406383589	456642899544	150
4571610000	4571610910	4571610699	457180831182	457288623387	150
4551510000	4551510069	4551510433	455211165604	455625732450	150
4590510000	4590510187	4590510839	459492941743	459945137119	150
4587410000	4587410744	4587410775	458145645052	458481063660	150
4557510000	4557510155	4557510535	455477230262	455025640453	150
4506410000	4506410346	4506410981	450780466200	450680066170	150
4477410000	4477410558	4477410666	447924872850	447058672380	150
4511510000	4511510638	4511510040	451924009935	451209159986	150
4531610000	4531610164	4531610303	453058044840	453938617955	150
4483510000	4483510828	4483510738	448878893964	448375888470	150
4711610000	4711610751	4711610129	471605622056	471055012414	150
4682510000	4682510421	4682510749	468624835928	468687761211	150
4716500000	4716500647	4716500033	471550170847	471683766984	150
4601510000	4601510450	4601510950	460052549460	460475163021	150
4616510000	4616510551	4616510134	461501997940	461289219196	150
4601610000	4601610635	4601610023	460741323058	460284043213	150
4633510000	4633510246	4633510259	463722188473	463661336640	150
4621610000	4621610913	4621610217	462402298781	462902646851	150
4602610000	4602610009	4602610008	460715171726	460300851316	150
4623510000	4623510067	4623510158	462677319718	462066479438	150
4792510000	4792510720	4792510861	479073477798	479247011362	150

4801510000	4801510494	4801510970	480898621585	480448909963	150
4822510000	4822510831	4822510168	482267132721	482575102665	150
4825510000	4825510416	4825510207	482253716536	482046593316	150
4798510000	4798510122	4798510945	479728487907	479221192103	150
4823500000	4823500205	4823500158	482766141535	482892972531	150
4747510000	4747510156	4747510456	474903789769	474266875635	150
4724510000	4724510329	4724510175	472475897674	472962219228	150
4741510000	4741510814	4741510354	474222388289	474534898076	150
4777510000	4777510395	4777510752	477111993045	477008394389	150
4719410000	4719410465	4719410081	471390622668	471163322506	150
4759410000	4759410963	4759410478	475069467076	475600380714	150
4778510000	4778510893	4778510744	477835481551	477357701177	150
4733510000	4733510263	3733510268	473623568038	473197237061	150
4719510000	4719510404	4719510148	471808656655	471166813779	150
4737510000	4737510994	4737510357	473914302534	473148662548	150
4776510000	4776510347	4776510751	477411907083	477441983868	150
4948510000	4948510585	4948510468	494054656984	494713675422	150
4952510000	4952510429	4952510481	495374310388	495795246297	150
4938510000	4938510417	4938510366	493125427089	493179332215	150
4957410000	4957410458	4957410517	495731829564	495491324199	150
4863510000	4863510594	4863510576	486498087646	486389518671	150
4865510000	4865510947	4865510637	486244794209	486089301472	150
4870610000	4870610305	4870610744	487992168149	487096588633	150
4859410000	4859410983	4859410488	485467445635	485577701139	150
4885500000	4885500287	4885500733	488420092103	488098098486	150
4866410000	4866410321	4866410613	486511602012	486023419264	150
4857410000	4857410439	4857410507	485557112868	485454973645	150
4857510000	4857510209	4857510565	485039402354	485268475191	150
4870510000	4870510370	4870510673	487680212835	487899653002	150
5029410000	5029410520	5029410112	502112961437	502183786027	150
5085510000	5085510097	5085510770	508267878372	508267924587	150
5039410000	5039410591	5039410211	503991660557	503471984648	150
5024510000	5024510295	5024510106	502327895175	502055788451	150
5068510000	5068510695	5068510578	506946733058	506540606521	150
5043510000	5043510226	5043510299	504750330217	504697703231	150
4986510000	4986510491	4986510872	498216892432	498333281091	150
4980510000	4980510072	4980510781	498278196263	498724119536	150
5009410000	5009410212	5009410914	500908371982	500295833933	150
4962510000	4962510619	4962510583	496808518777	496329500796	150
5019410000	5019410343	5019410013	501378334630	501341108358	150
4988510000	4988510069	4988510865	498207455522	498785683659	150
4992510000	4992510754	4992510881	499098925199	499909897908	150
4995500000	4995500453	4995500853	499451084123	499884603650	150
5173510000	5173510653	5173510608	517118223614	517008682981	150
5194510000	5194510058	5194510827	519143227115	519130570852	150
5184510000	5184510891	5184510726	518092766737	518621398928	150
5207510000	5207510623	5207510004	520081436824	520580232682	150

5157410000	5157410483	5157410438	515038988453	515602830186	150
5157510000	5157510231	5157510496	515329525765	515633870825	150
5196410000	5196410537	5196410845	519754434844	519960777615	150
5094510000	5094510040	5094510817	509225890429	509969250271	150
5097510000	5097510809	5097510882	509988184273	509206678224	150
5089510000	5089510143	5089510773	508897795113	508792532052	150
5138510000	5138510345	5138510288	513465461735	513779253585	150
5135500000	5135500797	5135500159	513705699603	513282130757	150
5106510000	5106510376	5106510985	510254444074	510379836672	150
5104510000	5104510050	5104510910	510790417047	510014320408	150
5136510000	5136510814	5136510290	513707815738	513002554048	150
5298410000	5298410081	5298410835	529443910428	529944747954	150
5278410000	5278410790	5278410635	527417546412	527725100428	150
5309510000	5309510226	5309510006	530161933568	530825597018	150
5326410000	5326410628	5326410162	532947498079	532469384945	150
5326500000	5326500682	5326500094	532483576353	532894346108	150
5296410000	5296410552	5296410855	529509557440	529970366877	150
5303510000	5303510825	5303510927	530858964056	530519781541	150
5321610000	5321610863	5321610190	532518700456	532228987626	150
5289510000	5289510173	5289510793	528292367515	528070910910	150
5226500000	5226500666	5226500084	522651961347	522492774613	150
5229410000	5229410557	5229410132	522616455952	522268295393	150
5262510000	5262510485	5262510512	526341609039	526687167100	150
5231510000	5231510083	5231510209	523063495960	523702193624	150
5264510000	5264510701	5264510536	526579356739	526923618294	150
5237510000	5237510031	5237510303	523541233405	523526753249	150
5225500000	5225500831	5225500070	522286858148	522576809637	150
5238410000	5238410185	5238410243	523476959253	523519303984	150
5421510000	5421510920	5421510131	542688495791	542290778284	150
5456510000	5456510027	5456510516	545501841893	545433524282	150
5416410000	5416410490	5416410073	541930124922	541754610727	150
5429510000	5429510455	5429510218	542028608113	542726928178	150
5365510000	5365510860	5365510583	536649149613	536758724452	150
5385500000	5385500210	5385500681	538166272562	538554697040	150
5385510000	5385510148	5385510804	538743866651	538467713165	150
5360510000	5360510117	5360510527	536771753441	536476407063	150
5554510000	5554510701	5554510466	555378705286	555956414480	150
5527510000	5527510914	5527510233	552479937854	552777253266	150
5558410000	5558410560	5558410470	555278521867	555489215700	150
5580510000	5580510992	5580510742	558118812090	558263288452	150
5540510000	5540510956	5540510347	554079378795	554805236065	150
5556510000	5556510046	5556510526	555550156737	555354053013	150
5525510000	5525510369	5525510176	552160614028	552212853992	150
5535510000	5535510564	5535510278	553787997923	553294131688	150
5466500000	5466500170	5466500504	546758594021	546561324321	150
5498410000	5498410118	5498410855	549125382623	549603524754	150
5501510000	5501510433	5501510941	550966343661	550883486527	150

5501610000	5501610617	5501610014	550599456600	550094331851	150
5696410000	5696410606	5696410895	569940150883	569684321026	150
5699410000	5699410338	5699410863	569304603783	569761811876	150
5701510000	5701510474	5701510961	570263477543	570692869438	150
5666510000	5666510162	5666510639	566493422520	566114964166	150
5652510000	5652510374	5652510452	565974000611	565453963754	150
5585500000	5585500242	5585500700	558685591897	558901716566	150
5588410000	5588410997	5588410764	558902897814	558571063150	150
5642510000	5642510000	5642510351	564713756298	564341459266	150
5626410000	5626410680	5626410192	562006769100	562270081764	150
5811610000	5811610771	5811610140	581878472419	581747160013	150
5784510000	5784510995	5784510786	578549268446	578574930005	150
5809510000	5809510253	5809510057	580117224905	580036838217	150
5816510000	5816510586	5816510158	581582648203	581190307800	150
5782510000	5782510442	5782510760	578364725803	578704181579	150
5775510000	5775510115	5775510737	577397626058	577112332626	150
5746510000	5746510976	5746510447	574241278418	574401438070	150
5731510000	5731510614	5731510259	573241802905	573830578581	150
5741610000	5741610382	5741610422	574959599376	574102986019	150
5721510000	5721510978	5721510161	572329262688	572672580661	150
5719510000	5719510406	5719510149	571704541691	571580955069	150
5725510000	5725510401	5725510197	572434654438	572800736679	150
5726500000	5726500742	5726500134	572852360603	572025955316	150
5933510000	5933510302	5933510289	593307718938	593993191656	150
5925510000	5925510463	5925510218	592436051503	592022437049	150
5901510000	5901510518	5901510981	590088515675	590245627101	150
5936510000	5936510829	5936510371	593665806481	593644263918	150
5879510000	5879510107	5879510753	587697183222	587643794710	150
5829510000	5829510526	5829510259	582794414860	582088574087	150
5835500000	5835500909	5835500228	583551441275	583642998972	150
5869410000	5869410035	5869410589	586972563266	586668967438	150
5844510000	5844510590	5844510393	584757322592	584046173996	150
5839410000	5839410737	5839410291	583215080504	583701732875	150
5877410000	5877410626	5877410706	587951580405	587288897827	150
5859510000	5859510972	5859510555	585915295271	585878973356	150
6040510000	6040510864	6040510298	604371078030	604073521627	150
6057410000	6057410469	6057410429	605491071260	605943699783	150
6049510000	6049510738	6049510377	604906455104	604146221377	150
6037410000	6037410169	6037410238	603807886956	603833562108	150
6067410000	6067410478	6067410529	606752553631	606780540111	150
6026410000	6026410579	6026410133	602866261421	602377048062	150
6015510000	6015510247	6015510021	601422334949	601117896960	150
6019410000	6019410345	6019410014	601818672133	601665277466	150
5957510000	5957510227	5957510576	595603106391	595347219845	150
5988410000	5988410070	5988410805	598640812505	598321001884	150
5979510000	5979510125	5979510764	597178973048	597269479658	150
5985500000	5985500302	5985500746	598871499244	598540353188	150

5951610000	5951610104	5951610541	595842719464	595399154966	150
5977410000	5977410642	5977410716	597630201214	597705832517	150
5981610000	5981610173	5981610840	598810568989	598088337088	150
6160510000	6160510082	6160510508	616204424677	616553700919	150
6145500000	6145500960	6145500258	614529870712	614579167189	150
6148410000	6148410298	6148410334	614579556140	614002212649	150
6138410000	6138410169	6138410234	613310358379	613861994996	150
6147410000	6147410308	6147410341	614827345209	614903897564	150
6096410000	6096410523	6096410836	609056899892	609741807292	150
6086500000	6086500360	6086500664	608804212021	608887436639	150
6109410000	6109410231	6109410925	610908300831	610643528460	150
6314510000	6314510182	6314510036	631773207665	631723294790	150
6311510000	6311510602	6311510022	631555545014	631617444887	150
6281510000	6281510446	6281510706	628450921419	628362028004	150
6281610000	6281610053	6281610771	628434043636	628328565719	150
6319510000	6319510339	6319510109	631344523059	631958383458	150
6279410000	6279410107	6279410630	627806294978	627266697652	150
6266500000	6266500141	6266500485	626784052090	626411128393	150
6266510000	6266510165	6266510600	626980156150	626513552928	150
6240510000	6240510899	6240510318	624864724479	624718050081	150
6229510000	6229510498	6229510200	622603661598	622500584268	150
6235500000	6235500816	6235500170	623353901052	623223734016	150
6200510000	6200510449	6200510923	620964045117	620595854021	150
6214510000	6214510164	6214510026	621621105384	621424820975	150
6259410000	6259410873	6259410431	625232817475	625929759869	150
6247510000	6247510081	6247510408	624015445600	624360669660	150
6260610000	6260610055	6260610585	626413911211	626325599006	150
6212510000	6212510534	6212510008	621205864659	621365282693	150
6417410000	6417410804	6417410078	641373236912	641430282027	150
6395500000	6395500367	6395500793	639057654730	639320298396	150
6388510000	6388510984	6388510807	638022747902	638747531740	150
6403510000	6403510845	6403510938	640269987965	640731980314	150
6419410000	6419410419	6419410053	641927425398	641649961757	150
6392510000	6392510649	6392510822	639948859011	639232915608	150
6345510000	6345510710	6345510365	634504229367	634093478462	150
6362510000	6362510506	6362510523	636096855035	636617774435	150
6337410000	6337410233	6337410266	633747450727	633425254217	150
6369510000	6369510961	6369510605	636057908998	636243639925	150
6349410000	6349410837	6349410341	634910449111	634763617517	150
6366500000	6366500154	6366500495	636519948255	636773633076	150
6359510000	6359510896	6359510507	635151583801	635249826097	150
6386510000	6386510383	6386510814	638393828491	638104257178	150
6350510000	6350510924	6350510427	635291288521	635073281784	150
6367410000	6367410527	6367410560	636149255310	636739834009	150
6344510000	6344510504	6344510343	634612930302	634753287419	150
6374510000	6374510890	6374510646	637858744537	637668521609	150
6553510000	6553510496	6553510449	655467888704	655803066718	150

6527410000	6527410055	6527410187	652523738361	652828972357	150
6545500000	6545500028	6545500298	654250795555	654236205876	150
6525500000	6525500882	6525500101	652243525646	652424613434	150
6565510000	6565510898	6565510607	656925155337	656013338275	150
6509510000	6509510262	6509510028	650794398469	650439517732	150
6462510000	6462510526	6462510533	646536898943	646294209503	150
6451610000	6451610017	6451610492	645050658699	645738679296	150
6467410000	6467410545	6467410570	646106571331	646799736215	150
6485500000	6485500228	5485500691	648787504537	648256096689	150
6489410000	6489410159	6489410748	648498187939	648510634638	150
6457510000	6457510142	6457510527	645039877767	645576557973	150
6502510000	6502510405	6502510938	650264902939	650411037748	150
6474510000	6474510908	6474510656	647409895337	647239289501	150
6661610000	6661610754	6661610612	666926275931	666476964979	150
6649410000	6649410765	6649410371	664126451157	664828599124	150
6681610000	6681610125	6681610811	668369469577	668642733020	150
6647410000	6647410398	6647410388	664188280624	664753274253	150
6653510000	6653510513	6653510459	665783500451	665184809662	150
6572510000	6572510154	6572510644	657532827981	657729132692	150
6583510000	6583510848	6583510750	658338432765	658516912302	150
6586510000	6586510423	6586510834	658406374818	658069750451	150
6618510000	6618510158	6618510141	661798595558	661949653312	150
6764510000	6764510790	6764510588	676593652948	676993604448	150
6790610000	6790610481	6790610935	679300239201	679592888509	150
6797410000	6797410773	6797410896	679192435223	679418398771	150
6798410000	6798410170	6798410885	679132109846	679500826210	150
6768510000	6768510819	6768510648	676772074058	676810174389	150
6755510000	6755510844	6755510516	675209647834	675076590978	150
6739410000	6739410720	6739410282	673431451093	673988313052	150
6717410000	6717410852	6717410107	671017629272	671069427846	150
6691510000	6691510726	6691510846	669523274059	669849292782	150
6721610000	6721610933	6721610229	672982621698	672264237538	150
6715510000	6715510234	6715510095	671197806165	671434992383	150
6694510000	6694510014	6694510878	669944714846	669619981316	150
6751510000	6751510111	6751510456	675684088934	675079823689	150
6751610000	6751610069	6751610522	675719099425	675220986472	150
6695500000	6695500413	6695500823	669819468958	669996588330	150
6892510000	6892510739	6892510873	689871301423	689446699733	150
6925500000	6925500951	6925500141	692419884677	692524160150	150
6899510000	6899510330	6899510952	689269858888	689436982172	150
6878410000	6878410875	6878410695	687329784898	687165541388	150
6868410000	6868410725	6868410597	686147106806	686258105600	150
6826410000	6826410715	6826410213	682380808207	682803246594	150
6841610000	6841610911	6841610433	684973536331	684631513579	150
6827510000	6827510968	6827510264	682735834334	682477813690	150
6860510000	6860510175	6860510576	686715101143	686020452100	150
6861510000	6861510168	6861510566	686454205834	686995891383	150

6828510000	6828510294	6828510259	682054346844	682759689338	150
6850610000	6850610012	6850610547	685527214012	685847717585	150
6840510000	6840510833	6840510377	684312493325	684375030534	150
6857410000	6857410442	6857410509	685276085506	685083260087	150
6816410000	6816410544	6816410113	681410473646	681015602053	150
7023510000	7023510062	7023510101	702917128322	702137690666	150
7045510000	7045510656	7045510333	704483991562	704765719433	150
7016500000	7016500541	7016500966	701633901578	701153584252	150
7031610000	7031610993	7031610260	703031069715	703856303333	150
7037510000	7037510005	7037510286	703573889827	703010925752	150
7007410000	7007410672	7007410937	700426556239	700194066683	150
6996510000	6996510673	6996510974	699194197192	699593887884	150
7011510000	7011510541	7011510993	701290717203	701687644768	150
6991610000	6991610880	6991610941	699083233248	699321573782	150
6969410000	6969410058	6969410600	696727346464	696471644827	150
6939410000	6939410760	6939410301	693977111765	693086567726	150
6958410000	6958410561	6958410509	695673690338	695230740712	150
6959410000	6959410005	6959410500	695633207379	695359778188	150
6956500000	6956500092	6956500455	695455668569	695170856720	150
6990610000	6990610517	6990610955	699901329438	699679784848	150
6993510000	6993510015	6993510892	699544790607	699617336958	150
6950610000	6950610028	6950610557	695025600245	695073520177	150
7169510000	7169510933	7169510587	716144083550	716894346146	150
7156510000	7156510980	7156510489	715236022251	715786726472	150
7141510000	7141510696	7141510299	714357273740	714701741037	150
7149510000	7149510696	7149510388	714162360241	714019324590	150
7128410000	7128410058	7128410135	712058484046	712797045132	150
7176410000	7176410293	7176410647	717622903731	717153792893	150
7095500000	7095500321	7095500760	709017070135	709172825399	150
7071610000	7071610825	7071610652	707890614079	707937909507	150
7097410000	7097410667	7097410828	709230242408	709663402788	150
7113510000	7113510891	7113510010	711986773730	711401694998	150
7088510000	7088510940	7088510777	708204925550	708622916979	150
7107510000	7107510610	7107510995	710194932608	710882132943	150
7082510000	7082510252	7082510693	708140773068	708903659921	150
7114510000	7114510150	7114510017	711447861831	711480550158	150
7086410000	7086410441	7086410738	708690771201	708002333780	150
7108410000	7108410841	7108410937	710884337661	710996072272	150
7288510000	7288510972	7288510798	728799148739	728040996840	150
7249410000	7249410819	7249410332	724523235080	724488873789	150
7280510000	7280510938	7280510715	728070220365	728270845904	150
7269410000	7269410927	7269410531	726021137406	726593513024	150
7287410000	7287410695	7287410748	728017302259	728974772777	150
7248510000	7248510476	7248510400	724626929271	724844295841	150
7216510000	7216510573	7216510098	721781923612	721746275560	150
7181610000	7181610018	7181610762	718416728905	718663904264	150
7203510000	7203510812	7203510917	720927818092	720830114884	150

7237410000	7237410213	7237410258	723349840960	723019012196	150
7196510000	7196510531	7196510895	719117009895	719052244966	150
7208510000	7208510020	7208510003	720708528105	720567707869	150
7227510000	7227510865	7227510205	722596310949	722030431666	150
7222510000	7222510726	7222510111	722425507707	722215838863	150
7199510000	7199510316	7199510884	719053814231	719658214139	150
7197410000	7197410684	7197410838	719963806437	719445901728	150
7200610000	7200610390	7200610993	720074895155	720112468032	150
7411610000	7411610703	7411610103	741042622546	741999978338	150
7372510000	7372510123	7372510625	737794847528	737825525278	150
7402610000	7402610977	7402610991	740000990116	740001854861	150
7409410000	7409410289	7409410956	740646107139	740972882426	150
7412510000	7412510571	7412510029	741585540577	741475368950	150
7428410000	7428410054	7428410165	742049262295	742246768797	150
7406510000	7406510434	7406510018	740105291630	740046316662	150
7397410000	7397410714	7397410857	739848712531	739560931646	150
7359410000	7359410892	7359410442	735671094597	735886588280	150
7312510000	7312510554	7312510019	731184586549	731540380498	150
7351610000	7351610004	7351610483	735298855661	735939965748	150
7519410000	7519410438	7519410064	751835616239	751698779214	150
7498510000	7498510081	7498510918	749501177477	749778009617	150
7530510000	7530510775	7530510249	753016277422	753890314081	150
7531510000	7531510583	7531510241	753974043590	753112008397	150
7500510000	7500510513	7500510953	750975602750	750979599576	150
7500610000	7500610436	7500610023	750302693646	750461440415	150
7526500000	7526500716	7526500116	752869594255	752801145838	150
7536410000	7536410819	7536410285	753173258300	753419831954	150
7536500000	7536500868	7536500216	753522158329	753824132070	150
7536510000	7536510763	7536510332	753153305621	753947482568	150
7507510000	7507510680	7507510036	750402481812	750629250523	150
7492510000	7492510669	7492510833	749204484557	749406824494	150
7436500000	7436500853	7436500206	743128658281	743271278738	150
7477410000	7477410564	7477410669	747051731611	747981871880	150
7432510000	7432510946	7432510233	743879431768	743091333963	150
7481610000	7481610094	7481610792	748625538598	748908232608	150
7459510000	7459510915	7459510518	745948532251	745413507473	150
7637510000	7637510981	7637510348	763057728159	763233565390	150
7649510000	7649510781	7649510438	764438507783	764954955378	150
7646500000	7646500963	7646500326	764724764487	764414606184	150
7560510000	7560510120	7560510548	756406662604	756892847126	150
7578410000	7578410818	7578410667	757450686681	757959756595	150
7569410000	7569410982	7569410561	756577827199	756773776108	150
7568510000	7568510786	7568510630	756212042941	756483295343	150
7574510000	7574510927	7574510667	757187854545	757322847324	150
7767410000	7767410597	7767410600	776867954349	776946812519	150
7754510000	7754510739	7754510488	775423881166	775573882535	150
7771510000	7771510349	7771510657	777554828269	777349294179	150

7771610000	7771610950	7771610722	777785323083	777011884202	150
7759510000	7759510960	7759510547	775317105486	775280133453	150
7774510000	7774510827	7774510688	777071736708	777394632977	150
7728410000	7728410104	7728410194	772670887022	772042236830	150
7728510000	7728510276	7728510250	772753794626	772437237080	150
7675510000	7675510097	7675510728	767580229392	767995242023	150
7691610000	7691610305	7691610912	769480195359	769911231110	150
7676410000	7676410374	7676410696	767005819967	767031487538	150
7708510000	7708510001	7708510053	770738805992	770124730758	150
7687410000	7687410765	7687410787	768047968750	768774210886	150
7729510000	7729510514	7729510250	772063943324	772186857827	150
7719410000	7719410469	7719410084	771883098813	771693027315	150
7668410000	7668410692	7668410578	766221265206	766515854840	150
7697510000	7697510918	7697510943	769178723399	769571560145	150
7698410000	7698410157	7698410876	769052517174	769777017483	150
7845510000	7845510691	7845510422	784306809144	784021589201	150
7859410000	7859410988	7859410491	785996637630	785146008683	150
7811600000	7811600609	7811600063	781228877286	781345866730	150
7796410000	7796410624	7796410907	779917312652	779586247358	150
7827410000	7827410110	7827410220	7822674444024	782836129985	150
7836510000	7836510814	7836510363	783847757185	783744762484	150
7907510000	7907510749	7907510076	790755640342	790797860595	150
7851610000	7851610087	7851610533	785625018912	785579925222	150
7911610000	7911610790	7911610152	791911321457	791765536457	150
7805510000	7805510216	7805510001	780520244036	780481200101	150
7871510000	7871510368	7871510667	787714312695	787473196272	150
7833510000	7833510287	7833510281	783005852708	783390222405	150
7929410000	7929410578	7929410203	792155323243	792911014521	150
7963510000	7963510620	7963510589	796453710399	796142948256	150
7990510000	7990510309	7990510882	799844372624	799431174270	150
8022510000	8022510691	8022510092	802184506917	802027489945	150
7921610000	7921610974	7921610250	792639492491	792735052280	150
8025500000	8025500801	8025500053	802385470048	802051331783	150
7999410000	7999410396	7999410895	799547046915	799730385363	150
7941610000	7941610935	7941610444	794061373747	794842651547	150
7957410000	7957410463	7957410520	795313003787	795603753483	150
7931610000	7931610243	7931610345	793011903031	793561061127	150
8019510000	8019510293	8019510080	801268027164	801203738363	150
7944510000	7944510609	7944510406	794782868158	794788205278	150
7978410000	7978410894	7978410706	797824188525	797243861402	150
7966410000	7966410258	7966410626	796527690293	796119165193	150
7966510000	7966510214	7966510671	796558427753	796184941039	150
8035500000	8035500786	8035500153	803650283975	803999493307	150
7926410000	7926410735	7926410225	792712015873	792947057412	150
7916500000	7916500623	7916500056	791572608330	791585604088	150
7956510000	7956510117	7956510570	795640965680	795450430239	150
8000510000	8000510416	8000510906	800703397687	800689244914	150

8002510000	8002510799	8002510889	800073367571	800231630659	150
8159410000	8159410858	8159410423	815890679939	815065673055	150
8121510000	8121510869	8121510103	812345078202	812756136856	150
8095510000	8095510277	8095510877	809606201223	809928588631	150
8134510000	8134510405	8134510221	813513018582	813195696342	150
8153510000	8153510429	8153510413	815015087124	815722332809	150
8102610000	8102610923	8102610963	810087980220	810664605695	150
8131610000	8131610096	8131610271	813952879966	813628729197	150
8092510000	8092510597	8092510793	809491184528	809434340639	150
8162510000	8162510471	8162510505	816576857311	816744431555	150
8148510000	8148510461	8148510390	814145950589	814468890814	150
8108510000	8108510005	8108510994	810017682744	810857808651	150
8110510000	8110510618	8110510013	811167933042	811076490546	150
8126500000	8126500657	8126500077	812703847295	812546716106	150
8285500000	8285500200	8285500674	828357025584	828176963919	150
8201610000	8201610576	8201610987	820361360500	820025065836	150
8179410000	8179410095	8179410622	817478516672	817862715043	150
8339510000	8339510619	8339510310	833974370306	833149426155	150
8228410000	8228410076	8228410146	822936362361	822591011285	150
8218410000	8218410916	8218410050	821386590388	821810256258	150
8234510000	8234510422	8234510231	823985112024	823352932424	150
8224510000	8224510333	8224510129	822638458640	822188585025	150
8174510000	8174510859	8174510628	817731355200	817757230681	150
8217410000	8217410778	8217410060	821598493871	821762463545	150
8202610000	8202610939	8202610972	820229863206	820697989701	150
8176510000	8176510253	8176510694	817378499685	817459454745	150
8261510000	8261510207	8261510509	826946263307	826933730133	150
8277410000	8277410533	8277410650	827879937237	827392766648	150
8195500000	8195500337	8195500773	819097297334	819697218433	150
8169410000	8169410910	8169410522	816104106332	816321689524	150
8253510000	8253510445	8253510423	825812343935	825004504514	150
8227410000	8227410009	8227410159	822707144254	822604381472	150
8418410000	8418410950	8418410069	841308437423	841110056477	150
8309410000	8309410273	8309410947	830792580747	830522560768	150
8322510000	8322510745	8322510123	832896433325	832931934347	150
8297410000	8297410701	8297410848	829655943832	829433550922	150
8297510000	8297510850	8297510905	829087655021	829647105827	150
8340510000	8340510924	8340510330	834034611870	834655722930	150
8299510000	8299510334	8299510894	829886219937	829136160959	150
8329410000	8329410581	8329410144	832354825286	832294985622	150
8391610000	8391610249	8391610883	839500268190	839072948795	150
8307510000	8307510645	8307510017	830036327666	830031683233	150
8537510000	8537510967	8537510338	853652841300	853325720273	150
8543510000	8543510321	8543510351	854726240597	854998139569	150
8529510000	8529510476	8529510231	852559073100	852433180899	150
8467410000	8467410548	8467410572	846029479378	846020819523	150
8467510000	8467510320	8467510628	846221481532	846294265285	150

8426500000	8426500702	8426500107	842930481449	842835155912	150
8539410000	8539410692	8539410263	853797573405	853757577426	150
8487410000	8487410732	8487410769	848122716323	848301579098	150
8487510000	8487510515	8487510826	848490744890	848251127311	150
8518410000	8518410963	8518410079	851667671294	851430420403	150
8430510000	8430510757	8430510240	843838572302	843037573797	150
8447410000	8447410367	8447410371	844915433099	844328221292	150
8447510000	8447510114	8447510429	844016277463	844877400813	150
8477410000	8477410566	8477410670	847142529270	847661878833	150
8493510000	8493510931	8493510843	849631301911	849638125237	150
8504510000	8504510120	8504510957	850785331800	850025706006	150
8490510000	8490510174	8490510833	849868060220	849084973821	150
8460610000	8460610090	8460610607	846022561014	846364349213	150
8521510000	8521510947	8521510144	852852392160	852219441051	150
8545510000	8545510744	8545510389	854211085181	854461731022	150
8422510000	8422510765	8422510133	842036355565	842862946504	150
8531610000	8531610172	8531610307	853094913484	853838279380	150
8645510000	8645510659	8645510400	864948032370	864206471256	150
8631600000	8631600825	8631600249	863047972907	863353663392	150
8635510000	8635510585	8635510291	863193954272	863632888364	150
8570510000	8570510318	8570510647	857704181407	857488691682	150
8658510000	8658510631	8658510542	865213399749	865785553927	150
8549510000	8549510766	8549510429	854898661809	854136442702	150
8665510000	8665510918	8665510620	866809008722	866905715290	150
8557410000	8557410399	8557410481	855963405362	855221572487	150
8571610000	8571610917	8571610703	857551186392	857755625967	150
8639510000	8639510671	8639510340	863270323377	863478292694	150
8687510000	8687510748	8687510845	868173116509	868942868000	150
8714510000	8714510252	8714510080	871932358674	871252660105	150
8731610000	8731610208	8731610327	873296737751	873653957645	150
8732510000	8732510840	8732510264	873358540145	873742639712	150
8709410000	8709410341	8709410987	870638841427	870895895716	150
8748410000	8748410417	8748410395	874920586505	874465367849	150
8797510000	8797510937	8797510954	879523366292	879915838894	150
8697410000	8697410761	8697410888	869876298695	869062356151	150
8786410000	8786410483	8786410808	878319929679	878634565804	150
8688410000	8688410021	8688410777	868761043278	868069903158	150
8678510000	8678510885	8678510738	867434422380	867152177361	150
8679410000	8679410195	8679410671	867400867792	867666638268	150
8778410000	8778410859	8778410687	877787092611	877663807677	150
8753510000	8753510408	8753510470	875230329323	875757086994	150
8749410000	8749410788	8749410383	874251261841	874186250146	150
8749510000	8749510800	8749510449	874225888785	874936678415	150
8729410000	8729410546	8729410184	872836993210	872038985248	150
8897410000	8897410791	8897410908	889472634868	889390989479	150
8877510000	8877510416	8877510766	887319048530	887517050241	150
8847410000	8847410437	8847410410	884802676604	884427822120	150

8836410000	8836410872	8836410316	883968879888	883310776196	150
8881510000	8881510579	8881510768	888010377638	888169831117	150
8867410000	8867410615	8867410611	886010561337	886647038415	150
8813510000	8813510025	8813510082	881035094420	881872813847	150
8898410000	8898410188	8898410897	889449939157	889943403849	150
8858510000	8858510664	8858510563	885627305053	885805457759	150
8816500000	8816500610	8816500047	881897700670	881930633353	150
8808410000	8808410846	8808410009	880519627222	880551043034	150
8879410000	8879410052	8879410691	887002397688	887747235420	150
9028510000	9028510241	9028510183	902625488097	902508370988	150
9048410000	9048410284	9048410327	904187548612	904959895080	150
8991510000	8991510781	8991510879	899793279161	899707357991	150
9046500000	9046500872	9046500267	904128553518	904607243687	150
8928410000	8928410139	8928410216	892930171305	892911325812	150
8983510000	8983510915	8983510793	898203035126	898123703508	150
8959410000	8959410008	8959410502	895726298338	895809610317	150
9045500000	9045500949	9045500251	904980759428	904868652507	150
8970510000	8970510397	8970510687	897468198789	897089352953	150
9002610000	9002610906	9002610954	900643086767	900134498803	150
9038410000	9038410157	9038410227	903141084648	903525873548	150
9068410000	9068410582	9068410522	906751622794	906607477906	150
9099410000	9099410265	9099410808	909140619016	909963734269	150
9166510000	9166510149	9166510594	916607075844	916946267738	150
9080510000	9080510417	9080510697	908753270965	908709184139	150
9080610000	9080610276	9080610769	908419649555	908638074069	150
9085500000	9085500244	9085500651	908241902264	908026162351	150
9072510000	9072510066	9072510598	907666489714	907097097359	150
9110610000	9110610428	9110610085	911459111108	911036312568	150
9118410000	9118410898	9118410040	911932438131	911680390362	150
9159510000	9159510867	9159510490	915665573757	915137629865	150
9069410000	9069410029	9069410513	906143292401	906977936682	150
9125500000	9125500821	9125500064	912469695181	912700811799	150
9088410000	9088410913	9088410718	908271902164	908006315572	150
9062510000	9062510457	9062510496	906592920828	906467757947	150
9245510000	9245510697	9245510357	924308988775	924578568636	150
9233510000	9233510183	9233510223	923983385964	923312068118	150
9248410000	9248410322	9248410347	924415716763	924090310301	150
9221510000	9221510888	9221510115	922163381329	922079480655	150
9236500000	9236500827	9236500188	923404799686	923952348544	150
9225500000	9225500838	9225500074	922986581608	922562981271	150
9197510000	9197510833	9197510896	919257890641	919909550411	150
9286410000	9286410473	9286410760	928695451592	928228899926	150
9204510000	9204510069	9204510925	920926966464	920583746937	150
9249510000	9249510716	9249510400	924279543010	924055093152	150
9220510000	9220510720	9220510123	922009907703	922751533838	150
9235500000	9235500820	9235500173	923632570454	923878211628	150
9268510000	9268510738	9268510602	926611572201	926090935316	150

9213510000	9213510913	9213510023	921216693994	921722542105	150
9256500000	9256500058	9256500388	925253822904	925757074255	150
9243510000	9243510268	9243510322	924342028650	924550511368	150
9358410000	9358410528	9358410454	935783277562	935533224785	150
9302510000	9302510373	9302510920	930391574557	930125445333	150
9375510000	9375510048	9375510698	937894574174	937624968738	150
9304510000	9304510085	9304510936	930394601539	930970992734	150
9336500000	9336500841	9336500198	933995399115	933854399426	150
9306510000	9306510417	9306510009	930155389952	930511552752	150
9419510000	9419510361	9419510122	941520598235	941683577001	150
9408510000	9408510958	9408510025	940950886144	940432339056	150
9380610000	9380610323	9380610799	938186342875	938456267684	150
9352510000	9352510324	9352510425	935841171549	935941250984	150
9424510000	9424510369	9424510150	942706081486	942514221255	150
9381610000	9381610078	9381610784	938286023596	938213954293	150
9384510000	9384510936	9384510750	938127245158	938522315277	150
9399410000	9399410319	9399410837	939223384038	939111704132	150
9414510000	9414510202	9414510049	941560312736	941923383885	150
9373500000	9373500753	9373500606	937451205335	937770781215	150
9307410000	9307410638	9307410970	930208809301	930749549108	150
9364510000	9364510721	9364510550	936853025403	936931006563	150
9518510000	9518510144	9518510134	951093474495	951948215689	150
9476410000	9476410345	9476410678	947399899650	947836473103	150
9513510000	9513510969	9513510054	951927666042	951404081380	150
9499510000	9499510270	9499510915	949783522682	949754218409	150
9517410000	9517410824	9517410091	951959182807	951992268495	150
9503510000	9503510777	9503510951	950101126435	950708347711	150
9461610000	9461610203	9461610595	946068799276	946242157394	150
9468410000	9468410659	9468410560	946557514744	946967203785	150
9566510000	9566510221	8566510633	956658004925	956414046395	150
9676510000	9676510337	9676510746	967695775805	967153239720	150
9559410000	9559410935	9559410464	955401625375	955226059782	150
9560610000	9560610109	9560610618	956221113654	956639454988	150
9619410000	9619410456	9619410076	961667123757	961613940945	150
9609410000	9609410326	9609410978	960295568246	960930048954	150
9595500000	9595500404	9595500816	959461488357	959818970974	150
9679410000	9679410197	9679410672	967045230411	967119617257	150
9561610000	9561610740	9561610605	956110818609	956171443076	150
9643510000	9643510340	9643510363	964274896581	964373948762	150
9616500000	9616500639	9616500028	961578131274	961542237891	150
9604510000	9604510137	9604510968	960444706157	960189952349	150
9563510000	9563510554	9563510551	956446049094	956678532375	150
9659410000	9659410955	9659410473	965102358315	965769657739	150
9614510000	9614510235	9614510071	961582058964	961945662728	150
9592510000	9592510690	9592510846	959392822163	959592434960	150
9636410000	9636410839	9636410297	963090695080	963369188427	150
9636500000	9636500811	9636500228	963953121970	963524419634	150

9681510000	9681510546	9681510748	968773007754	968272721073	150
9756500000	9756500066	9756500438	975470102601	975096720280	150
9713510000	9713510007	9713510073	971911332731	971594307034	150
9849410000	9849410806	9849410394	984282244778	984501654526	150
9706410000	9706410384	9706410006	970031898168	970642629580	150
9806410000	9806410401	9806410017	980816145256	980794361877	150
9806510000	9806510506	9806510060	980083434667	980674285634	150
9785500000	9785500279	9785500727	978191961772	978380343710	150
9688510000	9688510034	9688510840	968202018370	968369783017	150
9727510000	9727510957	9727510257	972979269077	972530192392	150
9762510000	9762510590	9762510568	976117579571	976562924799	150
9720510000	9720510810	9720510173	972855248580	972061082492	150
9736410000	9736410858	9736410307	973911380170	973339392518	150
9819510000	9819510429	9819510163	981840762739	981237461481	150
9888410000	9888410060	9888410799	988496711998	988392851951	150
9888510000	9888510061	9888510860	988250315796	988466173827	150
9876410000	9876410408	9876410720	987228179953	987211406632	150
9836500000	9836500840	9836500247	983966950591	983073817653	150
9864510000	9864510811	9864510601	986191303655	986111460825	150
9820610000	9820610565	9820610254	982705883758	982894635638	150
9832510000	9832510862	9832510274	983831831404	983206104323	150
9835510000	9835510620	9835510314	983408266603	983377746432	150
9924510000	9924510374	9924510201	992993049655	992712242878	150
9927510000	9927510992	9927510278	992632100020	992271960780	150
9858410000	9858410548	9858410503	985434737702	985667580165	150
9950510000	9950510047	9950510491	995719753648	995795694611	150
9997510000	9997510976	9997510975	999886255463	999254288403	150
9960610000	9960610170	9960610658	996821727883	996253503442	150
1875336811	1875336269	1129910000	187322443411	187735907019	150
5354647273	5354647551	7118410038	535853264507	535788162420	150
8801716781	8801716311	9510510054	880557220309	880955497709	150
8302720957	8302720386	2171510592	830677796786	830019545557	150
5342577954	5342577648	7896410917	534937084013	534956100967	150
9490909798	9490909924	7619910000	949326227461	949264940845	150
4681427780	4681427267	4413510039	468008487955	468655850019	150
4109220903	4109220472	9241510311	410616138444	410013025181	150
2588979099	2588979626	1331610284	258100473308	258601698010	150
2228963763	2228963199	1379510699	222202590360	222609787560	150
8058065423	8058065902	228510194	805260602443	805162871133	150
3043228004	3043228741	2886510860	304259956126	304441364843	150
3452509666	3452509456	8360610597	345009026450	345671603745	150
6774914563	6774914074	5010510000	677481738875	677554081200	150
2188886171	2188886251	5038510278	218225310192	218302123637	150
6176560985	6176560398	1459410446	617705139424	617566949850	150
8081118587	8081118121	3471610688	808047433989	808581237017	150
5123185307	5123185497	6145510343	512854745283	512608588843	150
241494042	241494562	6746500335	24474911910	24175861002	150

8886129383	8886129416	9268410541	888463869692	888733437739	150
5650757018	5650757627	3495500800	565912681100	565937883733	150
7471637814	7471637296	5869510654	747972279399	747724009319	150
5604540380	5604540332	4357410457	560857957749	560417737908	150
6405586272	6405586261	9230510223	640887657024	640151331224	150
1083891348	1083891329	4709910000	108120480864	108102392964	150
64072665	64072213	9698910000	6355094151	6771654477	150
3554927675	3554927744	546510424	355264774406	355617032040	150
6402503600	6402503785	5246500284	640874993121	640326460995	150
3047181379	3047181715	2848510456	304022711668	304681976388	150
6711757141	6711757132	6541510337	671107767479	671080247070	150
2262965109	2262965249	7526510231	226533483383	226512303260	150
6797472436	6797472881	7371610682	679316301101	679864827777	150
9606790034	9606790780	4211610081	960699768629	960600065083	150
8745470735	8745470437	5795500833	874125514969	874870922453	150
6051724678	6051724355	2866401658	605815743511	605128778716	150
766470926	766470042	6826500145	76688646238	76415541688	150
7118410000	7118410654	679510728	711289854228	711014184313	150
9212167685	9212167018	9978510769	921191430480	921084830076	150
7598612947	7598612764	1919910000	759666187515	759429111491	150
6261893545	6261893957	6238510299	626828916921	626956204631	150
8121779812	8121779764	216500979	812104624331	812163210941	150
6069828130	6069828599	2558510526	606626341283	606705482360	150
974684683	974684246	6445500288	97366648801	97628835876	150
5052634177	5052634247	4277510702	505306514246	505807499455	150
1433570742	1433570239	698410869	143657533625	143126206549	150
3742561212	3742561020	1798410880	374737000007	374141702457	150
2046410000	2046410992	2046410330	204624663465	204025243803	150
2698310221	2698310076	9534510261	269272489393	269806015267	150
9939351783	9939351505	1173500578	993234544439	993461836452	150
6135161732	6135161544	9009510980	613416343488	613083937090	150
8132346632	8132346614	1388410740	813379637716	813767893307	150
1434905399	1434905757	4678410674	143362817359	143078002612	150
9766087515	9766087844	809410989	976440949616	976060788652	150
9508076760	9508076915	2259410427	950101804440	950551779000	150
5172820910	5172820977	9669510638	517984811521	517804880729	150
8755341100	8755341382	4626500123	875524428849	875232592959	150
6916432063	6916432609	5434510248	691155634302	691680490908	150
2786854709	2786854251	8366510612	278404009435	278355864592	150
8294381324	8294381866	7146500275	829018714573	829798305774	150
2945636298	2945636014	636410288	294602599305	294648654303	150
7150367029	7150367561	9528410176	715166921548	715081473852	150
3378157923	3378157952	7856510560	337410014304	337278898719	150
3771694888	3771694633	8787510855	377896863983	377477839115	150
3645829046	3645829306	8740510370	364368209284	364371143892	150
5272047182	5272047259	2918510166	527121376722	527350060624	150
9079239523	9079239572	1086410732	907310927706	907544559596	150

5678365775	5678365770	4507410985	567389637634	567302293618	150
4922140549	4922140185	8916410126	492920816863	492522774180	150
4487510000	4487510274	8597510934	448183048656	448389763662	150
5860432019	5860432130	685500705	586604401483	586692587108	150
7059410000	7059410538	7059410412	705691649575	705737745604	150
6492577798	6492577773	7677410688	649807087925	649269487934	150
5105176345	5105176812	8620510162	510860713887	510715595323	150
9807727787	9807727000	3700510968	980309021738	980041317239	150
9327273927	9327273131	8782994765	932096593862	932583498797	150
1020510000	1020510120	1020510096	102741138495	102310063149	150
2385798531	2385798576	7347410361	238922514184	238147441807	150
1466451648	1466451365	9143510313	146932359902	146278057836	150
5879961495	5879961804	8885510857	587127416028	587997074027	150
8056533842	8056533679	2769510641	805743038924	805441018042	150
2809915225	2809915428	1928510264	280037351570	280428588142	150
957826038	957826596	9149910000	95056511413	95070336695	150
5836877291	5836877102	7465510597	583343949345	583471867129	150
8042967168	8042967731	9789510847	804972945872	804400405808	150
3589802920	3589802869	9839910000	358404980766	358210500852	150
9734299691	9734299267	3628510237	973203478592	973250019935	150
6675613578	6675613475	4073910000	667472728104	667996088782	150
1256500000	1256500872	1256500380	125635368825	125486807502	150
8487625852	8487625450	1229510195	848592498346	848382664639	150
6508725199	6508725889	6001610965	650939221472	650315350589	150
3734999619	3734999774	6171610661	373277656639	373627954028	150
5894573430	5894573593	4167510594	589218281010	589375681648	150
4457410000	4457410462	4457410467	445043185633	445680388373	150
3315546040	3315546273	5904510994	331363341959	331743240016	150
1503940725	1503940198	2087510780	150247555131	150141373298	150
8583005984	8583005141	7448510420	858589448454	858670073092	150
6989052634	6989052987	9648510442	698105967195	698528222608	150
9523570103	9523570398	48410318	952080059552	952372670187	150
5802418592	5802418060	4063510497	580554388417	580568599167	150
1880070538	1880070223	224510121	188925760877	188792699479	150
6265439458	6265439645	1586510829	626269437900	626363627069	150
3360416248	3360416582	8629410174	336868638110	336308891352	150
7980240710	7980240437	8535500201	798327344247	798309494919	150
2618299630	2618299907	842510366	261043723406	261206435926	150
7674603514	7674603349	8789410780	767742991473	767142788419	150
2727048719	2727048901	8647510450	272280986120	272538720294	150
6026294118	6026294916	7809410995	602801573595	602893697017	150
560473710	560473435	7469410551	56871870851	56426147775	150
6684625876	6684625210	3407410974	668976231258	668347599399	150
7400359661	7400359139	3800610049	740062514523	740490633622	150
3381930581	3381930838	477510718	338703128617	338426072123	150
9172133151	9172133433	5127510193	917481958543	917492691605	150
7769460792	7769460920	2811510068	776810885570	776855217790	150

2361840657	2361840989	7692510854	236652924553	236690169576	150
7723442566	7723442742	5912510080	772069376926	772704941129	150
6136700264	6136700257	8997410918	613166002638	613607352405	150
9173318476	9173318008	4420510138	917244771269	917110708711	150
4958510000	4958510391	4958510568	495047145913	495793277123	150
7806692201	7806692811	6215510041	780266246059	780476722620	150
9420173468	9420173737	2195500766	942886640346	942875752850	150
3890528455	3890528565	5026500064	389934511921	389781339656	150
8586676033	8586676721	5520510149	858369611503	858864129697	150
4515611476	4515611341	2734510275	451174472505	451746181986	150
8586410000	8586410432	8586410788	858318127634	858687116597	150
4926421580	4926421184	1708410992	492790801437	492931072769	150
6342397019	6342397146	6716410103	634346942895	634549252736	150
8293064254	8293064144	5426410172	829717059189	829304364105	150
3639495978	3639495453	8380510726	363175080267	363222576813	150
2396511559	2396511464	2709410981	239300433010	239800918343	150
8396395654	8396395176	6679510734	839545661847	839256428845	150
6865872377	6865872351	1118510086	686344064196	686422495289	150
3520862296	3520862514	5454700470	352535629478	352146480388	150
3270124631	3270124639	2408410963	327035184010	327249175872	150
7008684484	7008684043	5757410498	700856964374	700649588512	150
2826713003	2826713841	4607510043	282643592208	282099194671	150
5026995080	5026995805	4381610779	502118924224	502060312057	150
9931079919	9931079335	345500272	993417316317	993258251075	150
4633019421	4633019918	7491512072	463447930973	463544022960	150
7139868534	7139868544	5615500007	713990351441	713730759978	150
1109873020	1109873027	2597410872	110344283603	110679303909	150
2843905199	2843905467	177410632	284656262460	284998976546	150
2481386219	2481386909	9788410789	248053891472	248245950738	150
9669401443	9669401442	815500024	966647295640	966809306790	150
8566559720	8566559971	2023510096	856042126369	856887782796	150
1468314114	1468314487	6915500041	146576152437	146102961788	150
1631254931	1631254285	8568410569	163522526905	163602127596	150
8577966475	8577966948	2359410437	857742948438	857149579169	150
6719624438	6719624620	1771510651	671355442299	671887079785	150
2789858472	2789858159	5667510644	278222592979	278725275048	150
7518063017	7518063350	2149410317	751746667100	751014879596	150
2152510000	2152510319	2152510398	215288985575	215316104012	150
4508785851	4508785230	5216500984	450945302154	450180891306	150
1740850122	1740850815	5206500883	174594542602	174279235365	150
1825432810	1825432262	8369410542	182668318668	182024171787	150
7966477277	7966477502	3295500779	796140093404	796464330967	150
9540425640	9540425800	2439410247	954417049780	954823044968	150
720788218	720788109	119910000	72827824113	72885445813	150
1230456975	1230456912	8908510073	123612691682	123749717992	150
1924486479	1924486938	7007510985	192482621178	192516219050	150
5684710606	5684710271	9484510760	568245511893	568361048361	150

2606410000	2606410577	2606410989	260365133706	260153305727	150
7281158549	7281158698	7927410230	728093046870	728696817675	150
1756389462	1756389370	435510264	175926083129	175067540648	150
4206133529	4206133170	4869410588	420023994935	420222224584	150
2285256237	2285256335	9636510344	228212313791	228298048842	150
3345456772	3345456690	1961610637	334552652285	334497192481	150
2171488761	2171488403	3269510593	217988256940	217103140969	150
7651316208	7651316749	1016510072	765834985981	765023730381	150
727965109	727965985	4874510695	72258216136	72454488731	150
4553866842	4553866677	6436510321	455416134543	455427461244	150
4379222765	4379222592	4358410449	437727633445	437506852432	150
791370134	791370411	5378510705	79906202313	79200591565	150
3123899592	3123899508	3780510760	312500448512	312946920459	150
4438155008	4438155743	5776410704	443944894012	443989392441	150
7266900507	7266900096	1880510768	726046495273	726355509024	150
7228475592	7228475476	4147510396	722129474979	722557616487	150
3628326303	3628326974	4471510624	362080320461	362397447700	150
621924247	621924353	4197410835	62410551118	62390970601	150
2922510000	2922510471	2922510176	292978535520	292822961003	150
4301753534	4301753474	6937410323	430609388812	430045370626	150
2546378053	2546378051	6219410034	254189317211	254037989813	150
7257588176	7257588674	4318510109	725407672880	725571660962	150
9580186386	9580186105	9451510428	958377613860	958774401382	150
8489829547	8489829373	7305510951	848028410382	848618941597	150
9537960125	9537960713	7168510590	953365140355	953006311496	150
7391506559	7391506269	9961510579	739161388644	739299634273	150
3945445277	3945445920	4178410624	394159524254	394635931129	150
5257815639	5257815814	4937510377	525850938533	525875880581	150
6906269077	6906269809	2581610797	690818910606	690909280078	150
4976525082	4976525713	4791610919	497906020464	497413537351	150
2560219053	2560219230	4761610620	256540402115	256820146310	150
9026511699	9026511185	7406410975	902925559830	902235671039	150
3627610000	3627610886	7130510211	362651478164	362427760298	150
8545538415	8545538316	1077410623	854670307461	854896092996	150
8215568273	8215568879	5640510357	821913137415	821705083818	150
2695667684	2695667794	688410769	269558982248	269100238534	150
5387599249	5387599228	9725500124	538136112100	538670777431	150
2798376205	2798376058	5476510722	279853840993	279843974346	150
4590367715	4590367255	1398410841	459089605021	459308844374	150
2184366760	2184366307	4089410707	218186217869	218515447051	150
979262040	979262311	4099510872	97504644054	97280212158	150
5950786963	5950786940	2777410693	595287900428	595880139088	150
3134212478	3134212130	4058510478	313835222057	313752917847	150
4058510000	4058510547	8489510816	405215858347	405913218011	150
5279895948	5279895841	336410258	527540198471	527749259157	150
8001320770	8001320038	2402610986	800043606829	800543344138	150
5285758217	5285758077	6767510655	528360725908	528212324806	150

339524100	339524186	2244510329	33300705708	33987397436	150
8707762638	8707762712	1680510748	870194081235	870240155748	150
7949317293	7949317149	5648410383	794219956897	794566276289	150
8402510000	8402510003	8402510929	840334682431	840186788162	150
5687771312	5687771618	7919410104	568546636066	568078150422	150
1701117727	1701117302	29510174	170966207591	170896020412	150
2250522906	2250522572	5726410202	225327230098	225514892035	150
8776347244	8776347244	6909410004	877319005589	877163383233	150
2023956227	2023956402	835500223	202991918541	202465759056	150
4002190913	4002190627	8747410400	400060008162	400139433597	150
17871505	17871985	1847410403	1322420182	1563691500	150
3535432429	3535432110	2373510625	353352768292	353397041808	150
7473510000	7473510991	1267410544	747729449630	747761085275	150
9065215450	9065215907	7473510640	906724300346	906427476437	150
2051581668	2051581241	8469510617	205891212096	205687681751	150
7445632025	7445632115	1594510863	744386842620	744143154417	150
3762289272	3762289651	6939910000	376494845710	376628083596	150
904779400	904779545	9631610318	90166270172	90318628214	150
5639263313	5639263831	8209410937	563936873755	563223633624	150
17968589	17968140	8769410582	1876053383	1232370131	150
4458571545	4458571499	7502610001	445468259767	445643513485	150
4695086884	4695086975	1868410592	469951485388	469034247916	150
3817589078	3817589671	8947510479	381840597071	381342670760	150
7269323169	7269323565	3328510207	726934628362	726879010615	150
9731043140	9731043185	7723510172	973934767077	973331326537	150
3083663634	3083663049	4336510309	308100563416	308307087763	150
1252418636	1252418181	5006510975	125478841175	125360456732	150
8851654889	8851654690	8750510469	885871600693	885078925732	150
6888330557	6888330818	4395510904	688636516561	688956113621	150
6169694783	6169694492	3949410398	616557385865	616296436496	150
115426331	115426131	4867410607	11348326654	11855748229	150
1969462626	1969462934	3949510464	196780798768	196671006416	150
7077970190	7077970803	4056510477	707979129685	707933924185	150
8434989269	8434989303	5579410658	843178035552	843064963233	150
727610000	727610639	2588510823	72632220737	72904285180	150
7937950731	7937950966	7335500181	793213625904	793840669575	150
2003528789	2003528247	4680610824	200698140587	200368020345	150
4965865677	4965865404	7526410184	496395219661	496482637352	150
7783394796	7783394801	3727410205	778217817726	778430072966	150
8542645663	8542645294	5439410250	854800832095	854097740857	150
9779342311	9779342231	8706500936	977420456536	977987832994	150
3584875716	3584875670	5738410294	358540974564	358288997310	150
2243242666	2243242481	2368410544	224581499360	224929197673	150
9317441571	9317441864	4517510134	931754286095	931606073692	150
6127888303	6127888211	6169410520	612898289813	612619277625	150
2420568877	2420568414	5931510278	242938807247	242128592601	150
6914400870	6914400828	9349510410	691904976657	691120102395	150

6363487331	6363487600	7449410352	636959129164	636911582863	150
3507448522	3507448728	5106500874	350813569522	350406468455	150
1895364871	1895364693	4376510711	189340370208	189395484393	150
8612710483	8612710152	5151510394	861590119277	861830203795	150
7887332782	7887332735	3117410045	788015498879	788634715145	150
3994653248	3994653401	1423510136	399959954571	399324665057	150
3470595444	3470595814	6482510731	347746842134	347016944717	150
6261035748	6261035252	7433510241	626490967656	626091100602	150
8324925893	8324925476	8182510704	832576598649	832184584628	150
7457538582	7457538973	3939410298	745461763385	745022032514	150
16058323	16058665	5976510772	1027633784	1262682352	150
5924149408	5924149677	4825500129	592083286724	592266782637	150
9214444769	9214444412	1761510552	921257085053	921166444202	150
4271510000	4271510116	4271510603	427260759388	427917019712	150
9193915788	9193915568	9499410847	919717061749	919630836648	150
6337651011	6337651961	2198510883	633787022366	633170010570	150
3647564870	3647564632	2489410744	364143817799	364697401402	150
5100519112	5100519316	71610645	510447091209	510871762934	150
7381721349	7381721196	29410107	738762108853	738885573382	150
5408462230	5408462202	3497410863	540206875849	540883561032	150
8558919078	8558919567	3418410064	855178106925	855613223429	150
311610000	311610119	311610086	31093238314	31371909847	150
4565883892	4565883045	2763910000	456282168061	456982381402	150
2954752815	2954752425	9168410531	295127914434	295394964158	150
4621656858	4621656277	2744510380	462311981400	462711158767	150
8785012539	8785012435	9315510055	878726117430	878717934923	150
5366467478	5366467441	9076410639	536746025064	536415060628	150
2639410000	2639410415	2639410267	263923172411	263266756552	150
960029792	960029759	6316500995	96004098282	96696108291	150
4466967988	4466967618	900510985	446373109433	446468715873	150
855910617	855910395	4898510955	85060945530	85356683699	150
6184807560	6184807090	1427510219	618606730704	618331514300	150
9138006190	9138006293	9726510253	913617700984	913153797737	150
3870641090	3870641020	4410510039	387573323684	387333405825	150
5892626763	5892626900	4654510475	589915329458	589481459790	150
1127456011	1127456900	3441610391	112454254962	112775130520	150
884158503	884158753	2127410142	88902375155	88926970465	150
2463085906	2463085114	7139410223	246602824770	246929777781	150
6991171173	6991171656	247510402	699991143148	699071828029	150
7551006914	7551006588	9135500163	755049849534	755785368472	150
754034656	754034170	290610880	75401538887	75694629773	150
2273075581	2273075442	2357510513	227147500047	227049296908	150
7783609914	7783609376	6102510897	778446670763	778422537848	150
8759895438	8759895120	4288410733	875869517614	875886684249	150
3041754410	3041754042	6750610537	304173773733	304139077576	150
2700490432	2700490109	7972510682	270831587872	270629389369	150
9161343813	9161343112	7549410362	916947518651	916760305567	150

5423157360	5423157516	9061510489	542242844251	542040871484	150
6785986358	6785986536	2895510952	678939315398	678789880469	150
8126067700	8126067944	6831610335	812910135312	812423587142	150
1676938460	1676938839	5727410208	167438813590	167476369536	150
3827292612	3827292097	8400610014	382923377718	382319411252	150
2481584947	2481584740	1277410643	248488228572	248484577832	150
3636980459	3636980343	3978510763	363259621446	363703535662	150
5007553934	5007553165	6806500944	500679455582	500143090019	150
7255969178	7255969416	8291510808	725299353417	725008099539	150
7988784892	7988784601	5566500514	798298822261	798577803786	150
1011981351	1011981285	985500740	101111545890	101558111287	150
3850584546	3850584282	5768410586	385830171545	385472069761	150
4166115940	4166115080	5125500060	416920128700	416949751320	150
8383889219	8383889481	4876510761	838683277270	838722008362	150
979237264	979237450	9206510999	97652063256	97739483265	150
3472348084	3472348939	6294510838	347846045599	347275608559	150
4765244386	4765244778	7980610857	476170419166	476603844472	150
9690483314	9690483332	6613510060	969077610121	969836023964	150
1328238137	1328238382	4178510684	132428883733	132031968346	150
2616379200	2616379462	2424510143	261249821664	261880804953	150
2113571680	2113571503	5328410152	211834716876	211429041283	150
3325736365	3325736994	3577510731	332710089172	332625367012	150
8700107915	8700107752	9444510357	870032051600	870224511168	150
5153141460	5153141522	8394510850	515639286080	515080126043	150
3402156409	3402156322	7949510468	340838555300	340204089547	150
6669657932	6669657230	7527410188	666538139420	666525839794	150
2472030245	2472030950	7819410094	247171414463	247493057594	150
7431528861	7431528872	7149410322	743348649542	743337872330	150
3479613099	3479613249	3909410001	347696862537	347320692588	150
6395865386	6395865817	4087410725	639361833975	639348588508	150
2554627899	2554627399	7635500210	255627764765	255649848472	150
5556240662	5556240420	4235500168	555094160600	555972232478	150
461107816	461107979	987410810	46001208204	46291685322	150
9683788762	9683788781	5570610714	968188896738	968267988890	150
2484870275	2484870674	9251610475	248321867620	248804446977	150
5517593346	5517593876	919410097	551716433094	551092791993	150
5527235480	5527235146	987510867	552959404547	552526800505	150
4700165712	4700165894	227410151	470468560297	470952191045	150
8949064820	8949064131	101510894	894792870443	894881945618	150
4418803878	4418803316	6987410816	441459407378	441445052407	150
1603687221	1603687163	2707510051	160465225553	160727218709	150
3489048618	3489048254	3770510662	348113832836	348073635117	150
5367300733	5367300036	5690610924	536204749702	536685340846	150
8196359329	8196359143	8641610415	819529316790	819328688434	150
9118561750	9118561781	1079410605	911046845406	911153944476	150
6261138687	6261138105	4358510508	626408405797	626939006459	150
1901623417	1901623056	118410031	190340618335	190682971223	150

6185937891	6185937018	4755510514	618223986808	618867189086	150
3722197821	3722197175	7793510872	372082462873	372957092344	150
8202610651	8202610775	9585510828	820422025550	820193163047	150
8766672033	8766672469	2917410122	876635911730	876890772701	150
9840352274	9840352206	4269410528	984486492795	984191044845	150
6008812553	6008812302	279410624	600653188672	600674538778	150
4963471027	4963471883	3968510664	496779934124	496714917015	150
9842832612	9842832988	4219510097	984036220840	984407370140	150
4441106678	4441106318	7388410746	444100727092	444390247733	150
7917478128	7917478648	6458410461	791909818966	791684363333	150
1186893314	1186893202	689510828	118492604627	118341229898	150
6226399798	6226399289	5327510213	622989170752	622318294082	150
2457509925	2457509738	4823510179	245559025316	245132351897	150
9603325805	9603325809	3027410133	960140672034	960369625208	150
3685505684	3685505921	6596410886	368647593311	368817930891	150
901019797	901019749	6418510121	90276403954	90923963320	150
2625040240	2625040723	9291610874	262242451341	262624531075	150
2460509995	2460509821	6459410451	246540771838	246075578489	150
6983702586	6983702946	9577410680	698462343113	698709136209	150
9611084567	9611084171	57510481	961937852971	961615369812	150
5207689817	5207689939	1891510861	520355961943	520755366499	150
8091915664	8091915420	5079510673	809965925452	809233937874	150
5036505800	5036505377	969910000	503154127550	503379665226	150
6616012373	6616012395	4496410874	661140313625	661582678372	150
8796876228	8796876145	5345500277	879043927487	879322204496	150
1200030930	1200030460	632510246	120278219366	120338503368	150
6978940638	6978940449	6033510201	697672205340	697033016393	150
4582030350	4582030581	5517410087	458885494949	458070422371	150
7291910850	7291910094	8060510500	729916187587	729666349150	150
356993757	356993074	9985500751	35569651622	35288453762	150
1909468571	1909468009	382510716	190449078100	190603856210	150
8968944292	8968944893	9226410156	896099441717	896492810819	150
7665195965	7665195347	4629510237	766057109259	766947860570	150
3210018226	3210018893	1047410327	321459827777	321210329173	150
9582150864	9582150177	5875510748	958404653327	958872545385	150
2374306628	2374306201	8529410164	237054441670	237277769807	150
8590532982	8590532849	1236500180	859361129978	859362640535	150
3467489268	3467489744	7468410558	346610440227	346738839926	150
5169826463	5169826409	3478410653	516525274283	516752726315	150
6507173292	6507173105	3085500645	650625462316	650150276926	150
2426510000	2426510629	2426510215	242694687931	242467637980	150
355323211	355323987	1167410534	35992428791	35170257907	150
4326939997	4326939815	9727410212	432588594493	432832519983	150
9645848981	9645848811	228410138	964398300155	964984379103	150
6876907924	6876907509	8054510417	687305935239	687555519166	150
5167571961	5167571648	7233500201	516110936177	516658904483	150
1095580099	1095580563	8463510540	109417808985	109522871042	150

1789430255	1789430678	3177510691	178481651937	178458362576	150
2128961053	2128961226	3871610728	212122006681	212776409746	150
7340969389	7340969001	5557410478	734294018200	734435493585	150
7105958982	7105958229	8390610898	710282124905	710493152120	150
2686043366	2686043416	3549410358	268530774248	268505681136	150
8406305483	8406305010	1445500283	840343521301	840922437540	150
3474317658	3474317202	3883510777	347052982730	347741926220	150
9721546662	9721546055	1727510249	972805384842	972088854666	150
3103066205	3103066473	2129711369	310171647226	310890124708	150
1254606897	1254606084	539510322	125452717466	125188854486	150
837285563	837285921	2955510534	83229327909	83052420235	150
8824686291	8824686316	3982510778	882051750720	882092325187	150
2853207581	2853207983	6881610831	285314578016	285775621807	150
138390290	138390245	5738510348	13852487202	13465388534	150
8109486712	8109486623	2667410586	810347014117	810072826809	150
2014069564	2014069355	6893510882	201862684065	201407594034	150
4343188805	4343188883	5116410043	434976676547	434179550765	150
5287368712	5287368588	9787410799	528915788852	528126191587	150
7718542976	7718542182	3379410637	771087564818	771681917212	150
596912131	596912679	6528410173	59386691013	59095204765	150
606653839	606653583	8817410118	60635561148	60295609806	150
3672202556	3672202589	8659510538	367493042421	367510284722	150
8944767079	8944767786	7135510241	894323902612	894224395750	150
9436018020	9436018755	2385810848	943205217191	943319294736	150
4970993333	4970993502	3327410164	497270628657	497392297040	150
9231010030	9231010315	2449410347	923524659488	923716950364	150
2145656424	2145656858	7598410866	214205613528	214056964185	150
2387998316	2387998875	4070610663	238028344150	238772656724	150
3790077792	3790077298	4101610973	379573393925	379739673952	150
5772727149	5772727672	8926500157	577676071703	577417369170	150
6039218534	6039218392	6537410286	603095275566	603509511309	150
18311356	18311505	4780610834	1111018567	1037422644	150
508848069	508848253	3722510157	50090273261	50164214673	150
5717666997	5717666756	110610076	571677506025	571823696720	150
7268303348	7268303681	9028410127	726100924088	726907007796	150
9710889237	9710889034	7846500346	971566186005	971564308296	150
4374558931	4374558605	951510470	437116799463	437812611644	150
2591276184	2591276114	9708410000	259973303994	259779908692	150
6783025132	6783025129	6287510804	678628551505	678130940087	150
8398221665	8398141869	5218410047	839237205818	839661339569	150
4291664035	4296400043	4679910000	429355876582	429868500145	150
7194122753	7190991178	950510481	719079013573	719718723299	150
3413144161	3413144581	8894510900	341917358232	341899574864	150
2321132758	2321132487	9157410442	232480577677	232672006476	150
7296150747	7296150863	3446410371	729302643272	729124097453	150
7801893180	7807331467	5927410228	780324322957	780211380681	150
5991539734	5990084294	3369410537	599803924893	599340469621	150

4487031267	4487031772	7909510069	448412160098	448575824157	150
8993308382	8993308597	3081510683	899429182549	899354238251	150
6915935746	6919988657	9808410010	691724571547	691500729135	150
6915935746	6919988657	9808410010	691901522275	691500729135	150
6915935746	6919988657	9808410010	691606852082	691500729135	150
1936104503	1933155744	6923510191	193312564070	193166923743	150
5464338145	5463811782	5187410736	546568668846	546088965287	150
3778973022	3778647967	6690510851	377600158460	377174568902	150
8497631597	8498284303	5155510451	849991336625	849003600803	150
9383699130	9388288701	1738510343	938005934599	938292372940	150
3364515638	3366343301	5815500030	336135550296	336123815427	150
6945374978	6941034168	4229910000	694738261752	694672287108	150
2022945130	2027225393	3783510767	202467214592	202576826271	150
9778159845	9779559264	615510078	977720979025	977376292493	150
6687155968	6680764453	5064510516	668562341081	668789249422	150
3860500316	3865408639	6505510970	386912442810	386102897004	150
5780215438	5787826527	1259910000	578212297452	578866770839	150
9204127469	9209921559	9439410254	920122150009	920622722135	150
7499211063	7497602240	279510688	749739891706	749887075522	150
700686599	708629864	8828410206	70414743900	70003186634	150
4383795644	4383423234	5791510855	438195032938	438479018104	150
6762950280	6766004994	5047510387	676113535886	676188141103	150
4937572902	4930585464	6036410234	493916112605	493081009844	150
8278739046	8273363861	9079410613	827939303177	827086911064	150
3266756797	3268861776	1718410091	326465646878	326628426269	150
4458134393	4454489473	818510155	445803631111	445078630576	150
6359495754	6353345205	2157510493	635684388685	635937514648	150
6474285568	6471726001	3611610119	647208748356	647288347779	150
9590958071	9595331016	953510483	959697663604	959484098500	150
305330259	300416237	830510272	30409797593	30816781658	150
1199423839	1198354505	7856500446	119266024010	119558740870	150
2521102638	2520707736	4967510672	252344072398	252195768887	150
6512200606	6519615583	7701542012	651691377565	651464754646	150
2341462163	2347433916	1460510533	234427964311	234441751527	150
7676080961	7677295278	9890510874	767610711098	767486185960	150
3963512535	3960310327	8455510486	396233288496	396221160735	150
4741918270	4742358275	2161610558	474190692792	474931223054	150
4978412630	4978477092	2318410054	497205979550	497989221031	150
5393912911	5399367113	6921510182	539258601722	539194786213	150
9269645987	9269710746	6706410003	926521139614	926892357306	150
9373601049	9377977780	708510046	937006907892	937576263746	150
4125373326	4120557021	6151610463	412511921610	412700088332	150
1806503225	1803111621	6452510432	180612917684	180899837152	150
5569508844	5566796474	3614510065	556833466215	556849297898	150
9117778969	9113532484	9673510662	911471630399	911715411339	150
2400583150	2409152226	5208410946	240494036045	240118291579	150
5303147999	5303946646	1559410456	530973933698	530054251299	150

8879163277	8876950471	8319410046	887908479076	887364147122	150
1041939392	1048864857	3454510454	104795699435	104727709799	150
6472119247	6474870904	4779410677	647946660415	647991600207	150
1174123650	1176381003	8967410620	117280889066	117320602869	150
9546809030	9546904734	3096510881	954981289982	954570313318	150
7610778484	7615168061	5548510428	761451940054	761184491059	150
48510000	48510427	48510372	4061076352	4001978614	150
48510000	48510427	48510372	4061076352	4001978614	150
33500000	33500233	33500174	3673586205	3244555920	150
33500000	33500233	33500174	3673586205	3244555920	150
5510000	5510073	5510911	408019537	411641875	150
5510000	5510073	5510911	408019537	411641875	150
19410000	19410332	19410008	1177653870	1475908933	150
19410000	19410332	19410008	1177653870	1475908933	150
56500000	56500015	56500359	5395839600	5726553630	150
56500000	56500015	56500359	5395839600	5726553630	150
11610000	11610694	11610058	1871581546	1335732196	150
11610000	11610694	11610058	1871581546	1335732196	150
46500000	46500855	46500258	4376428603	4482695479	150
46500000	46500855	46500258	4376428603	4482695479	150
28510000	28510219	28510174	2460299081	2572370709	150
28510000	28510219	28510174	2460299081	2572370709	150
10610000	10610499	10610066	1235409954	1856317515	150
10610000	10610499	10610066	1235409954	1856317515	150
610000	610349	610966	637541238	414367241	150
610000	610349	610966	637541238	414367241	150
39510000	39510549	39510274	3342346427	3246561272	150
39510000	39510549	39510274	3342346427	3246561272	150
108410000	108410829	108410930	10479740462	10701669865	150
108410000	108410829	108410930	10479740462	10701669865	150
109410000	109410219	109410919	10044452984	10023099733	150
109410000	109410219	109410919	10044452984	10023099733	150
229410000	229410547	229410127	22621958373	22676525714	150
229410000	229410547	229410127	22621958373	22676525714	150
207410000	207410696	207410951	20847352828	20153668036	150
207410000	207410696	207410951	20847352828	20153668036	150
190610000	190610443	190610870	19781366713	19282086014	150
190610000	190610443	190610870	19781366713	19282086014	150
232510000	232510893	232510205	23000447603	23986562990	150
232510000	232510893	232510205	23000447603	23986562990	150
198410000	198410096	198410820	19565256359	19196064833	150
198410000	198410096	198410820	19565256359	19196064833	150
129410000	129410527	129410117	12648270917	12008174316	150
129410000	129410527	129410117	12648270917	12008174316	150
149410000	149410785	149410315	14580198021	14957526222	150
149410000	149410785	149410315	14580198021	14957526222	150
131510000	131510051	9031510194	13120677154	13273878667	150

131510000	131510051	9031510194	13120677154	13273878667	150
147410000	147410275	147410336	14600455250	14345450205	150
147410000	147410275	147410336	14600455250	14345450205	150
351510000	351510024	351510409	35970453908	35710990891	150
351510000	351510024	351510409	35970453908	35710990891	150
358410000	358410510	358410445	35940036612	35815372285	150
358410000	358410510	358410445	35940036612	35815372285	150
325510000	325510327	325510149	32666981135	32303613637	150
325510000	325510327	325510149	32666981135	32303613637	150
349410000	349410824	349410335	34467985441	34168602052	150
349410000	349410824	349410335	34467985441	34168602052	150
356510000	356510001	356510501	35475442476	35598024692	150
356510000	356510001	356510501	35475442476	35598024692	150
321610000	321610853	321610185	32968838584	32201291207	150
321610000	321610853	321610185	32968838584	32201291207	150
288410000	288410931	288410729	28247913432	28416572826	150
288410000	288410931	288410729	28247913432	28416572826	150
291610000	291610218	291610865	29111824846	29579602619	150
291610000	291610218	291610865	29111824846	29579602619	150
267510000	267510273	267510600	26075116483	26094960788	150
267510000	267510273	267510600	26075116483	26094960788	150
285500000	285500258	285500664	28329571310	28535361340	150
285500000	285500258	285500664	28329571310	28535361340	150
278410000	278410780	278410630	27919699897	27196215050	150
278410000	278410780	278410630	27919699897	27196215050	150
270510000	270510246	270510609	27065834791	27192840104	150
270510000	270510246	270510609	27065834791	27192840104	150
249410000	249410805	249410325	24026600656	24718212822	150
249410000	249410805	249410325	24026600656	24718212822	150
437410000	437410239	437410270	43500065605	43533457739	150
437410000	437410239	437410270	43500065605	43533457739	150
436410000	436410800	436410268	43455424689	43532890437	150
436410000	436410800	436410268	43455424689	43532890437	150
453510000	453510467	453510435	45842094690	45779701035	150
453510000	453510467	453510435	45842094690	45779701035	150
479510000	479510118	479510708	47588536096	47388619284	150
479510000	479510118	479510708	47588536096	47388619284	150
443510000	443510287	443510333	44071606542	44411431216	150
443510000	443510287	443510333	44071606542	44411431216	150
459510000	459510902	459510511	45450828813	45574849397	150
459510000	459510902	459510511	45450828813	45574849397	150
396510000	396510555	396510908	39807528654	39902026781	150
396510000	396510555	396510908	39807528654	39902026781	150
416510000	416510596	416510110	41275815695	41873158803	150
416510000	416510596	416510110	41275815695	41873158803	150
410610000	410610463	410610106	41026880388	41222047510	150
410610000	410610463	410610106	41026880388	41222047510	150

426500000	426500688	426500099	42100810909	42660745460	150
426500000	426500688	426500099	42100810909	42660745460	150
397410000	397410703	397410850	39453081939	39168437735	150
397410000	397410703	397410850	39453081939	39168437735	150
376410000	376410316	376410659	37504857855	37654298888	150
376410000	376410316	376410659	37504857855	37654298888	150
427410000	427410027	427410171	42792352030	42120042172	150
427410000	427410027	427410171	42792352030	42120042172	150
378410000	378410796	378410640	37524964185	37090931400	150
378410000	378410796	378410640	37524964185	37090931400	150
590610000	590610515	590610909	59583794829	59027270994	150
590610000	590610515	590610909	59583794829	59027270994	150
597410000	597410733	597410870	59996413369	59352494346	150
597410000	597410733	597410870	59996413369	59352494346	150
618410000	618410966	618410081	61371787631	61856901956	150
618410000	618410966	618410081	61371787631	61856901956	150
575510000	575510067	575510710	57698401657	57691120480	150
575510000	575510067	575510710	57698401657	57691120480	150
616410000	616410513	616410088	61463468412	61125913817	150
585500000	585500233	585500695	58811401014	58091808028	150
585500000	585500233	585500695	58811401014	58091808028	150
586410000	586410505	586410781	58601516509	58341088742	150
586410000	586410505	586410781	58601516509	58341088742	150
543510000	543510305	543510343	54944726629	54860125336	150
546500000	546500936	546500309	54496220522	54412494976	150
546500000	546500936	546500309	54496220522	54412494976	150
556500000	556500016	556500409	55507539116	55697284031	150
495510000	495510335	495510910	49948069449	49047330757	150
495510000	495510335	495510910	49948069449	49047330757	150
549510000	549510752	549510421	54822712944	54303979297	150
549510000	549510752	549510421	54822712944	54303979297	150
527510000	527510905	527510228	52401605018	52791838562	150
527510000	527510905	527510228	52401605018	52791838562	150
497510000	497510871	497510916	49652570330	49091093791	150
497510000	497510871	497510916	49652570330	49091093791	150
525500000	525500872	525500095	52464536560	52593431008	150
525500000	525500872	525500095	52464536560	52593431008	150
498410000	498410108	498410850	49920555230	49365538400	150
498410000	498410108	498410850	49920555230	49365538400	150
702510000	702510429	702510952	70870845431	70011249863	150
702510000	702510429	702510952	70870845431	70011249863	150
717410000	717410837	717410102	71285862124	71419454251	150
717410000	717410837	717410102	71285862124	71419454251	150
706500000	706500485	706500928	70688161010	70020132298	150
706500000	706500485	706500928	70688161010	70020132298	150
709510000	709510285	709510042	70259106621	70629372329	150
709510000	709510285	709510042	70259106621	70629372329	150

691610000	691610290	691610905	69123349978	69294846246	150
691610000	691610290	691610905	69123349978	69294846246	150
725510000	725510391	725510191	72142065909	72898895839	150
725510000	725510391	725510191	72142065909	72898895839	150
646500000	646500954	646500319	64040322161	64180043219	150
646500000	646500954	646500319	64040322161	64180043219	150
681610000	681610115	681610805	68212370323	68914697453	150
681610000	681610115	681610805	68212370323	68914697453	150
672510000	672510161	672510646	67877389919	67097881251	150
672510000	672510161	672510646	67877389919	67097881251	150
658410000	658410568	658410475	65701975993	65730960231	150
658410000	658410568	658410475	65701975993	65730960231	150
637410000	637410285	637410290	63509432544	63905995263	150
637410000	637410285	637410290	63509432544	63905995263	150
667410000	667410567	667410584	66384138354	66653019679	150
667410000	667410567	667410584	66384138354	66653019679	150
638510000	638510421	638510332	63586193630	63107823105	150
638510000	638510421	638510332	63586193630	63107823105	150
676510000	676510323	676510737	67161850680	67076642643	150
676510000	676510323	676510737	67161850680	67076642643	150
836500000	836500826	836500238	83576882320	83890025249	150
836500000	836500826	836500238	83576882320	83890025249	150
839510000	839510691	839510351	83493762644	83165119633	150
839510000	839510691	839510351	83493762644	83165119633	150
843510000	843510359	843510374	84375851862	84377103181	150
843510000	843510359	843510374	84375851862	84377103181	150
861610000	861610775	861610626	86672019931	86510262666	150
861610000	861610775	861610626	86672019931	86510262666	150
837410000	837410198	9737410308	83992011310	83463012921	150
837410000	837410198	9737410308	83992011310	83463012921	150
852510000	852510402	852510467	85042297610	85799039070	150
852510000	852510402	852510467	85042297610	85799039070	150
757510000	757510183	757510551	75346700617	75765468275	150
757510000	757510183	757510551	75346700617	75765468275	150
749410000	749410772	749410375	74460013341	74337098558	150
749410000	749410772	749410375	74460013341	74337098558	150
750510000	750510989	750510461	75170274026	75810990647	150
750510000	750510989	750510461	75170274026	75810990647	150
770610000	770610280	770610729	77777877742	77255814999	150
770610000	770610280	770610729	77777877742	77255814999	150
795510000	795510389	795510940	79561874955	79772504345	150
795510000	795510389	795510940	79561874955	79772504345	150
758410000	758410589	758410484	75039180648	75812328333	150
758410000	758410589	758410484	75039180648	75812328333	150
771610000	771610937	771610715	77086862056	77220649877	150
771610000	771610937	771610715	77086862056	77220649877	150
778410000	778410841	778410680	77692260256	77844535227	150

778410000	778410841	778410680	77692260256	77844535227	150
958410000	958410549	958410504	95259231059	95680673455	150
958410000	958410549	958410504	95259231059	95680673455	150
943510000	943510376	943510384	94504241703	94388190409	150
943510000	943510376	943510384	94504241703	94388190409	150
967510000	967510391	967510668	96768791679	96536374237	150
967510000	967510391	967510668	96768791679	96536374237	150
935510000	935510621	935510315	93141753713	93284450156	150
935510000	935510621	935510315	93141753713	93284450156	150
960610000	960610154	960610649	96125954298	96471117701	150
960610000	960610154	960610649	96125954298	96471117701	150
912510000	912510655	912510074	91464302780	91954382003	150
912510000	912510655	912510074	91464302780	91954382003	150
915510000	915510256	915510110	91858968663	91935130953	150
915510000	915510256	915510110	91858968663	91935130953	150
918410000	918410013	918410110	91236706685	91936672110	150
918410000	918410013	918410110	91236706685	91936672110	150
890510000	890510243	890510865	89466489835	89796203344	150
890510000	890510243	890510865	89466489835	89796203344	150
924510000	924510358	924510192	92434611493	92570778805	150
924510000	924510358	924510192	92434611493	92570778805	150
1095510000	1095510263	1095510870	109700361201	109063819622	150
1095510000	1095510263	1095510870	109700361201	109063819622	150
929410000	929410566	929410196	92280325044	92839284886	150
929410000	929410566	929410196	92280325044	92839284886	150
896510000	896510646	896510958	89246010486	89009437170	150
896510000	896510646	896510958	89246010486	89009437170	150
885510000	885510223	885510849	88305776122	88131509235	150
885510000	885510223	885510849	88305776122	88131509235	150
1107410000	1107410678	1107410941	110456624117	110281169845	150
1107410000	1107410678	1107410941	110456624117	110281169845	150
1080610000	1080610260	1080610761	108778505087	108674395847	150
1080610000	1080610260	1080610761	108778505087	108674395847	150
1059410000	1059410826	1059410406	105164552502	105047494089	150
1059410000	1059410826	1059410406	105164552502	105047494089	150
1103510000	1103510784	1103510901	110455592247	110050049194	150
1103510000	1103510784	1103510901	110455592247	110050049194	150
1117510000	1117510771	1117510090	111467650241	111900198552	150
1117510000	1117510771	1117510090	111467650241	111900198552	150
1016500000	1016500532	1016500960	101178603669	101825707949	150
1016500000	1016500532	1016500960	101178603669	101825707949	150
1050510000	1050510861	1050510392	105674377670	105482594598	150
1050510000	1050510861	1050510392	105674377670	105482594598	150
1025510000	1025510275	1025510121	102349483534	102018431350	150
1025510000	1025510275	1025510121	102349483534	102018431350	150
1039410000	1039410583	1039410207	103140146625	103721859697	150
1039410000	1039410583	1039410207	103140146625	103721859697	150

1055510000	1055510720	1055510437	105248242379	105435118942	150
1055510000	1055510720	1055510437	105248242379	105435118942	150
1027510000	1027510813	1027510179	102470453746	102491419311	150
1027510000	1027510813	1027510179	102470453746	102491419311	150
1211510000	1211510569	1211510007	121864091194	121259850649	150
1211510000	1211510569	1211510007	121864091194	121259850649	150
1193510000	1193510934	1193510806	119663151764	119463723760	150
1193510000	1193510934	1193510806	119663151764	119463723760	150
1217510000	1217510790	1217510101	121732716978	121259096412	150
1217510000	1217510790	1217510101	121732716978	121259096412	150
1187410000	1187410666	1187410732	118208390819	118568522226	150
1187410000	1187410666	1187410732	118208390819	118568522226	150
1189510000	1189510151	1189510779	118947052931	118634508612	150
1189510000	1189510151	1189510779	118947052931	118634508612	150
1239510000	1239510587	1239510294	123882254316	123627871610	150
1239510000	1239510587	1239510294	123882254316	123627871610	150
1183510000	1183510770	1183510703	118528976028	118126712188	150
1183510000	1183510770	1183510703	118528976028	118126712188	150
1197510000	1197510817	1197510888	119461481164	119582310973	150
1197510000	1197510817	1197510888	119461481164	119582310973	150
1209510000	1209510200	1209510992	120383353536	120670485807	150
1209510000	1209510200	1209510992	120383353536	120670485807	150
1216410000	1216410453	1216410049	121512370663	121883715057	150
1216410000	1216410453	1216410049	121512370663	121883715057	150
1241610000	1241610284	1241610369	124608632632	124589161066	150
1241610000	1241610284	1241610369	124608632632	124589161066	150
1186410000	1186410446	1186410742	118539128902	118127728427	150
1186410000	1186410446	1186410742	118539128902	118127728427	150
1139410000	1139410599	1139410217	113948561988	113193825818	150
1139410000	1139410599	1139410217	113948561988	113193825818	150
1142510000	1142510901	1142510296	114361843199	114952846233	150
1142510000	1142510901	1142510296	114361843199	114952846233	150
1346410000	1346410942	1346410359	134079204598	134044244321	150
1346410000	1346410942	1346410359	134079204598	134044244321	150
1126500000	1126500645	1126500070	112256298408	112810911522	150
1126500000	1126500645	1126500070	112256298408	112810911522	150
1159410000	1159410844	1159410416	115820553909	115916994847	150
1159410000	1159410844	1159410416	115820553909	115916994847	150
1146410000	1146410911	1146410339	114235405566	114947686890	150
1146410000	1146410911	1146410339	114235405566	114947686890	150
1127510000	1127510833	1127510188	112590582468	112652903863	150
1127510000	1127510833	1127510188	112590582468	112652903863	150
1135510000	1135510488	1135510235	113579721494	113606539110	150
1135510000	1135510488	1135510235	113579721494	113606539110	150
1309410000	1309410258	1309410940	130372143035	130461603335	150
1309410000	1309410258	1309410940	130372143035	130461603335	150
1347510000	1347510088	1347510413	134775538160	134815760653	150

1347510000	1347510088	1347510413	134775538160	134815760653	150
1326510000	1326510667	1326510203	132479754813	132635226316	150
1326510000	1326510667	1326510203	132479754813	132635226316	150
1335510000	1335510526	1335510256	133378174918	133332600741	150
1335510000	1335510526	1335510256	133378174918	133332600741	150
1332510000	1332510913	1332510216	133923835175	133197469011	150
1332510000	1332510913	1332510216	133923835175	133197469011	150
1270610000	1270610204	1270610680	127385368309	127680954511	150
1270610000	1270610204	1270610680	127385368309	127680954511	150
1298410000	1298410115	1298410831	129802617942	129412275485	150
1298410000	1298410115	1298410831	129802617942	129412275485	150
1283510000	1283510786	1283510713	128314521142	128535433743	150
1283510000	1283510786	1283510713	128314521142	128535433743	150
1263510000	1263510482	1263510513	126600192094	126046213315	150
1263510000	1263510482	1263510513	126600192094	126046213315	150
1254510000	1254510645	1254510431	125975848670	125482960933	150
1254510000	1254510645	1254510431	125975848670	125482960933	150
1435500000	1435500837	1435500184	143426042375	143680368270	150
1435500000	1435500837	1435500184	143426042375	143680368270	150
1487410000	1487410717	1487410762	148615645896	148224301380	150
1487410000	1487410717	1487410762	148615645896	148224301380	150
1441510000	1441510747	1441510322	144683758373	144660367988	150
1441510000	1441510747	1441510322	144683758373	144660367988	150
1438410000	1438410208	1438410259	143394747884	143104330472	150
1438410000	1438410208	1438410259	143394747884	143104330472	150
1476410000	1476410332	1476410670	147977987385	147898228856	150
1476410000	1476410332	1476410670	147977987385	147898228856	150
1485500000	1485500218	1485500687	148807765657	148021765264	150
1485500000	1485500218	1485500687	148807765657	148021765264	150
1446500000	1446500922	1446500300	144378832408	144109951553	150
1446500000	1446500922	1446500300	144378832408	144109951553	150
1446510000	1446510913	1446510415	144827034247	144320699658	150
1446510000	1446510913	1446510415	144827034247	144320699658	150
1405510000	1405510140	1405510955	140137058473	140546161591	150
1405510000	1405510140	1405510955	140137058473	140546161591	150
1387410000	1387410699	1387410752	138356442451	138504450880	150
1425500000	1425500858	1425500086	142458853935	142928375841	150
1425500000	1425500858	1425500086	142458853935	142928375841	150
1591510000	1591510696	1591510831	159529537907	159752913182	150
1591510000	1591510696	1591510831	159529537907	159752913182	150
1606500000	1606500472	1606500919	160292582820	160126096121	150
1606500000	1606500472	1606500919	160292582820	160126096121	150
1608510000	1608510973	1608510037	160163885970	160474719919	150
1608510000	1608510973	1608510037	160163885970	160474719919	150
1595500000	1595500391	1595500808	159174627033	159386687991	150
1595500000	1595500391	1595500808	159174627033	159386687991	150
1616500000	1616500627	1616500020	161819609215	161365185626	150

1616500000	1616500627	1616500020	161819609215	161365185626	150
1579410000	1579410164	1579410654	157843182186	157490683207	150
1579410000	1579410164	1579410654	157843182186	157490683207	150
1596510000	1596510594	1596510929	159223287796	159723463911	150
1596510000	1596510594	1596510929	159223287796	159723463911	150
1569410000	1569410972	1569410555	156382554988	156718219162	150
1569410000	1569410972	1569410555	156382554988	156718219162	150
1496510000	1496510575	1496510919	149166250789	149946485240	150
1496510000	1496510575	1496510919	149166250789	149946485240	150
1509410000	1509410295	1509410960	150250104789	150102791121	150
1509410000	1509410295	1509410960	150250104789	150102791121	150
1510610000	1510610482	1510610117	151869106411	151161459871	150
1510610000	1510610482	1510610117	151869106411	151161459871	150
1537510000	1537510070	1537510330	153713805257	153370371681	150
1537510000	1537510070	1537510330	153713805257	153370371681	150
1699510000	1699510287	1699510927	169309486831	169286247716	150
1699510000	1699510287	1699510927	169309486831	169286247716	150
1715500000	1715500740	1715500014	171705917217	171328299003	150
1715500000	1715500740	1715500014	171705917217	171328299003	150
1730510000	1730510798	1730510263	173035455758	173161041340	150
1730510000	1730510798	1730510263	173035455758	173161041340	150
1716510000	1716510564	1716510143	171517446186	171220632968	150
1716510000	1716510564	1716510143	171517446186	171220632968	150
1703510000	1703510799	1703510963	170363360495	170385202264	150
1703510000	1703510799	1703510963	170363360495	170385202264	150
1725500000	1725500906	1725500116	172863131732	172329479227	150
1725500000	1725500906	1725500116	172863131732	172329479227	150
1698510000	1698510101	1698510932	169024851063	169878792334	150
1698510000	1698510101	1698510932	169024851063	169878792334	150
1710510000	1710510612	1710510066	171075029998	171833470777	150
1710510000	1710510612	1710510066	171075029998	171833470777	150
1728410000	1728410093	1728410188	172854640773	172097550087	150
1728410000	1728410093	1728410188	172854640773	172097550087	150
1693510000	1693510954	1693510855	169911136629	169229824975	150
1693510000	1693510954	1693510855	169911136629	169229824975	150
1638410000	1638410245	1638410280	163284815647	163591878966	150
1638410000	1638410245	1638410280	163284815647	163591878966	150
1622510000	1622510789	1622510146	162915506481	162360965503	150
1622510000	1622510789	1622510146	162915506481	162360965503	150
1671510000	1671510317	1671510641	167013462500	167589118665	150
1671510000	1671510317	1671510641	167013462500	167589118665	150
1662510000	1662510553	1662510548	166887653518	166402253361	150
1662510000	1662510553	1662510548	166887653518	166402253361	150
1647410000	1647410389	1647410383	164380725372	164048766315	150
1647410000	1647410389	1647410383	164380725372	164048766315	150
1858410000	1858410532	1858410495	185201562059	185601620204	150
1858410000	1858410532	1858410495	185201562059	185601620204	150

1863500000	1863500544	1863500548	186118056824	186948997096	150
1863500000	1863500544	1863500548	186118056824	186948997096	150
1803510000	1803510818	1803510973	180223107227	180464450347	150
1803510000	1803510818	1803510973	180223107227	180464450347	150
1786410000	1786410470	1786410800	178634304431	178007196658	150
1786410000	1786410470	1786410800	178634304431	178007196658	150
1802510000	1802510453	1802510963	180875045702	180200578286	150
1802510000	1802510453	1802510963	180875045702	180200578286	150
1756500000	1756500051	1756500430	175870002250	175657846890	150
1756500000	1756500051	1756500430	175870002250	175657846890	150
1772510000	1772510183	1772510657	177334126545	177553211508	150
1772510000	1772510183	1772510657	177334126545	177553211508	150
1786510000	1786510449	1786510849	178778463543	178445129055	150
1786510000	1786510449	1786510849	178778463543	178445129055	150
1773500000	1773500804	1773500636	177353745119	177450315066	150
1773500000	1773500804	1773500636	177353745119	177450315066	150
1968410000	1968410731	1968410602	196122972188	196441522777	150
1968410000	1968410731	1968410602	196122972188	196441522777	150
1914600000	1914600132	1914600056	191662774900	191265835123	150
1914600000	1914600132	1914600056	191662774900	191265835123	150
1887410000	1887410786	1887410801	188145445894	188758075811	150
1887410000	1887410786	1887410801	188145445894	188758075811	150
1873510000	1873510719	1873510673	187007167761	187953617410	150
1873510000	1873510719	1873510673	187007167761	187953617410	150
1889510000	1889510262	1889510849	188248639238	188162854338	150
1889510000	1889510262	1889510849	188248639238	188162854338	150
1926500000	1926500768	1926500150	192212864197	192776648115	150
1926500000	1926500768	1926500150	192212864197	192776648115	150
1890610000	1890610489	1890610940	189937618502	189855482382	150
1890610000	1890610489	1890610940	189937618502	189855482382	150
1879410000	1879410217	1879410684	187681839408	187568866801	150
1879410000	1879410217	1879410684	187681839408	187568866801	150
2077510000	2077510276	2077510680	207661826142	207346606809	150
2077510000	2077510276	2077510680	207661826142	207346606809	150
2086510000	2086510396	2086510779	208210852742	208947273651	150
2086510000	2086510396	2086510779	208210852742	208947273651	150
2088410000	2088410900	2088410711	208797356134	208725759115	150
2088410000	2088410900	2088410711	208797356134	208725759115	150
2090510000	2090510087	2090510789	209076132262	209559364975	150
2090510000	2090510087	2090510789	209076132262	209559364975	150
2084510000	2084510870	2084510713	208108682132	208128830037	150
2084510000	2084510870	2084510713	208108682132	208128830037	150
2067510000	2067510238	2067510583	206042679266	206363954163	150
2067510000	2067510238	2067510583	206042679266	206363954163	150
2092510000	2092510585	2092510787	209721191360	209963896015	150
2092510000	2092510585	2092510787	209721191360	209963896015	150
2098410000	2098410082	2098410812	209553278437	209347496055	150

2098410000	2098410082	2098410812	209553278437	209347496055	150
2068410000	2068410569	2068410515	206882521376	206433849543	150
2068410000	2068410569	2068410515	206882521376	206433849543	150
2049410000	2049410770	2049410307	204769482019	204108269485	150
2049410000	2049410770	2049410307	204769482019	204108269485	150
1991510000	1991510767	1991510872	199122285228	199885034189	150
1991510000	1991510767	1991510872	199122285228	199885034189	150
1996510000	1996510662	1996510969	199297496182	199202108170	150
1996510000	1996510662	1996510969	199297496182	199202108170	150
2041510000	2041510666	2041510285	204209128670	204011429181	150
2041510000	2041510666	2041510285	204209128670	204011429181	150
2022510000	2022510678	2022510087	202305698169	202597553417	150
2022510000	2022510678	2022510087	202305698169	202597553417	150
2191510000	2191510623	2191510792	219564235395	219966362207	150
2191510000	2191510623	2191510792	219564235395	219966362207	150
2209410000	2209410239	2209410931	220365163379	220250359960	150
2209410000	2209410239	2209410931	220365163379	220250359960	150
2186510000	2186510415	2186510790	218258584770	218736729366	150
2186510000	2186510415	2186510790	218258584770	218736729366	150
2218510000	2218510082	2218510097	221999995169	221228280882	150
2218510000	2218510082	2218510097	221999995169	221228280882	150
2179510000	2179510076	2179510680	217461765107	217494351887	150
2179510000	2179510076	2179510680	217461765107	217494351887	150
2235500000	2235500807	2235500166	223252964222	223814771636	150
2235500000	2235500807	2235500166	223252964222	223814771636	150
2168410000	2168410587	2168410525	216862192706	216954996039	150
2168410000	2168410587	2168410525	216862192706	216954996039	150
2137410000	2137410178	2137410244	213433804382	213110388243	150
2137410000	2137410178	2137410244	213433804382	213110388243	150
2339410000	2339410636	2339410237	233614383616	233807665531	150
2339410000	2339410636	2339410237	233614383616	233807665531	150
2132510000	2132510878	2132510197	213308963762	213865064799	150
2132510000	2132510878	2132510197	213308963762	213865064799	150
2158410000	2158410476	2158410428	215151174847	215647399936	150
2158410000	2158410476	2158410428	215151174847	215647399936	150
2164510000	2164510677	2164510523	216735034233	216955164805	150
2164510000	2164510677	2164510523	216735034233	216955164805	150
2156500000	2156500033	2156500371	215526334907	215790478444	150
2156500000	2156500033	2156500371	215526334907	215790478444	150
2348510000	2348510482	2348510405	234725196234	234950753760	150
2348510000	2348510482	2348510405	234725196234	234950753760	150
2312510000	2312510544	2312510014	231899576670	231027684072	150
2312510000	2312510544	2312510014	231899576670	231027684072	150
2316410000	2316410471	2316410060	231791933323	231962077393	150
2316410000	2316410471	2316410060	231791933323	231962077393	150
2357410000	2357410508	2357410455	235454850612	235867406802	150
2357410000	2357410508	2357410455	235454850612	235867406802	150

2329410000	2329410571	2329410139	232815956602	232497016326	150
2329410000	2329410571	2329410139	232815956602	232497016326	150
2329510000	2329510509	2329510206	232462698437	232092583817	150
2329510000	2329510509	2329510206	232462698437	232092583817	150
2290510000	2290510125	2290510807	229007671221	229708435263	150
2290510000	2290510125	2290510807	229007671221	229708435263	150
2258410000	2258410495	2258410437	225865565663	225927374109	150
2258410000	2258410495	2258410437	225865565663	225927374109	150
2291510000	2291510642	2291510802	229889838885	229420093512	150
2291510000	2291510642	2291510802	229889838885	229420093512	150
2293510000	2293510886	2293510817	229964096249	229656929573	150
2293510000	2293510886	2293510817	229964096249	229656929573	150
2271610000	2271610851	2271610667	227643698020	227588820908	150
2271610000	2271610851	2271610667	227643698020	227588820908	150
2285500000	2285500261	2285500666	228540376254	228169104693	150
2285500000	2285500261	2285500666	228540376254	228169104693	150
2285510000	2285510125	2285510790	228541967858	228508735471	150
2285510000	2285510125	2285510790	228541967858	228508735471	150
2250510000	2250510899	2250510413	225291254211	225572693275	150
2250510000	2250510899	2250510413	225291254211	225572693275	150
2280610000	2280610297	2280610782	228877348463	228095237656	150
2280610000	2280610297	2280610782	228877348463	228095237656	150
2456500000	2456500004	2456500401	245646533679	245025121400	150
2456500000	2456500004	2456500401	245646533679	245025121400	150
2438510000	2438510392	2438510314	243198706870	243957646019	150
2438510000	2438510392	2438510314	243198706870	243957646019	150
2479410000	2479410148	2479410645	247401787538	247280166971	150
2479410000	2479410148	2479410645	247401787538	247280166971	150
2467510000	2467510309	2467510622	246974953395	246878734228	150
2467510000	2467510309	2467510622	246974953395	246878734228	150
2489510000	2489510197	2489510810	248171072895	248647236372	150
2489510000	2489510197	2489510810	248171072895	248647236372	150
2428510000	2428510214	2428510216	242551333310	242721718467	150
2428510000	2428510214	2428510216	242551333310	242721718467	150
2442510000	2442510955	2442510328	244953798363	244926432234	150
2442510000	2442510955	2442510328	244953798363	244926432234	150
2470610000	2470610234	2470610701	247337374237	247216243172	150
2470610000	2470610234	2470610701	247337374237	247216243172	150
2458510000	2458510666	2458510516	245245347180	245621234608	150
2458510000	2458510666	2458510516	245245347180	245621234608	150
2468510000	2468510760	2468510615	246950291621	246544247289	150
2468510000	2468510760	2468510615	246950291621	246544247289	150
2488410000	2488410972	2488410751	248790088692	248831227761	150
2488410000	2488410972	2488410751	248790088692	248831227761	150
2371510000	2371510259	2371510611	237791105982	237776177111	150
2371510000	2371510259	2371510611	237791105982	237776177111	150
2363510000	2363510503	2363510524	236920190423	236112396627	150

2363510000	2363510503	2363510524	236920190423	236112396627	150
2395500000	2395500361	2395500788	239793013590	239576751810	150
2395500000	2395500361	2395500788	239793013590	239576751810	150
2377510000	2377510324	2377510710	237942798106	237316943168	150
2377510000	2377510324	2377510710	237942798106	237316943168	150
2579510000	2579510137	2579510720	257982286890	257618796027	150
2579510000	2579510137	2579510720	257982286890	257618796027	150
2597510000	2597510892	2597510928	259913895605	259563375430	150
2597510000	2597510892	2597510928	259913895605	259563375430	150
2595510000	2595510358	2595510922	259398825194	259720193709	150
2595510000	2595510358	2595510922	259398825194	259720193709	150
2555510000	2555510805	2555510491	255334463188	255643362881	150
2555510000	2555510805	2555510491	255334463188	255643362881	150
2608410000	2608410909	2608410983	260844302091	260940711888	150
2608410000	2608410909	2608410983	260844302091	260940711888	150
2580610000	2580610340	2580610812	258078895841	258373040471	150
2580610000	2580610340	2580610812	258078895841	258373040471	150
2578410000	2578410806	2578410662	257109011934	257276389628	150
2578410000	2578410806	2578410662	257109011934	257276389628	150
2591610000	2591610275	2591610897	259795405286	259615745953	150
2591610000	2591610275	2591610897	259795405286	259615745953	150
2508410000	2508410893	2508410973	250313461447	250204098392	150
2508410000	2508410893	2508410973	250313461447	250204098392	150
2532510000	2532510951	2532510238	253811335636	253173667993	150
2532510000	2532510951	2532510238	253811335636	253173667993	150
2538410000	2538410227	2538410271	253795590642	253952808963	150
2538410000	2538410227	2538410271	253795590642	253952808963	150
2491510000	2491510679	2491510822	249691642969	249952711948	150
2491510000	2491510679	2491510822	249691642969	249952711948	150
2519410000	2519410429	2519410059	251777983759	251634449398	150
2519410000	2519410429	2519410059	251777983759	251634449398	150
2533510000	2533510223	2533510246	253678540075	253852536932	150
2533510000	2533510223	2533510246	253678540075	253852536932	150
2548410000	2548410361	2548410370	254212348808	254937743354	150
2548410000	2548410361	2548410370	254212348808	254937743354	150
2539410000	2539410678	2539410257	253220825054	253669777727	150
2539410000	2539410678	2539410257	253220825054	253669777727	150
2702610000	2702610022	2702610016	270733968664	270211844510	150
2702610000	2702610022	2702610016	270733968664	270211844510	150
2684510000	2684510973	2684510773	268307003587	268943555099	150
2684510000	2684510973	2684510773	268307003587	268943555099	150
2718410000	2718410986	2718410092	271873448516	271360749404	150
2718410000	2718410986	2718410092	271873448516	271360749404	150
2697410000	2697410753	2697410882	269803141362	269247737886	150
2697410000	2697410753	2697410882	269803141362	269247737886	150
2676410000	2676410364	2676410691	267947876622	267191172566	150
2676410000	2676410364	2676410691	267947876622	267191172566	150

2641610000	2641610358	2641610409	264938778647	264149237331	150
2641610000	2641610358	2641610409	264938778647	264149237331	150
2658510000	2658510620	2658510536	265724749267	265744332494	150
2658510000	2658510620	2658510536	265724749267	265744332494	150
2668410000	2668410682	2668410573	266122198706	266481419943	150
2668410000	2668410682	2668410573	266122198706	266481419943	150
2619410000	2619410444	2619410069	261761210613	261559598430	150
2619410000	2619410444	2619410069	261761210613	261559598430	150
2656500000	2656500037	2656500421	265840623205	265124322940	150
2656500000	2656500037	2656500421	265840623205	265124322940	150
2624510000	2624510308	2624510163	262507075657	262815592454	150
2624510000	2624510308	2624510163	262507075657	262815592454	150
2627510000	2627510925	2627510240	262566777703	262951810961	150
2627510000	2627510925	2627510240	262566777703	262951810961	150
2669410000	2669410991	2669410566	266724836165	266171859254	150
2669410000	2669410991	2669410566	266724836165	266171859254	150
2805510000	2805510207	2805510996	280587147223	280439299479	150
2805510000	2805510207	2805510996	280587147223	280439299479	150
2807510000	2807510721	2807510061	280296530890	280424537369	150
2807510000	2807510721	2807510061	280296530890	280424537369	150
2818410000	2818410000	2818410102	281441063751	281485429435	150
2818410000	2818410000	2818410102	281441063751	281485429435	150
2812510000	2812510637	2812510066	281521762390	281554777819	150
2812510000	2812510637	2812510066	281521762390	281554777819	150
2816500000	2816500602	2816500041	281860550905	281326790106	150
2816500000	2816500602	2816500041	281860550905	281326790106	150
2829410000	2829410553	2829410188	282776375676	282839959280	150
2829410000	2829410553	2829410188	282776375676	282839959280	150
2834510000	2834510513	2834510286	283955028657	283558376400	150
2834510000	2834510513	2834510286	283955028657	283558376400	150
2825500000	2825500927	2825500127	282458413667	282789274891	150
2825500000	2825500927	2825500127	282458413667	282789274891	150
2763510000	2763510574	2763510564	276874856200	276933841195	150
2763510000	2763510574	2763510564	276874856200	276933841195	150
2756510000	2756510073	2756510545	275511884602	275768274211	150
2756510000	2756510073	2756510545	275511884602	275768274211	150
2748510000	2748510548	2748510445	274702413025	274375248472	150
2748510000	2748510548	2748510445	274702413025	274375248472	150
2794510000	2794510023	2794510884	279834253848	279052377091	150
2794510000	2794510023	2794510884	279834253848	279052377091	150
2765510000	2765510923	2765510624	276446137014	276371611937	150
2765510000	2765510923	2765510624	276446137014	276371611937	150
2788510000	2788510038	2788510843	278031075911	278783704076	150
2788510000	2788510038	2788510843	278031075911	278783704076	150
2766410000	2766410303	2766410601	276061903753	276894856706	150
2766410000	2766410303	2766410601	276061903753	276894856706	150
2973510000	2973510740	2973510684	297407807310	297053807104	150

2973510000	2973510740	2973510684	297407807310	297053807104	150
2979410000	2979410058	2979410695	297512315659	297652434251	150
2979410000	2979410058	2979410695	297512315659	297652434251	150
2946510000	2946510936	2946510465	294013902843	294758788526	150
2946510000	2946510936	2946510465	294013902843	294758788526	150
2935500000	2935500919	2935500235	293023830405	293319028215	150
2935500000	2935500919	2935500235	293023830405	293319028215	150
2925500000	2925500945	2925500137	292422940347	292275439492	150
2925500000	2925500945	2925500137	292422940347	292275439492	150
2891610000	2891610329	2891610927	289104592772	289273870257	150
2891610000	2891610329	2891610927	289104592772	289273870257	150
2898410000	2898410177	2898410891	289943324362	289793885581	150
2898410000	2898410177	2898410891	289943324362	289793885581	150
2900610000	2900610488	2900610058	290653903902	290899980301	150
2900610000	2900610488	2900610058	290653903902	290899980301	150
2915500000	2915500774	2915500037	291260302537	291749173786	150
2915500000	2915500774	2915500037	291260302537	291749173786	150
2919410000	2919410493	2919410099	291464783187	291458517907	150
2919410000	2919410493	2919410099	291464783187	291458517907	150
2872510000	2872510207	2872510667	287114752436	287559134632	150
2872510000	2872510207	2872510667	287114752436	287559134632	150
2911510000	2911510813	2911510078	291766932463	291177302303	150
2911510000	2911510813	2911510078	291766932463	291177302303	150
2876410000	2876410395	2876410711	287107062783	287274143360	150
2876410000	2876410395	2876410711	287107062783	287274143360	150
3057410000	3057410463	3057410426	305613832909	305586441782	150
3057410000	3057410463	3057410426	305613832909	305586441782	150
3075510000	3075510981	3075510658	307578134216	307914264519	150
3075510000	3075510981	3075510658	307578134216	307914264519	150
3078410000	3078410754	3078410613	307118088496	307534908656	150
3078410000	3078410754	3078410613	307118088496	307534908656	150
3081610000	3081610993	3081610748	308972372040	308902221163	150
3081610000	3081610993	3081610748	308972372040	308902221163	150
3051510000	3051510868	3051510382	305398281772	305225340311	150
3051510000	3051510868	3051510382	305398281772	305225340311	150
3051610000	3051610944	3051610450	305984111314	305670882165	150
3051610000	3051610944	3051610450	305984111314	305670882165	150
3069500000	3069500608	3069500487	306797285700	306664647959	150
3069500000	3069500608	3069500487	306797285700	306664647959	150
3091510000	3091510607	3091510783	309282132557	309179763476	150
3091510000	3091510607	3091510783	309282132557	309179763476	150
3074510000	3074510832	3074510614	307883323354	307697623449	150
3074510000	3074510832	3074510614	307883323354	307697623449	150
3032510000	3032510862	3032510188	303543555474	303135105287	150
3032510000	3032510862	3032510188	303543555474	303135105287	150
3035500000	3035500778	3035500148	303169460788	303635220371	150
3035500000	3035500778	3035500148	303169460788	303635220371	150

3045500000	3045500939	3045500246	304553873488	304205706876	150
3045500000	3045500939	3045500246	304553873488	304205706876	150
2984510000	2984510021	2984510803	298431873831	298352739402	150
2984510000	2984510021	2984510803	298431873831	298352739402	150
3025500000	3025500794	3025500048	302441220048	302797827077	150
3025500000	3025500794	3025500048	302441220048	302797827077	150
3028410000	3028410034	2028410122	302228458321	302738826537	150
3028410000	3028410034	2028410122	302228458321	302738826537	150
3026510000	3026510618	3026510175	302842595894	302689329016	150
3026510000	3026510618	3026510175	302842595894	302689329016	150
2997510000	2997510962	2997510968	299331074795	299578184750	150
2997510000	2997510962	2997510968	299331074795	299578184750	150
3003510000	3003510770	3003510891	300807533352	300545110299	150
3003510000	3003510770	3003510891	300807533352	300545110299	150
3013510000	3013510864	3013510997	301320343463	301254233064	150
3013510000	3013510864	3013510997	301320343463	301254233064	150
3191610000	3191610204	3191610858	319718020764	319730364870	150
3191610000	3191610204	3191610858	319718020764	319730364870	150
3222510000	3222510717	3222510107	322456373614	322083527904	150
3222510000	3222510717	3222510107	322456373614	322083527904	150
3223510000	3223510093	3223510117	322029841460	322347571916	150
3223510000	3223510093	3223510117	322029841460	322347571916	150
3177410000	3177410653	3177410635	317256291056	317190358022	150
3177410000	3177410653	3177410635	317256291056	317190358022	150
3219410000	3219410374	3219410031	321059277683	321406602467	150
3219410000	3219410374	3219410031	321059277683	321406602467	150
3227410000	3227410999	3227410154	322383215892	322701206521	150
3227410000	3227410999	3227410154	322383215892	322701206521	150
3187510000	3187510455	3187510791	318909649977	318390419546	150
3187510000	3187510455	3187510791	318909649977	318390419546	150
3150510000	3150510882	3150510404	315104759410	315615243338	150
3150510000	3150510882	3150510404	315104759410	315615243338	150
3144510000	3144510567	3144510320	314844118569	314828005525	150
3144510000	3144510567	3144510320	314844118569	314828005525	150
3119410000	3119410355	3119410021	311860842546	311010427199	150
3119410000	3119410355	3119410021	311860842546	311010427199	150
3136410000	3136410759	3136410241	313471013776	313213889800	150
3136410000	3136410759	3136410241	313471013776	313213889800	150
3133500000	3133500259	3133500187	313986565970	313594167610	150
3133500000	3133500259	3133500187	313986565970	313594167610	150
3158510000	3158510616	3158510487	315701609670	315187385054	150
3158510000	3158510616	3158510487	315701609670	315187385054	150
3118410000	3118410885	3118410034	311320153292	311237673714	150
3118410000	3118410885	3118410034	311320153292	311237673714	150
3338510000	3338510377	3338510305	333689678430	333924326415	150
3338510000	3338510377	3338510305	333689678430	333924326415	150
3319410000	3319410393	3319410041	331911066352	331986455204	150

3319410000	3319410393	3319410041	331911066352	331986455204	150
3354510000	3354510664	3354510443	335474998360	335431099456	150
3354510000	3354510664	3354510443	335474998360	335431099456	150
3300610000	3300610399	3300610999	330098785896	330100845849	150
3300610000	3300610399	3300610999	330098785896	330100845849	150
3252510000	3252510107	3252510409	325578312410	325579142058	150
3252510000	3252510107	3252510409	325578312410	325579142058	150
3286510000	3286510433	3286510801	328861424238	328236061993	150
3286510000	3286510433	3286510801	328861424238	328236061993	150
3236510000	3236510702	3236510298	323001777197	323347855134	150
3236510000	3236510702	3236510298	323001777197	323347855134	150
3273510000	3273510665	3273510616	327698513237	327751956291	150
3273510000	3273510665	3273510616	327698513237	327751956291	150
3258410000	3258410497	3258410438	325297286108	325020511966	150
3258410000	3258410497	3258410438	325297286108	325020511966	150
3245500000	3245500971	3245500265	324927870573	324329035617	150
3245500000	3245500971	3245500265	324927870573	324329035617	150
3448410000	3448410344	3448410361	344135143101	344956866904	150
3448410000	3448410344	3448410361	344135143101	344956866904	150
3470510000	3470510292	3470510632	347194632065	347589716689	150
3470510000	3470510292	3470510632	347194632065	347589716689	150
3428410000	3428410047	3428410161	342562400390	342539063881	150
3428410000	3428410047	3428410161	342562400390	342539063881	150
3429410000	3429410592	3429410149	342079473992	342645298183	150
3429410000	3429410592	3429410149	342079473992	342645298183	150
3461510000	3461510239	3461510524	346894696451	346679230949	150
3461510000	3461510239	3461510524	346894696451	346679230949	150
3461610000	3461610189	3461610589	346339650105	346829780651	150
3461610000	3461610189	3461610589	346339650105	346829780651	150
3439510000	3439510627	3439510315	343283521731	343525870243	150
3439510000	3439510627	3439510315	343283521731	343525870243	150
3478510000	3478510848	3478510713	347967658889	347150258388	150
3478510000	3478510848	3478510713	347967658889	347150258388	150
3435500000	3435500841	3435500186	343061702763	343037005435	150
3435500000	3435500841	3435500186	343061702763	343037005435	150
3401510000	3401510406	3401510929	340580254093	340159536364	150
3401510000	3401510406	3401510929	340580254093	340159536364	150
3378410000	3378410802	3378410643	337540080361	337366508191	150
3378410000	3378410802	3378410643	337540080361	337366508191	150
3375510000	3375510035	3375510692	337333911341	337785300795	150
3375510000	3375510035	3375510692	337333911341	337785300795	150
3392510000	3392510642	3392510819	339587459984	339065779795	150
3392510000	3392510642	3392510819	339587459984	339065779795	150
3406500000	3406500444	3406500901	340314724578	340106885225	150
3406500000	3406500444	3406500901	340314724578	340106885225	150
3387410000	3387410703	3387410754	338738578512	338904530711	150
3387410000	3387410703	3387410754	338738578512	338904530711	150

3383510000	3383510807	3383510727	338488535365	338807781844	150
3383510000	3383510807	3383510727	338488535365	338807781844	150
3416500000	3416500598	3416500002	341345940802	341516673261	150
3416500000	3416500598	3416500002	341345940802	341516673261	150
3552510000	3552510348	3552510440	355353644701	355502001302	150
3552510000	3552510348	3552510440	355353644701	355502001302	150
3600610000	3600610444	3600610029	360705192742	360476278428	150
3600610000	3600610444	3600610029	360705192742	360476278428	150
3581510000	3581510514	3581510733	358978342482	358312042693	150
3581510000	3581510514	3581510733	358978342482	358312042693	150
3550510000	3550510955	3550510444	355967508209	355917189451	150
3550510000	3550510955	3550510444	355967508209	355917189451	150
3547410000	3547410374	3547410376	354118011612	354453116733	150
3547410000	3547410374	3547410376	354118011612	354453116733	150
3506500000	3506500461	3506500911	350540410946	350320038689	150
3506500000	3506500461	3506500911	350540410946	350320038689	150
3512510000	3512510582	3512510036	351731811355	351955738307	150
3512510000	3512510582	3512510036	351731811355	351955738307	150
3515510000	3515510194	3515510071	351955142231	351122020878	150
3515510000	3515510194	3515510071	351955142231	351122020878	150
3529410000	3529410609	3529410159	352800670498	352240485234	150
3529410000	3529410609	3529410159	352800670498	352240485234	150
3486410000	3486410494	3486410774	348548293160	348374436752	150
3486410000	3486410494	3486410774	348548293160	348374436752	150
3545500000	3545500022	3545500295	354255557522	354439278032	150
3545500000	3545500022	3545500295	354255557522	354439278032	150
3729410000	3729410536	3729410179	372676941411	372139192633	150
3729410000	3729410536	3729410179	372676941411	372139192633	150
3712510000	3712510619	3712510056	371285864774	371490713291	150
3712510000	3712510619	3712510056	371285864774	371490713291	150
3700610000	3700610459	3700610039	370402735312	370243256786	150
3700610000	3700610459	3700610039	370402735312	370243256786	150
3657510000	3657510170	3657510544	365492307653	365586385630	150
3657510000	3657510170	3657510544	365492307653	365586385630	150
3660510000	3660510131	3660510554	366734390868	366297386761	150
3660510000	3660510131	3660510554	366734390868	366297386761	150
3664510000	3664510765	3664510575	366187600004	366963729894	150
3664510000	3664510765	3664510575	366187600004	366963729894	150
3609410000	3609410315	3609410972	360402672993	360482808353	150
3609410000	3609410315	3609410972	360402672993	360482808353	150
3658410000	3658410575	3658410478	365042356478	365864479747	150
3658410000	3658410575	3658410478	365042356478	365864479747	150
3612510000	3612510602	3612510046	361431882354	361345327984	150
3612510000	3612510602	3612510046	361431882354	361345327984	150
3625500000	3625500892	3625500108	362447912716	362508279768	150
3625500000	3625500892	3625500108	362447912716	362508279768	150
3666500000	3666500197	3666500522	366251848966	366967401308	150

3666500000	3666500197	3666500522	366251848966	366967401308	150
3659410000	3659410942	3659410467	365283882988	365712897704	150
3659410000	3659410942	3659410467	365283882988	365712897704	150
3817510000	3817510780	3817510161	381668344070	381680236444	150
3817510000	3817510780	3817510161	381668344070	381680236444	150
3801610000	3801610665	3801610041	380640961534	380448289774	150
3801610000	3801610665	3801610041	380640961534	380448289774	150
3819410000	3819410480	3819410090	381508939657	381505944913	150
3819410000	3819410480	3819410090	381508939657	381505944913	150
3804510000	3804510157	3804510982	380327220603	380398304008	150
3804510000	3804510157	3804510982	380327220603	380398304008	150
3808410000	3808410837	3808410004	380677815711	380515805814	150
3808410000	3808410837	3808410004	380677815711	380515805814	150
3797410000	3797410768	3797410893	379247017914	379962693579	150
3797410000	3797410768	3797410893	379247017914	379962693579	150
3837510000	3837510008	3837510366	383409160325	383264089341	150
3837510000	3837510008	3837510366	383409160325	383264089341	150
3769410000	3769410011	3769410577	376590714800	376100481818	150
3769410000	3769410011	3769410577	376590714800	376100481818	150
3757410000	3757410421	3757410496	375876264528	375413197907	150
3757410000	3757410421	3757410496	375876264528	375413197907	150
3767410000	3767410590	3767410596	376558690735	376075479479	150
3767410000	3767410590	3767410596	376558690735	376075479479	150
3969410000	3969410053	3969410597	396761866684	396612664814	150
3969410000	3969410053	3969410597	396761866684	396612664814	150
3939510000	3939510716	3939510364	393447770813	393455266606	150
3939510000	3939510716	3939510364	393447770813	393455266606	150
3927510000	3927510979	3927510272	392697158137	392208800516	150
3927510000	3927510979	3927510272	392697158137	392208800516	150
3860510000	3860510169	3860510573	386368566068	386955470083	150
3860510000	3860510169	3860510573	386368566068	386955470083	150
3881610000	3881610151	3881610828	388918735028	388353455703	150
3881610000	3881610151	3881610828	388918735028	388353455703	150
3882510000	3882510544	3882510768	388197861318	388455026427	150
3882510000	3882510544	3882510768	388197861318	388455026427	150
3916500000	3916500616	3916500052	391298458995	391484150107	150
3916500000	3916500616	3916500052	391298458995	391484150107	150
3888410000	3888410047	3888410793	388038873676	388938797969	150
3888410000	3888410047	3888410793	388038873676	388938797969	150
3918410000	3918410017	3918410113	391284394815	391908416413	150
3918410000	3918410017	3918410113	391284394815	391908416413	150
3895500000	3895500437	3895500841	389721774682	389472287428	150
3895500000	3895500437	3895500841	389721774682	389472287428	150
4058410000	4058410462	4058410420	405663743638	405951216369	150
4058410000	4058410462	4058410420	405663743638	405951216369	150
4042510000	4042510887	4042510289	404405697793	404872376398	150
4042510000	4042510887	4042510289	404405697793	404872376398	150

4036500000	4036500787	4036500163	403034637703	403034678555	150
4036500000	4036500787	4036500163	403034637703	403034678555	150
4090610000	4090610433	4090610864	409516321861	409085715477	150
4090610000	4090610433	4090610864	409516321861	409085715477	150
4078510000	4078510861	4078510675	407935643269	407043949072	150
4078510000	4078510861	4078510675	407935643269	407043949072	150
4065510000	4065510890	4065510548	406832658944	406451553827	150
4065510000	4065510890	4065510548	406832658944	406451553827	150
4066500000	4066500103	4066500463	406366451120	406752275432	150
4066500000	4066500103	4066500463	406366451120	406752275432	150
4069410000	4069410019	4069410508	406158091522	406684619142	150
4069410000	4069410019	4069410508	406158091522	406684619142	150
4076510000	4076510226	4076510679	407522777212	407854535208	150
4076510000	4076510226	4076510679	407522777212	407854535208	150
4049410000	4049410773	4049410309	404660031019	404675682337	150
4049410000	4049410773	4049410309	404660031019	404675682337	150
4011610000	4011610703	4011610061	401700318679	401223694235	150
4011610000	4011610703	4011610061	401700318679	401223694235	150
4021510000	4021510839	4021510090	402646463832	402341965038	150
4021510000	4021510839	4021510090	402646463832	402341965038	150
4006500000	4006500466	4006500864	400572310668	400379525709	150
4006500000	4006500466	4006500864	400572310668	400379525709	150
4008410000	4008410817	4008410924	400087370062	400501240534	150
4008410000	4008410817	4008410924	400087370062	400501240534	150
3995510000	3995510337	3995510963	399023510638	399628398054	150
3995510000	3995510337	3995510963	399023510638	399628398054	150
3998410000	3998410194	3998410902	399857355022	399474313310	150
3998410000	3998410194	3998410902	399857355022	399474313310	150
3996410000	3996410647	3996410923	399503336293	399637716789	150
3996410000	3996410647	3996410923	399503336293	399637716789	150
4002610000	4002610898	4002610949	400331992902	400840979154	150
4002610000	4002610898	4002610949	400331992902	400840979154	150
4201510000	4201510368	4201510909	420890406973	420537453368	150
4201510000	4201510368	4201510909	420890406973	420537453368	150
4165510000	4165510908	4165510560	416532831734	416749790191	150
4165510000	4165510908	4165510560	416532831734	416749790191	150
4166500000	4166500120	4166500473	416901051362	416692500333	150
4166500000	4166500120	4166500473	416901051362	416692500333	150
4189410000	4189410099	4189410717	418010569941	418202333211	150
4189410000	4189410099	4189410717	418010569941	418202333211	150
4202510000	4202510346	4202510905	420953109202	420697635911	150
4202510000	4202510346	4202510905	420953109202	420697635911	150
4175510000	4175510004	4175510671	417913363373	417392542444	150
4175510000	4175510004	4175510671	417913363373	417392542444	150
4133510000	4133510154	4133510208	413528566141	413365122365	150
4133510000	4133510154	4133510208	413528566141	413365122365	150
4136500000	4136500803	4136500173	413929926852	413281328639	150

4136500000	4136500803	4136500173	413929926852	413281328639	150
4105510000	4105510097	4105510925	410875767447	410820584904	150
4105510000	4105510097	4105510925	410875767447	410820584904	150
4123510000	4123510075	4123510108	412330346717	412074114280	150
4123510000	4123510075	4123510108	412330346717	412074114280	150
4129410000	4129410535	4129410121	412521958341	412642526386	150
4129410000	4129410535	4129410121	412521958341	412642526386	150
4112510000	4112510513	4112510995	411678636209	411702012111	150
4112510000	4112510513	4112510995	411678636209	411702012111	150
4115510000	4115510262	4115510029	411772089688	411868979254	150
4115510000	4115510262	4115510029	411772089688	411868979254	150
4125510000	4125510300	4125510133	412673319186	412769218074	150
4125510000	4125510300	4125510133	412673319186	412769218074	150
4141610000	4141610273	4141610362	414461755762	414153777359	150
4141610000	4141610273	4141610362	414461755762	414153777359	150
4318410000	4318410927	4318410055	431236849183	431723407940	150
4318410000	4318410927	4318410055	431236849183	431723407940	150
4325500000	4325500844	4325500079	432456036585	432908328925	150
4325500000	4325500844	4325500079	432456036585	432908328925	150
4306500000	4306500430	4306500892	430385438487	430965236129	150
4306500000	4306500430	4306500892	430385438487	430965236129	150
4337510000	4337510045	4337510312	433723566546	433432407545	150
4337510000	4337510045	4337510312	433723566546	433432407545	150
4290610000	4290610469	4290610884	429919613900	429623218981	150
4290610000	4290610469	4290610884	429919613900	429623218981	150
4284510000	4284510906	4284510735	428631884909	428791917851	150
4284510000	4284510906	4284510735	428631884909	428791917851	150
4342510000	4342510942	4342510319	434263552885	434844943625	150
4342510000	4342510942	4342510319	434263552885	434844943625	150
4302610000	4302610950	4302610978	430810333446	430900866746	150
4302610000	4302610950	4302610978	430810333446	430900866746	150
4272510000	4272510096	4272510613	427235106687	427160248303	150
4272510000	4272510096	4272510613	427235106687	427160248303	150
4242510000	4242510923	4242510309	424453779732	424653389910	150
4242510000	4242510923	4242510309	424453779732	424653389910	150
4258510000	4258510636	4258510498	425260751941	425371058367	150
4258510000	4258510636	4258510498	425260751941	425371058367	150
4445510000	4445510722	4445510374	444947848602	444624517831	150
4445510000	4445510722	4445510374	444947848602	444624517831	150
4267410000	4267410507	4267410547	426812989888	426082256674	150
4267410000	4267410507	4267410547	426812989888	426082256674	150
4239410000	4239410623	4239410230	423005279822	423461823808	150
4239410000	4239410623	4239410230	423005279822	423461823808	150
4268410000	4268410610	4268410536	426647210087	426327100637	150
4268410000	4268410610	4268410536	426647210087	426327100637	150
4225510000	4225510317	4225510143	422614996585	422073983790	150
4225510000	4225510317	4225510143	422614996585	422073983790	150

4246510000	4246510881	4246510399	424556430515	424055739945	150
4246510000	4246510881	4246510399	424556430515	424055739945	150
4237410000	4237410208	4237410255	423261183715	423594824914	150
4237410000	4237410208	4237410255	423261183715	423594824914	150
4417510000	4417510828	4417510124	441018532178	441679192908	150
4417510000	4417510828	4417510124	441018532178	441679192908	150
4427410000	4427410034	4427410175	442481198401	442343442072	150
4427410000	4427410034	4427410175	442481198401	442343442072	150
4407510000	4407510655	4407510023	440078690148	440006660393	150
4407510000	4407510655	4407510023	440078690148	440006660393	150
4425500000	4425500862	4425500089	442016546817	442928190524	150
4425500000	4425500862	4425500089	442016546817	442928190524	150
4425510000	4425510349	4425510164	442838535352	442649600403	150
4425510000	4425510349	4425510164	442838535352	442649600403	150
4409510000	4409510239	4409510015	440585205652	440378935878	150
4409510000	4409510239	4409510015	440585205652	440378935878	150
4346500000	4346500913	4346500293	434202137509	434217030927	150
4346500000	4346500913	4346500293	434202137509	434217030927	150
4401610000	4401610598	4401610003	440493101362	440643823259	150
4401610000	4401610598	4401610003	440493101362	440643823259	150
4361610000	4361610171	4361610580	436316808241	436284491304	150
4361610000	4361610171	4361610580	436316808241	436284491304	150
4393510000	4393510906	4393510830	439805026511	439773927467	150
4393510000	4393510906	4393510830	439805026511	439773927467	150
4380610000	4380610313	4380610794	438295625951	438749367749	150
4380610000	4380610313	4380610794	438295625951	438749367749	150
4374510000	4374510885	4374510644	437903395841	437225398274	150
4374510000	4374510885	4374510644	437903395841	437225398274	150
4404510000	4404510092	4404510941	440011705439	440592797196	150
4404510000	4404510092	4404510941	440011705439	440592797196	150
4564510000	4564510747	4564510565	456905002871	456642899544	150
4564510000	4564510747	4564510565	456905002871	456642899544	150
4571610000	4571610909	4571610699	457332511412	457288623387	150
4571610000	4571610909	4571610699	457332511412	457288623387	150
4551510000	4551510068	4551510433	455323373321	455625732450	150
4551510000	4551510068	4551510433	455323373321	455625732450	150
4590510000	4590510186	4590510839	459034761437	459945137119	150
4590510000	4590510186	4590510839	459034761437	459945137119	150
4587410000	4587410743	4587410775	458798902169	458481063660	150
4587410000	4587410743	4587410775	458798902169	458481063660	150
4557510000	4557510154	4557510535	455491747328	455025640453	150
4557510000	4557510154	4557510535	455491747328	455025640453	150
4506410000	4506410345	4506410981	450903510934	450680066170	150
4506410000	4506410345	4506410981	450903510934	450680066170	150
4477410000	4477410557	4477410666	447855520303	447058672380	150
4477410000	4477410557	4477410666	447855520303	447058672380	150
4511510000	4511510637	4511510040	451522197859	451209159986	150

4511510000	4511510637	4511510040	451522197859	451209159986	150
4531610000	4531610163	4531610303	453056117714	453938617955	150
4531610000	4531610163	4531610303	453056117714	453938617955	150
4483510000	4483510827	4483510738	448827505005	448375888470	150
4483510000	4483510827	4483510738	448827505005	448375888470	150
4711610000	4711610750	4711610129	471891020215	471055012414	150
4711610000	4711610750	4711610129	471891020215	471055012414	150
4682510000	4682510420	4682510749	468607414197	468687761211	150
4682510000	4682510420	4682510749	468607414197	468687761211	150
4716500000	4716500646	4716500033	471158097193	471683766984	150
4716500000	4716500646	4716500033	471158097193	471683766984	150
4601510000	4601510449	4601510950	460409213076	460475163021	150
4601510000	4601510449	4601510950	460409213076	460475163021	150
4616510000	4616510550	4616510134	461991606524	461289219196	150
4616510000	4616510550	4616510134	461991606524	461289219196	150
4601610000	4601610634	4601610023	460875545534	460284043213	150
4601610000	4601610634	4601610023	460875545534	460284043213	150
4633510000	4633510245	4633510259	463829061892	463661336640	150
4633510000	4633510245	4633510259	463829061892	463661336640	150
4621610000	4621610912	4621610217	462934964752	462902646851	150
4621610000	4621610912	4621610217	462934964752	462902646851	150
4602610000	4602610008	4602610008	460687618994	460300851316	150
4602610000	4602610008	4602610008	460687618994	460300851316	150
4623510000	4623510066	4623510158	462673292258	462066479438	150
4623510000	4623510066	4623510158	462673292258	462066479438	150
4792510000	4792510719	4792510861	479392254753	479247011362	150
4792510000	4792510719	4792510861	479392254753	479247011362	150
4801510000	4801510493	4801510970	480197859954	480448909963	150
4801510000	4801510493	4801510970	480197859954	480448909963	150
4822510000	4822510830	4822510168	482437963376	482575102665	150
4822510000	4822510830	4822510168	482437963376	482575102665	150
4825510000	4825510415	4825510207	482030304504	482046593316	150
4825510000	4825510415	4825510207	482030304504	482046593316	150
4798510000	4798510121	4798510945	479076046295	479221192103	150
4798510000	4798510121	4798510945	479076046295	479221192103	150
4823500000	4823500204	4823500158	482547579276	482892972531	150
4823500000	4823500204	4823500158	482547579276	482892972531	150
4747510000	4747510155	4747510456	474265821625	474266875635	150
4747510000	4747510155	4747510456	474265821625	474266875635	150
4724510000	4724510328	4724510175	472193801539	472962219228	150
4724510000	4724510328	4724510175	472193801539	472962219228	150
4741510000	4741510813	4741510354	474914993512	474534898076	150
4741510000	4741510813	4741510354	474914993512	474534898076	150
4777510000	4777510394	4777510752	477279121513	477008394389	150
4777510000	4777510394	4777510752	477279121513	477008394389	150
4719410000	4719410464	4719410081	471465094747	471163322506	150
4719410000	4719410464	4719410081	471465094747	471163322506	150

4719510000	4719510403	4719510148	471303715487	471166813779	150
4719510000	4719510403	4719510148	471303715487	471166813779	150
4759410000	4759410962	4759410478	475156714940	475600380714	150
4759410000	4759410962	4759410478	475156714940	475600380714	150
4778510000	4778510892	4778510744	477249179184	477357701177	150
4778510000	4778510892	4778510744	477249179184	477357701177	150
4733510000	4733510262	3733510268	473743587269	473197237061	150
4733510000	4733510262	3733510268	473743587269	473197237061	150
4737510000	4737510993	4737510357	473189964230	473148662548	150
4737510000	4737510993	4737510357	473189964230	473148662548	150
4776510000	4776510346	4776510751	477075891470	477441983868	150
4776510000	4776510346	4776510751	477075891470	477441983868	150
4948510000	4948510584	4948510468	494617573302	494713675422	150
4948510000	4948510584	4948510468	494617573302	494713675422	150
4952510000	4952510428	4952510481	495984578504	495795246297	150
4952510000	4952510428	4952510481	495984578504	495795246297	150
4938510000	4938510416	4938510366	493073162961	493179332215	150
4938510000	4938510416	4938510366	493073162961	493179332215	150
4957410000	4957410457	4957410517	495799689129	495491324199	150
4957410000	4957410457	4957410517	495799689129	495491324199	150
4863510000	4863510593	4863510576	486050021646	486389518671	150
4863510000	4863510593	4863510576	486050021646	486389518671	150
4865510000	4865510946	4865510637	486382670201	486089301472	150
4865510000	4865510946	4865510637	486382670201	486089301472	150
4870610000	4870610304	4870610744	487917194123	487096588633	150
4870610000	4870610304	4870610744	487917194123	487096588633	150
4859410000	4859410982	4859410488	485776156213	485577701139	150
4859410000	4859410982	4859410488	485776156213	485577701139	150
4885500000	4885500286	4885500733	488447142152	488098098486	150
4885500000	4885500286	4885500733	488447142152	488098098486	150
4866410000	4866410320	4866410613	486117506750	486023419264	150
4866410000	4866410320	4866410613	486117506750	486023419264	150
4857410000	4857410438	4857410507	485866174255	485454973645	150
4857410000	4857410438	4857410507	485866174255	485454973645	150
4857510000	4857510208	4857510565	485959942643	485268475191	150
4857510000	4857510208	4857510565	485959942643	485268475191	150
4870510000	4870510369	4870510673	487675237350	487899653002	150
4870510000	4870510369	4870510673	487675237350	487899653002	150
5029410000	5029410519	5029410112	502764944152	502183786027	150
5029410000	5029410519	5029410112	502764944152	502183786027	150
5085510000	5085510096	5085510770	508441295720	508267924587	150
5085510000	5085510096	5085510770	508441295720	508267924587	150
5039410000	5039410590	5039410211	503400419824	503471984648	150
5039410000	5039410590	5039410211	503400419824	503471984648	150
5024510000	5024510294	5024510106	502685655827	502055788451	150
5024510000	5024510294	5024510106	502685655827	502055788451	150
5068510000	5068510694	5068510578	506887665711	506540606521	150

5068510000	5068510694	5068510578	506887665711	506540606521	150
5043510000	5043510225	5043510299	504244395543	504697703231	150
5043510000	5043510225	5043510299	504244395543	504697703231	150
4986510000	4986510490	4986510872	498531639711	498333281091	150
4986510000	4986510490	4986510872	498531639711	498333281091	150
4980510000	4980510071	4980510781	498013930334	498724119536	150
4980510000	4980510071	4980510781	498013930334	498724119536	150
5009410000	5009410211	5009410914	500769820511	500295833933	150
5009410000	5009410211	5009410914	500769820511	500295833933	150
4962510000	4962510618	4962510583	496494540776	496329500796	150
4962510000	4962510618	4962510583	496494540776	496329500796	150
5019410000	5019410342	5019410013	501465445601	501341108358	150
5019410000	5019410342	5019410013	501465445601	501341108358	150
4988510000	4988510068	4988510865	498741913601	498785683659	150
4988510000	4988510068	4988510865	498741913601	498785683659	150
4992510000	4992510753	4992510881	499426892590	499909897908	150
4992510000	4992510753	4992510881	499426892590	499909897908	150
4995500000	4995500452	4995500853	499273571510	499884603650	150
4995500000	4995500452	4995500853	499273571510	499884603650	150
5173510000	5173510652	5173510608	517465421065	517008682981	150
5173510000	5173510652	5173510608	517465421065	517008682981	150
5194510000	5194510057	5194510827	519377872162	519130570852	150
5194510000	5194510057	5194510827	519377872162	519130570852	150
5184510000	5184510890	5184510726	518017590262	518621398928	150
5184510000	5184510890	5184510726	518017590262	518621398928	150
5207510000	5207510622	5207510004	520860287153	520580232682	150
5207510000	5207510622	5207510004	520860287153	520580232682	150
5157410000	5157410482	5157410438	515993609086	515602830186	150
5157410000	5157410482	5157410438	515993609086	515602830186	150
5157510000	5157510230	5157510496	515976751537	515633870825	150
5157510000	5157510230	5157510496	515976751537	515633870825	150
5196410000	5196410536	5196410845	519952536832	519960777615	150
5196410000	5196410536	5196410845	519952536832	519960777615	150
5094510000	5094510039	5094510817	509875004539	509969250271	150
5094510000	5094510039	5094510817	509875004539	509969250271	150
5097510000	5097510808	5097510882	509558191600	509206678224	150
5097510000	5097510808	5097510882	509558191600	509206678224	150
5089510000	5089510142	5089510773	508394854960	508792532052	150
5089510000	5089510142	5089510773	508394854960	508792532052	150
5106510000	5106510375	5106510985	510529085668	510379836672	150
5106510000	5106510375	5106510985	510529085668	510379836672	150
5135500000	5135500796	5135500159	513453372315	513282130757	150
5135500000	5135500796	5135500159	513453372315	513282130757	150
5138510000	5138510344	5138510288	513386478178	513779253585	150
5138510000	5138510344	5138510288	513386478178	513779253585	150
5104510000	5104510049	5104510910	510855320531	510014320408	150
5104510000	5104510049	5104510910	510855320531	510014320408	150

5136510000	5136510813	5136510290	513554859338	513002554048	150
5136510000	5136510813	5136510290	513554859338	513002554048	150
5298410000	5298410080	5298410835	529973446191	529944747954	150
5298410000	5298410080	5298410835	529973446191	529944747954	150
5278410000	5278410789	5278410635	527169287203	527725100428	150
5278410000	5278410789	5278410635	527169287203	527725100428	150
5309510000	5309510225	5309510006	530947401153	530825597018	150
5309510000	5309510225	5309510006	530947401153	530825597018	150
5326410000	5326410627	5326410162	532874861365	532469384945	150
5326410000	5326410627	5326410162	532874861365	532469384945	150
5326500000	5326500681	5326500094	532659448128	532894346108	150
5326500000	5326500681	5326500094	532659448128	532894346108	150
5296410000	5296410551	5296410855	529682610693	529970366877	150
5296410000	5296410551	5296410855	529682610693	529970366877	150
5303510000	5303510824	5303510927	530715859377	530519781541	150
5303510000	5303510824	5303510927	530715859377	530519781541	150
5321610000	5321610862	5321610190	532129332886	532228987626	150
5321610000	5321610862	5321610190	532129332886	532228987626	150
5289510000	5289510172	5289510793	528113049247	528070910910	150
5289510000	5289510172	5289510793	528113049247	528070910910	150
5226500000	5226500665	5226500084	522883289957	522492774613	150
5226500000	5226500665	5226500084	522883289957	522492774613	150
5229410000	5229410556	5229410132	522435897224	522268295393	150
5229410000	5229410556	5229410132	522435897224	522268295393	150
5262510000	5262510484	5262510512	526718495218	526687167100	150
5262510000	5262510484	5262510512	526718495218	526687167100	150
5231510000	5231510082	5231510209	523365339883	523702193624	150
5231510000	5231510082	5231510209	523365339883	523702193624	150
5264510000	5264510700	5264510536	526475702910	526923618294	150
5264510000	5264510700	5264510536	526475702910	526923618294	150
5237510000	5237510030	5237510303	523071771939	523526753249	150
5237510000	5237510030	5237510303	523071771939	523526753249	150
5225500000	5225500830	5225500070	522349337110	522576809637	150
5225500000	5225500830	5225500070	522349337110	522576809637	150
5238410000	5238410184	5238410243	523100830590	523519303984	150
5238410000	5238410184	5238410243	523100830590	523519303984	150
5421510000	5421510919	5421510131	542251538971	542290778284	150
5421510000	5421510919	5421510131	542251538971	542290778284	150
5456510000	5456510026	5456510516	545458281007	545433524282	150
5456510000	5456510026	5456510516	545458281007	545433524282	150
5416410000	5416410489	5416410073	541994312162	541754610727	150
5416410000	5416410489	5416410073	541994312162	541754610727	150
5429510000	5429510454	5429510218	542748620264	542726928178	150
5429510000	5429510454	5429510218	542748620264	542726928178	150
5365510000	5365510859	5365510583	536845924597	536758724452	150
5365510000	5365510859	5365510583	536845924597	536758724452	150
5385500000	5385500209	5385500681	538104029853	538554697040	150

5385500000	5385500209	5385500681	538104029853	538554697040	150
5385510000	5385510147	5385510804	538979890510	538467713165	150
5385510000	5385510147	5385510804	538979890510	538467713165	150
5360510000	5360510116	5360510527	536700650706	536476407063	150
5360510000	5360510116	5360510527	536700650706	536476407063	150
5554510000	5554510700	5554510466	555322262151	555956414480	150
5554510000	5554510700	5554510466	555322262151	555956414480	150
5527510000	5527510913	5527510233	552191941273	552777253266	150
5527510000	5527510913	5527510233	552191941273	552777253266	150
5558410000	5558410559	5558410470	555211483480	555489215700	150
5558410000	5558410559	5558410470	555211483480	555489215700	150
5580510000	5580510991	5580510742	558469589087	558263288452	150
5580510000	5580510991	5580510742	558469589087	558263288452	150
5540510000	5540510955	5540510347	554732056506	554805236065	150
5556510000	5556510045	5556510526	555444685794	555354053013	150
5556510000	5556510045	5556510526	555444685794	555354053013	150
5525510000	5525510368	5525510176	552284635485	552212853992	150
5525510000	5525510368	5525510176	552284635485	552212853992	150
5535510000	5535510563	5535510278	553604043429	553294131688	150
5535510000	5535510563	5535510278	553604043429	553294131688	150
5466500000	5466500169	5466500504	546653247158	546561324321	150
5466500000	5466500169	5466500504	546653247158	546561324321	150
5498410000	5498410117	5498410855	549848181039	549603524754	150
5498410000	5498410117	5498410855	549848181039	549603524754	150
5501510000	5501510432	5501510941	550715881657	550883486527	150
5501510000	5501510432	5501510941	550715881657	550883486527	150
5501610000	5501610616	5501610014	550732629491	550094331851	150
5501610000	5501610616	5501610014	550732629491	550094331851	150
5696410000	5696410605	5696410895	569407626701	569684321026	150
5696410000	5696410605	5696410895	569407626701	569684321026	150
5699410000	5699410337	5699410863	569959902960	569761811876	150
5699410000	5699410337	5699410863	569959902960	569761811876	150
5701510000	5701510473	5701510961	570850847453	570692869438	150
5701510000	5701510473	5701510961	570850847453	570692869438	150
5666510000	5666510161	5666510639	566213192097	566114964166	150
5666510000	5666510161	5666510639	566213192097	566114964166	150
5652510000	5652510373	5652510452	565401132340	565453963754	150
5652510000	5652510373	5652510452	565401132340	565453963754	150
5585500000	5585500241	5585500700	558654760766	558901716566	150
5585500000	5585500241	5585500700	558654760766	558901716566	150
5588410000	5588410996	5588410764	558071859378	558571063150	150
5588410000	5588410996	5588410764	558071859378	558571063150	150
5642510000	5642510999	5642510351	564910257272	564341459266	150
5642510000	5642510999	5642510351	564910257272	564341459266	150
5626410000	5626410679	5626410192	562276137913	562270081764	150
5626410000	5626410679	5626410192	562276137913	562270081764	150
5811610000	5811610770	5811610140	581315575969	581747160013	150

5811610000	5811610770	5811610140	581315575969	581747160013	150
5784510000	5784510994	5784510786	578364783120	578574930005	150
5784510000	5784510994	5784510786	578364783120	578574930005	150
5809510000	5809510252	5809510057	580883935750	580036838217	150
5809510000	5809510252	5809510057	580883935750	580036838217	150
5816510000	5816510585	5816510158	581037292612	581190307800	150
5816510000	5816510585	5816510158	581037292612	581190307800	150
5782510000	5782510441	5782510760	578728499743	578704181579	150
5782510000	5782510441	5782510760	578728499743	578704181579	150
5775510000	5775510114	5775510737	577550975011	577112332626	150
5775510000	5775510114	5775510737	577550975011	577112332626	150
5746510000	5746510975	5746510447	574076579275	574401438070	150
5746510000	5746510975	5746510447	574076579275	574401438070	150
5731510000	5731510613	5731510259	573592423578	573830578581	150
5731510000	5731510613	5731510259	573592423578	573830578581	150
5741610000	5741610381	5741610422	574455325278	574102986019	150
5741610000	5741610381	5741610422	574455325278	574102986019	150
5721510000	5721510977	5721510161	572540165830	572672580661	150
5721510000	5721510977	5721510161	572540165830	572672580661	150
5719510000	5719510405	5719510149	571516007664	571580955069	150
5719510000	5719510405	5719510149	571516007664	571580955069	150
5725510000	5725510400	5725510197	572154202227	572800736679	150
5725510000	5725510400	5725510197	572154202227	572800736679	150
5726500000	5726500741	5726500134	572270504382	572025955316	150
5726500000	5726500741	5726500134	572270504382	572025955316	150
5933510000	5933510301	5933510289	593071343177	593993191656	150
5933510000	5933510301	5933510289	593071343177	593993191656	150
5925510000	5925510462	5925510218	592193601677	592022437049	150
5925510000	5925510462	5925510218	592193601677	592022437049	150
5901510000	5901510517	5901510981	590950213128	590245627101	150
5901510000	5901510517	5901510981	590950213128	590245627101	150
5936510000	5936510828	5936510371	593394866429	593644263918	150
5936510000	5936510828	5936510371	593394866429	593644263918	150
5879510000	5879510106	5879510753	587630668342	587643794710	150
5879510000	5879510106	5879510753	587630668342	587643794710	150
5829510000	5829510525	5829510259	582933292832	582088574087	150
5829510000	5829510525	5829510259	582933292832	582088574087	150
5835500000	5835500908	5835500228	583413532347	583642998972	150
5835500000	5835500908	5835500228	583413532347	583642998972	150
5869410000	5869410034	5869410589	586918016443	586668967438	150
5869410000	5869410034	5869410589	586918016443	586668967438	150
5844510000	5844510589	5844510393	584508606362	584046173996	150
5844510000	5844510589	5844510393	584508606362	584046173996	150
5839410000	5839410736	5839410291	583469386085	583701732875	150
5839410000	5839410736	5839410291	583469386085	583701732875	150
5877410000	5877410625	5877410706	587075313764	587288897827	150
5877410000	5877410625	5877410706	587075313764	587288897827	150

5859510000	5859510971	5859510555	585615720897	585878973356	150
5859510000	5859510971	5859510555	585615720897	585878973356	150
6040510000	6040510863	6040510298	604929866082	604073521627	150
6040510000	6040510863	6040510298	604929866082	604073521627	150
6057410000	6057410468	6057410429	605014140253	605943699783	150
6057410000	6057410468	6057410429	605014140253	605943699783	150
6049510000	6049510737	6049510377	604706894402	604146221377	150
6049510000	6049510737	6049510377	604706894402	604146221377	150
6037410000	6037410168	6037410238	603852996286	603833562108	150
6037410000	6037410168	6037410238	603852996286	603833562108	150
6067410000	6067410477	6067410529	606557595587	606780540111	150
6067410000	6067410477	6067410529	606557595587	606780540111	150
6026410000	6026410578	6026410133	602751536162	602377048062	150
6026410000	6026410578	6026410133	602751536162	602377048062	150
6015510000	6015510246	6015510021	601100010076	601117896960	150
6015510000	6015510246	6015510021	601100010076	601117896960	150
6019410000	6019410344	6019410014	601352325804	601665277466	150
6019410000	6019410344	6019410014	601352325804	601665277466	150
5957510000	5957510226	5957510576	595443829157	595347219845	150
5957510000	5957510226	5957510576	595443829157	595347219845	150
5979510000	5979510124	5979510764	597514973272	597269479658	150
5979510000	5979510124	5979510764	597514973272	597269479658	150
5985500000	5985500301	5985500746	598108084960	598540353188	150
5985500000	5985500301	5985500746	598108084960	598540353188	150
5951610000	5951610103	5951610541	595353687805	595399154966	150
5951610000	5951610103	5951610541	595353687805	595399154966	150
5977410000	5977410641	5977410716	597853201972	597705832517	150
5977410000	5977410641	5977410716	597853201972	597705832517	150
5981610000	5981610172	5981610840	598678136405	598088337088	150
5981610000	5981610172	5981610840	598678136405	598088337088	150
5988410000	5988410069	5988410805	598547319338	598321001884	150
5988410000	5988410069	5988410805	598547319338	598321001884	150
6160510000	6160510081	6160510508	616256677902	616553700919	150
6160510000	6160510081	6160510508	616256677902	616553700919	150
6145500000	6145500959	6145500258	614456524318	614579167189	150
6145500000	6145500959	6145500258	614456524318	614579167189	150
6148410000	6148410297	6148410334	614436634833	614002212649	150
6148410000	6148410297	6148410334	614436634833	614002212649	150
6138410000	6138410168	6138410234	613972152306	613861994996	150
6138410000	6138410168	6138410234	613972152306	613861994996	150
6147410000	6147410307	6147410341	614751982553	614903897564	150
6147410000	6147410307	6147410341	614751982553	614903897564	150
6096410000	6096410522	6096410836	609052329274	609741807292	150
6096410000	6096410522	6096410836	609052329274	609741807292	150
6086500000	6086500359	6086500664	608324750978	608887436639	150
6086500000	6086500359	6086500664	608324750978	608887436639	150
6109410000	6109410230	6109410925	610565710639	610643528460	150

6109410000	6109410230	6109410925	610565710639	610643528460	150
6314510000	6314510181	6314510036	631181840159	631723294790	150
6314510000	6314510181	6314510036	631181840159	631723294790	150
6311510000	6311510601	6311510022	631647044010	631617444887	150
6311510000	6311510601	6311510022	631647044010	631617444887	150
6281510000	6281510445	6281510706	628488218302	628362028004	150
6281510000	6281510445	6281510706	628488218302	628362028004	150
6281610000	6281610052	6281610771	628683490752	628328565719	150
6281610000	6281610052	6281610771	628683490752	628328565719	150
6319510000	6319510338	6319510109	631313097802	631958383458	150
6319510000	6319510338	6319510109	631313097802	631958383458	150
6279410000	6279410106	6279410630	627030533931	627266697652	150
6279410000	6279410106	6279410630	627030533931	627266697652	150
6266500000	6266500140	6266500485	626543799113	626411128393	150
6266500000	6266500140	6266500485	626543799113	626411128393	150
6266510000	6266510164	6266510600	626557075924	626513552928	150
6266510000	6266510164	6266510600	626557075924	626513552928	150
6240510000	6240510898	6240510318	624140830103	624718050081	150
6240510000	6240510898	6240510318	624140830103	624718050081	150
6229510000	6229510497	6229510200	622761833363	622500584268	150
6229510000	6229510497	6229510200	622761833363	622500584268	150
6235500000	6235500815	6235500170	623019515638	623223734016	150
6235500000	6235500815	6235500170	623019515638	623223734016	150
6200510000	6200510448	6200510923	620244029782	620595854021	150
6200510000	6200510448	6200510923	620244029782	620595854021	150
6214510000	6214510163	6214510026	621075384715	621424820975	150
6214510000	6214510163	6214510026	621075384715	621424820975	150
6259410000	6259410872	6259410431	625971149600	625929759869	150
6259410000	6259410872	6259410431	625971149600	625929759869	150
6247510000	6247510080	6247510408	624836984189	624360669660	150
6260610000	6260610054	6260610585	626920159478	626325599006	150
6260610000	6260610054	6260610585	626920159478	626325599006	150
6212510000	6212510533	6212510008	621131951654	621365282693	150
6212510000	6212510533	6212510008	621131951654	621365282693	150
6417410000	6417410803	6417410078	641244517677	641430282027	150
6417410000	6417410803	6417410078	641244517677	641430282027	150
6395500000	6395500366	6395500793	639425031449	639320298396	150
6395500000	6395500366	6395500793	639425031449	639320298396	150
6388510000	6388510983	6388510807	638223535874	638747531740	150
6388510000	6388510983	6388510807	638223535874	638747531740	150
6403510000	6403510844	6403510938	640673637916	640731980314	150
6403510000	6403510844	6403510938	640673637916	640731980314	150
6419410000	6419410418	6419410053	641468195839	641649961757	150
6419410000	6419410418	6419410053	641468195839	641649961757	150
6392510000	6392510648	6392510822	639450316101	639232915608	150
6392510000	6392510648	6392510822	639450316101	639232915608	150
6345510000	6345510709	6345510365	634797592967	634093478462	150

6345510000	6345510709	6345510365	634797592967	634093478462	150
6362510000	6362510505	6362510523	636775855881	636617774435	150
6362510000	6362510505	6362510523	636775855881	636617774435	150
6337410000	6337410232	6337410266	633564516289	633425254217	150
6337410000	6337410232	6337410266	633564516289	633425254217	150
6369510000	6369510960	6369510605	636303230037	636243639925	150
6369510000	6369510960	6369510605	636303230037	636243639925	150
6349410000	6349410836	6349410341	634162360459	634763617517	150
6349410000	6349410836	6349410341	634162360459	634763617517	150
6366500000	6366500153	6366500495	636805251218	636773633076	150
6366500000	6366500153	6366500495	636805251218	636773633076	150
6359510000	6359510895	6359510507	635923876791	635249826097	150
6359510000	6359510895	6359510507	635923876791	635249826097	150
6350510000	6350510923	6350510427	635536285042	635073281784	150
6350510000	6350510923	6350510427	635536285042	635073281784	150
6386510000	6386510382	6386510814	638273345345	638104257178	150
6386510000	6386510382	6386510814	638273345345	638104257178	150
6344510000	6344510503	6344510343	634331550717	634753287419	150
6344510000	6344510503	6344510343	634331550717	634753287419	150
6367410000	6367410526	6367410560	636307396555	636739834009	150
6367410000	6367410526	6367410560	636307396555	636739834009	150
6374510000	6374510889	6374510646	637510951389	637668521609	150
6374510000	6374510889	6374510646	637510951389	637668521609	150
6553510000	6553510495	6553510449	655115064482	655803066718	150
6553510000	6553510495	6553510449	655115064482	655803066718	150
6527410000	6527410054	6527410187	652584993572	652828972357	150
6527410000	6527410054	6527410187	652584993572	652828972357	150
6545500000	6545500027	6545500298	654468578355	654236205876	150
6545500000	6545500027	6545500298	654468578355	654236205876	150
6525500000	6525500881	6525500101	652813172607	652424613434	150
6525500000	6525500881	6525500101	652813172607	652424613434	150
6565510000	6565510897	6565510607	656203329947	656013338275	150
6565510000	6565510897	6565510607	656203329947	656013338275	150
6509510000	6509510261	6509510028	650380557445	650439517732	150
6509510000	6509510261	6509510028	650380557445	650439517732	150
6462510000	6462510525	6462510533	646513612461	646294209503	150
6462510000	6462510525	6462510533	646513612461	646294209503	150
6451610000	6451610016	6451610492	645458909758	645738679296	150
6451610000	6451610016	6451610492	645458909758	645738679296	150
6467410000	6467410544	6467410570	646867056679	646799736215	150
6467410000	6467410544	6467410570	646867056679	646799736215	150
6485500000	6485500227	5485500691	648635266712	648256096689	150
6485500000	6485500227	5485500691	648635266712	648256096689	150
6489410000	6489410158	6489410748	648991510044	648510634638	150
6489410000	6489410158	6489410748	648991510044	648510634638	150
6457510000	6457510141	6457510527	645325936747	645576557973	150
6457510000	6457510141	6457510527	645325936747	645576557973	150

6502510000	6502510404	6502510938	650055609741	650411037748	150
6502510000	6502510404	6502510938	650055609741	650411037748	150
6474510000	6474510907	6474510656	647824074214	647239289501	150
6474510000	6474510907	6474510656	647824074214	647239289501	150
6661610000	6661610753	6661610612	666001228893	666476964979	150
6661610000	6661610753	6661610612	666001228893	666476964979	150
6649410000	6649410764	6649410371	664423606071	664828599124	150
6649410000	6649410764	6649410371	664423606071	664828599124	150
6681610000	6681610124	6681610811	668297319101	668642733020	150
6681610000	6681610124	6681610811	668297319101	668642733020	150
6647410000	6647410397	6647410388	664910574438	664753274253	150
6647410000	6647410397	6647410388	664910574438	664753274253	150
6653510000	6653510512	6653510459	665089523950	665184809662	150
6653510000	6653510512	6653510459	665089523950	665184809662	150
6572510000	6572510153	6572510644	657704481483	657729132692	150
6572510000	6572510153	6572510644	657704481483	657729132692	150
6583510000	6583510847	6583510750	658912339390	658516912302	150
6583510000	6583510847	6583510750	658912339390	658516912302	150
6586510000	6586510422	6586510834	658000587945	658069750451	150
6586510000	6586510422	6586510834	658000587945	658069750451	150
6618510000	6618510157	6618510141	661874555916	661949653312	150
6618510000	6618510157	6618510141	661874555916	661949653312	150
6764510000	6764510789	6764510588	676191807011	676993604448	150
6764510000	6764510789	6764510588	676191807011	676993604448	150
6790610000	6790610480	6790610935	679043541559	679592888509	150
6790610000	6790610480	6790610935	679043541559	679592888509	150
6797410000	6797410772	6797410896	679197136701	679418398771	150
6797410000	6797410772	6797410896	679197136701	679418398771	150
6798410000	6798410169	6798410885	679871829183	679500826210	150
6798410000	6798410169	6798410885	679871829183	679500826210	150
6768510000	6768510818	6768510648	676139841072	676810174389	150
6768510000	6768510818	6768510648	676139841072	676810174389	150
6755510000	6755510843	6755510516	675050122347	675076590978	150
6755510000	6755510843	6755510516	675050122347	675076590978	150
6739410000	6739410719	6739410282	673543839940	673988313052	150
6739410000	6739410719	6739410282	673543839940	673988313052	150
6717410000	6717410851	6717410107	671670526908	671069427846	150
6717410000	6717410851	6717410107	671670526908	671069427846	150
6691510000	6691510725	6691510846	669635203461	669849292782	150
6691510000	6691510725	6691510846	669635203461	669849292782	150
6721610000	6721610932	6721610229	672448073552	672264237538	150
6721610000	6721610932	6721610229	672448073552	672264237538	150
6715510000	6715510233	6715510095	671683028875	671434992383	150
6715510000	6715510233	6715510095	671683028875	671434992383	150
6694510000	6694510013	6694510878	669511596339	669619981316	150
6694510000	6694510013	6694510878	669511596339	669619981316	150
6751510000	6751510110	6751510456	675371757397	675079823689	150

6751510000	6751510110	6751510456	675371757397	675079823689	150
6751610000	6751610068	6751610522	675039795769	675220986472	150
6751610000	6751610068	6751610522	675039795769	675220986472	150
6695500000	6695500412	6695500823	669206159521	669996588330	150
6695500000	6695500412	6695500823	669206159521	669996588330	150
6892510000	6892510738	6892510873	689782935730	689446699733	150
6892510000	6892510738	6892510873	689782935730	689446699733	150
6925500000	6925500950	6925500141	692179035729	692524160150	150
6925500000	6925500950	6925500141	692179035729	692524160150	150
6899510000	6899510329	6899510952	689852441264	689436982172	150
6899510000	6899510329	6899510952	689852441264	689436982172	150
6878410000	6878410874	6878410695	687787078121	687165541388	150
6878410000	6878410874	6878410695	687787078121	687165541388	150
6868410000	6868410724	6868410597	686850420847	686258105600	150
6868410000	6868410724	6868410597	686850420847	686258105600	150
6826410000	6826410714	6826410213	682245377374	682803246594	150
6826410000	6826410714	6826410213	682245377374	682803246594	150
6841610000	6841610910	6841610433	684785147629	684631513579	150
6841610000	6841610910	6841610433	684785147629	684631513579	150
6860510000	6860510174	6860510576	686273414716	686020452100	150
6860510000	6860510174	6860510576	686273414716	686020452100	150
6827510000	6827510967	6827510264	682559008302	682477813690	150
6827510000	6827510967	6827510264	682559008302	682477813690	150
6861510000	6861510167	6861510566	686324481169	686995891383	150
6861510000	6861510167	6861510566	686324481169	686995891383	150
6828510000	6828510293	6828510259	682641088172	682759689338	150
6828510000	6828510293	6828510259	682641088172	682759689338	150
6850610000	6850610011	6850610547	685998028726	685847717585	150
6850610000	6850610011	6850610547	685998028726	685847717585	150
6840510000	6840510832	6840510377	684104037012	684375030534	150
6840510000	6840510832	6840510377	684104037012	684375030534	150
6857410000	6857410441	6857410509	685591159274	685083260087	150
6857410000	6857410441	6857410509	685591159274	685083260087	150
6816410000	6816410543	6816410113	681508189648	681015602053	150
6816410000	6816410543	6816410113	681508189648	681015602053	150
7023510000	7023510061	7023510101	702139054563	702137690666	150
7023510000	7023510061	7023510101	702139054563	702137690666	150
7045510000	7045510655	7045510333	704761196237	704765719433	150
7045510000	7045510655	7045510333	704761196237	704765719433	150
7016500000	7016500540	7016500966	701395729038	701153584252	150
7016500000	7016500540	7016500966	701395729038	701153584252	150
7031610000	7031610992	7031610260	703296610315	703856303333	150
7031610000	7031610992	7031610260	703296610315	703856303333	150
7037510000	7037510004	7037510286	703834507829	703010925752	150
7037510000	7037510004	7037510286	703834507829	703010925752	150
7007410000	7007410671	7007410937	700744363192	700194066683	150
7007410000	7007410671	7007410937	700744363192	700194066683	150

6996510000	6996510672	6996510974	699840700026	699593887884	150
6996510000	6996510672	6996510974	699840700026	699593887884	150
7011510000	7011510540	7011510993	701090933093	701687644768	150
7011510000	7011510540	7011510993	701090933093	701687644768	150
6991610000	6991610879	6991610941	699493896231	699321573782	150
6991610000	6991610879	6991610941	699493896231	699321573782	150
6969410000	6969410057	6969410600	696330886463	696471644827	150
6969410000	6969410057	6969410600	696330886463	696471644827	150
6939410000	6939410759	6939410301	693409020486	693086567726	150
6939410000	6939410759	6939410301	693409020486	693086567726	150
6958410000	6958410560	6958410509	695450734702	695230740712	150
6958410000	6958410560	6958410509	695450734702	695230740712	150
6959410000	6959410004	6959410500	695816561093	695359778188	150
6959410000	6959410004	6959410500	695816561093	695359778188	150
6956500000	6956500091	6956500455	695637634770	695170856720	150
6956500000	6956500091	6956500455	695637634770	695170856720	150
6990610000	6990610516	6990610955	699637191972	699679784848	150
6990610000	6990610516	6990610955	699637191972	699679784848	150
6993510000	6993510014	6993510892	699548406268	699617336958	150
6993510000	6993510014	6993510892	699548406268	699617336958	150
6950610000	6950610027	6950610557	695547539714	695073520177	150
6950610000	6950610027	6950610557	695547539714	695073520177	150
7169510000	7169510932	7169510587	716807213252	716894346146	150
7169510000	7169510932	7169510587	716807213252	716894346146	150
7156510000	7156510979	7156510489	715327701752	715786726472	150
7156510000	7156510979	7156510489	715327701752	715786726472	150
7141510000	7141510695	7141510299	714630669641	714701741037	150
7141510000	7141510695	7141510299	714630669641	714701741037	150
7149510000	7149510695	7149510388	714600537316	714019324590	150
7149510000	7149510695	7149510388	714600537316	714019324590	150
7128410000	7128410057	7128410135	712689604267	712797045132	150
7128410000	7128410057	7128410135	712689604267	712797045132	150
7176410000	7176410292	7176410647	717990594618	717153792893	150
7176410000	7176410292	7176410647	717990594618	717153792893	150
7095500000	7095500320	7095500760	709124672679	709172825399	150
7095500000	7095500320	7095500760	709124672679	709172825399	150
7071610000	7071610824	7071610652	707739526549	707937909507	150
7071610000	7071610824	7071610652	707739526549	707937909507	150
7097410000	7097410666	7097410828	709798497056	709663402788	150
7097410000	7097410666	7097410828	709798497056	709663402788	150
7113510000	7113510890	7113510010	711322218126	711401694998	150
7113510000	7113510890	7113510010	711322218126	711401694998	150
7088510000	7088510939	7088510777	708568756276	708622916979	150
7088510000	7088510939	7088510777	708568756276	708622916979	150
7107510000	7107510609	7107510995	710104811765	710882132943	150
7107510000	7107510609	7107510995	710104811765	710882132943	150
7082510000	7082510251	7082510693	708654587215	708903659921	150

7082510000	7082510251	7082510693	708654587215	708903659921	150
7114510000	7114510149	7114510017	711737688693	711480550158	150
7114510000	7114510149	7114510017	711737688693	711480550158	150
7086410000	7086410440	7086410738	708467077908	708002333780	150
7086410000	7086410440	7086410738	708467077908	708002333780	150
7108410000	7108410840	7108410937	710604142673	710996072272	150
7108410000	7108410840	7108410937	710604142673	710996072272	150
7288510000	7288510971	7288510798	728115274666	728040996840	150
7288510000	7288510971	7288510798	728115274666	728040996840	150
7249410000	7249410818	7249410332	724261492761	724488873789	150
7249410000	7249410818	7249410332	724261492761	724488873789	150
7280510000	7280510937	7280510715	728400336513	728270845904	150
7280510000	7280510937	7280510715	728400336513	728270845904	150
7269410000	7269410926	7269410531	726994644170	726593513024	150
7269410000	7269410926	7269410531	726994644170	726593513024	150
7287410000	7287410694	7287410748	728228113460	728974772777	150
7287410000	7287410694	7287410748	728228113460	728974772777	150
7248510000	7248510475	7248510400	724089472562	724844295841	150
7248510000	7248510475	7248510400	724089472562	724844295841	150
7216510000	7216510572	7216510098	721202831801	721746275560	150
7216510000	7216510572	7216510098	721202831801	721746275560	150
7181610000	7181610017	7181610762	718825910532	718663904264	150
7181610000	7181610017	7181610762	718825910532	718663904264	150
7203510000	7203510811	7203510917	720416356742	720830114884	150
7203510000	7203510811	7203510917	720416356742	720830114884	150
7237410000	7237410212	7237410258	723503043302	723019012196	150
7237410000	7237410212	7237410258	723503043302	723019012196	150
7196510000	7196510530	7196510895	719279474072	719052244966	150
7196510000	7196510530	7196510895	719279474072	719052244966	150
7199510000	7199510315	7199510884	719699371242	719658214139	150
7199510000	7199510315	7199510884	719699371242	719658214139	150
7208510000	7208510019	7208510003	720473533788	720567707869	150
7208510000	7208510019	7208510003	720473533788	720567707869	150
7227510000	7227510864	7227510205	722646712599	722030431666	150
7227510000	7227510864	7227510205	722646712599	722030431666	150
7222510000	7222510725	7222510111	722733988232	722215838863	150
7222510000	7222510725	7222510111	722733988232	722215838863	150
7197410000	7197410683	7197410838	719540605733	719445901728	150
7197410000	7197410683	7197410838	719540605733	719445901728	150
7200610000	7200610389	7200610993	720420308399	720112468032	150
7200610000	7200610389	7200610993	720420308399	720112468032	150
7411610000	7411610702	7411610103	741360614413	741999978338	150
7411610000	7411610702	7411610103	741360614413	741999978338	150
7402610000	7402610976	7402610991	740004935657	740001854861	150
7402610000	7402610976	7402610991	740004935657	740001854861	150
7372510000	7372510122	7372510625	737978358336	737825525278	150
7372510000	7372510122	7372510625	737978358336	737825525278	150

7409410000	7409410288	7409410956	740758574940	740972882426	150
7409410000	7409410288	7409410956	740758574940	740972882426	150
7412510000	7412510570	7412510029	741879504915	741475368950	150
7412510000	7412510570	7412510029	741879504915	741475368950	150
7428410000	7428410053	7428410165	742814145220	742246768797	150
7428410000	7428410053	7428410165	742814145220	742246768797	150
7406510000	7406510433	7406510018	740572225714	740046316662	150
7406510000	7406510433	7406510018	740572225714	740046316662	150
7397410000	7397410713	7397410857	739753346411	739560931646	150
7397410000	7397410713	7397410857	739753346411	739560931646	150
7359410000	7359410891	7359410442	735684495092	735886588280	150
7359410000	7359410891	7359410442	735684495092	735886588280	150
7312510000	7312510553	7312510019	731320089367	731540380498	150
7312510000	7312510553	7312510019	731320089367	731540380498	150
7351610000	7351610003	7351610483	735697339309	735939965748	150
7351610000	7351610003	7351610483	735697339309	735939965748	150
7519410000	7519410437	7519410064	751472034108	751698779214	150
7519410000	7519410437	7519410064	751472034108	751698779214	150
7498510000	7498510080	7498510918	749236329027	749778009617	150
7498510000	7498510080	7498510918	749236329027	749778009617	150
7530510000	7530510774	7530510249	753185148003	753890314081	150
7530510000	7530510774	7530510249	753185148003	753890314081	150
7531510000	7531510582	7531510241	753110740041	753112008397	150
7531510000	7531510582	7531510241	753110740041	753112008397	150
7500510000	7500510512	7500510953	750005593037	750979599576	150
7500510000	7500510512	7500510953	750005593037	750979599576	150
7500610000	7500610435	7500610023	750007336993	750461440415	150
7500610000	7500610435	7500610023	750007336993	750461440415	150
7526500000	7526500715	7526500116	752236360339	752801145838	150
7526500000	7526500715	7526500116	752236360339	752801145838	150
7536410000	7536410818	7536410285	753626987702	753419831954	150
7536410000	7536410818	7536410285	753626987702	753419831954	150
7536500000	7536500867	7536500216	753164392501	753824132070	150
7536500000	7536500867	7536500216	753164392501	753824132070	150
7536510000	7536510762	7536510332	753203858145	753947482568	150
7536510000	7536510762	7536510332	753203858145	753947482568	150
7507510000	7507510679	7507510036	750223253249	750629250523	150
7507510000	7507510679	7507510036	750223253249	750629250523	150
7492510000	7492510668	7492510833	749555850064	749406824494	150
7492510000	7492510668	7492510833	749555850064	749406824494	150
7436500000	7436500852	7436500206	743502956031	743271278738	150
7436500000	7436500852	7436500206	743502956031	743271278738	150
7477410000	7477410563	7477410669	747749449653	747981871880	150
7477410000	7477410563	7477410669	747749449653	747981871880	150
7432510000	7432510945	7432510233	743646631756	743091333963	150
7432510000	7432510945	7432510233	743646631756	743091333963	150
7481610000	7481610093	7481610792	748046123699	748908232608	150

7481610000	7481610093	7481610792	748046123699	748908232608	150
7459510000	7459510914	7459510518	745347127030	745413507473	150
7459510000	7459510914	7459510518	745347127030	745413507473	150
7649510000	7649510780	7649510438	764160670956	764954955378	150
7649510000	7649510780	7649510438	764160670956	764954955378	150
7646500000	7646500962	7646500326	764787437057	764414606184	150
7646500000	7646500962	7646500326	764787437057	764414606184	150
7637510000	7637510980	7637510348	763057802027	763233565390	150
7637510000	7637510980	7637510348	763057802027	763233565390	150
7569410000	7569410981	7569410561	756617810128	756773776108	150
7569410000	7569410981	7569410561	756617810128	756773776108	150
7560510000	7560510119	7560510548	756812613992	756892847126	150
7560510000	7560510119	7560510548	756812613992	756892847126	150
7578410000	7578410817	7578410667	757767498782	757959756595	150
7578410000	7578410817	7578410667	757767498782	757959756595	150
7568510000	7568510785	7568510630	756834660030	756483295343	150
7568510000	7568510785	7568510630	756834660030	756483295343	150
7574510000	7574510926	7574510667	757195839145	757322847324	150
7574510000	7574510926	7574510667	757195839145	757322847324	150
7767410000	7767410596	7767410600	776475594257	776946812519	150
7767410000	7767410596	7767410600	776475594257	776946812519	150
7754510000	7754510738	7754510488	775553998799	775573882535	150
7754510000	7754510738	7754510488	775553998799	775573882535	150
7771510000	7771510348	7771510657	777686801115	777349294179	150
7771510000	7771510348	7771510657	777686801115	777349294179	150
7771610000	7771610949	7771610722	777820863323	777011884202	150
7771610000	7771610949	7771610722	777820863323	777011884202	150
7759510000	7759510959	7759510547	775385587435	775280133453	150
7759510000	7759510959	7759510547	775385587435	775280133453	150
7774510000	7774510826	7774510688	777071800372	777394632977	150
7774510000	7774510826	7774510688	777071800372	777394632977	150
7728410000	7728410103	7728410194	772899307650	772042236830	150
7728410000	7728410103	7728410194	772899307650	772042236830	150
7728510000	7728510275	7728510250	772132874405	772437237080	150
7728510000	7728510275	7728510250	772132874405	772437237080	150
7675510000	7675510096	7675510728	767886792153	767995242023	150
7675510000	7675510096	7675510728	767886792153	767995242023	150
7691610000	7691610304	7691610912	769813331686	769911231110	150
7691610000	7691610304	7691610912	769813331686	769911231110	150
7676410000	7676410373	7676410696	767934155944	767031487538	150
7676410000	7676410373	7676410696	767934155944	767031487538	150
7708510000	7708510000	7708510053	770179891187	770124730758	150
7708510000	7708510000	7708510053	770179891187	770124730758	150
7687410000	7687410764	7687410787	768659764181	768774210886	150
7687410000	7687410764	7687410787	768659764181	768774210886	150
7729510000	7729510513	7729510250	772202215530	772186857827	150
7729510000	7729510513	7729510250	772202215530	772186857827	150

7719410000	7719410468	7719410084	771080185037	771693027315	150
7719410000	7719410468	7719410084	771080185037	771693027315	150
7668410000	7668410691	7668410578	766380449192	766515854840	150
7668410000	7668410691	7668410578	766380449192	766515854840	150
7697510000	7697510917	7697510943	769625956923	769571560145	150
7697510000	7697510917	7697510943	769625956923	769571560145	150
7698410000	7698410156	7698410876	769817769307	769777017483	150
7698410000	7698410156	7698410876	769817769307	769777017483	150
7845510000	7845510690	7845510422	784610695690	784021589201	150
7845510000	7845510690	7845510422	784610695690	784021589201	150
7859410000	7859410987	7859410491	785674477245	785146008683	150
7859410000	7859410987	7859410491	785674477245	785146008683	150
7805510000	7805510215	7805510001	780090394296	780481200101	150
7805510000	7805510215	7805510001	780090394296	780481200101	150
7811600000	7811600608	7811600063	781200560227	781345866730	150
7811600000	7811600608	7811600063	781200560227	781345866730	150
7827410000	7827410109	7827410220	782500385261	782836129985	150
7827410000	7827410109	7827410220	782500385261	782836129985	150
7836510000	7836510813	7836510363	783015643664	783744762484	150
7836510000	7836510813	7836510363	783015643664	783744762484	150
7796410000	7796410623	7796410907	779403750926	779586247358	150
7796410000	7796410623	7796410907	779403750926	779586247358	150
7907510000	7907510748	7907510076	790449510307	790797860595	150
7907510000	7907510748	7907510076	790449510307	790797860595	150
7851610000	7851610086	7851610533	785470103771	785579925222	150
7851610000	7851610086	7851610533	785470103771	785579925222	150
7911610000	7911610789	7911610152	791486963361	791765536457	150
7911610000	7911610789	7911610152	791486963361	791765536457	150
7871510000	7871510367	7871510667	787981794440	787473196272	150
7871510000	7871510367	7871510667	787981794440	787473196272	150
7833510000	7833510286	7833510281	783189531007	783390222405	150
7833510000	7833510286	7833510281	783189531007	783390222405	150
7990510000	7990510308	7990510882	799539245459	799431174270	150
7990510000	7990510308	7990510882	799539245459	799431174270	150
7929410000	7929410577	7929410203	792909984824	792911014521	150
7929410000	7929410577	7929410203	792909984824	792911014521	150
7963510000	7963510619	7963510589	796472404908	796142948256	150
7963510000	7963510619	7963510589	796472404908	796142948256	150
8022510000	8022510690	8022510092	802977967134	802027489945	150
8022510000	8022510690	8022510092	802977967134	802027489945	150
7921610000	7921610973	7921610250	792523711442	792735052280	150
7921610000	7921610973	7921610250	792523711442	792735052280	150
8025500000	8025500800	8025500053	802808865771	802051331783	150
8025500000	8025500800	8025500053	802808865771	802051331783	150
7999410000	7999410395	7999410895	799997762757	799730385363	150
7999410000	7999410395	7999410895	799997762757	799730385363	150
7941610000	7941610934	7941610444	794627902177	794842651547	150

7941610000	7941610934	7941610444	794627902177	794842651547	150
7957410000	7957410462	7957410520	795827361684	795603753483	150
7957410000	7957410462	7957410520	795827361684	795603753483	150
7931610000	7931610242	7931610345	793962843501	793561061127	150
7931610000	7931610242	7931610345	793962843501	793561061127	150
8019510000	8019510292	8019510080	801905071782	801203738363	150
8019510000	8019510292	8019510080	801905071782	801203738363	150
7944510000	7944510608	7944510406	794693431940	794788205278	150
7944510000	7944510608	7944510406	794693431940	794788205278	150
7978410000	7978410893	7978410706	797080124020	797243861402	150
7978410000	7978410893	7978410706	797080124020	797243861402	150
8035500000	8035500785	8035500153	803061164300	803999493307	150
8035500000	8035500785	8035500153	803061164300	803999493307	150
7966410000	7966410257	7966410626	796827677997	796119165193	150
7966410000	7966410257	7966410626	796827677997	796119165193	150
7966510000	7966510213	7966510671	796778762061	796184941039	150
7966510000	7966510213	7966510671	796778762061	796184941039	150
7926410000	7926410734	7926410225	792655056417	792947057412	150
7926410000	7926410734	7926410225	792655056417	792947057412	150
7916500000	7916500622	7916500056	791124104572	791585604088	150
7916500000	7916500622	7916500056	791124104572	791585604088	150
7956510000	7956510116	7956510570	795286393364	795450430239	150
7956510000	7956510116	7956510570	795286393364	795450430239	150
8000510000	8000510415	8000510906	800286465027	800689244914	150
8000510000	8000510415	8000510906	800286465027	800689244914	150
8002510000	8002510798	8002510889	800200818662	800231630659	150
8002510000	8002510798	8002510889	800200818662	800231630659	150
8159410000	8159410857	8159410423	815718069309	815065673055	150
8159410000	8159410857	8159410423	815718069309	815065673055	150
8121510000	8121510868	8121510103	812631679047	812756136856	150
8121510000	8121510868	8121510103	812631679047	812756136856	150
8095510000	8095510276	8095510877	809908005234	809928588631	150
8095510000	8095510276	8095510877	809908005234	809928588631	150
8134510000	8134510404	8134510221	813784122138	813195696342	150
8134510000	8134510404	8134510221	813784122138	813195696342	150
8153510000	8153510428	8153510413	815826074629	815722332809	150
8153510000	8153510428	8153510413	815826074629	815722332809	150
8102610000	8102610922	8102610963	810036855464	810664605695	150
8102610000	8102610922	8102610963	810036855464	810664605695	150
8131610000	8131610095	8131610271	813564424211	813628729197	150
8131610000	8131610095	8131610271	813564424211	813628729197	150
8092510000	8092510596	8092510793	809821595659	809434340639	150
8092510000	8092510596	8092510793	809821595659	809434340639	150
8162510000	8162510470	8162510505	816595601791	816744431555	150
8162510000	8162510470	8162510505	816595601791	816744431555	150
8148510000	8148510460	8148510390	814246617621	814468890814	150
8148510000	8148510460	8148510390	814246617621	814468890814	150

8108510000	8108510004	8108510994	810395212210	810857808651	150
8108510000	8108510004	8108510994	810395212210	810857808651	150
8110510000	8110510617	8110510013	811492602663	811076490546	150
8110510000	8110510617	8110510013	811492602663	811076490546	150
8126500000	8126500656	8126500077	812915367299	812546716106	150
8126500000	8126500656	8126500077	812915367299	812546716106	150
8285500000	8285500199	8285500674	828688377848	828176963919	150
8285500000	8285500199	8285500674	828688377848	828176963919	150
8228410000	8228410075	8228410146	822271997158	822591011285	150
8228410000	8228410075	8228410146	822271997158	822591011285	150
8201610000	8201610575	8201610987	820439540512	820025065836	150
8201610000	8201610575	8201610987	820439540512	820025065836	150
8179410000	8179410094	8179410622	817141684931	817862715043	150
8179410000	8179410094	8179410622	817141684931	817862715043	150
8339510000	8339510618	8339510310	833875320772	833149426155	150
8339510000	8339510618	8339510310	833875320772	833149426155	150
8218410000	8218410915	8218410050	821314464781	821810256258	150
8218410000	8218410915	8218410050	821314464781	821810256258	150
8234510000	8234510421	8234510231	823411611471	823352932424	150
8234510000	8234510421	8234510231	823411611471	823352932424	150
8224510000	8224510332	8224510129	822498763671	822188585025	150
8224510000	8224510332	8224510129	822498763671	822188585025	150
8174510000	8174510858	8174510628	817610249282	817757230681	150
8174510000	8174510858	8174510628	817610249282	817757230681	150
8217410000	8217410777	8217410060	821698337341	821762463545	150
8217410000	8217410777	8217410060	821698337341	821762463545	150
8202610000	8202610938	8202610972	820517163745	820697989701	150
8202610000	8202610938	8202610972	820517163745	820697989701	150
8176510000	8176510252	8176510694	817217346306	817459454745	150
8176510000	8176510252	8176510694	817217346306	817459454745	150
8261510000	8261510206	8261510509	826081360899	826933730133	150
8261510000	8261510206	8261510509	826081360899	826933730133	150
8277410000	8277410532	8277410650	827117959938	827392766648	150
8277410000	8277410532	8277410650	827117959938	827392766648	150
8195500000	8195500336	8195500773	819649605746	819697218433	150
8195500000	8195500336	8195500773	819649605746	819697218433	150
8169410000	8169410909	8169410522	816840542448	816321689524	150
8169410000	8169410909	8169410522	816840542448	816321689524	150
8253510000	8253510444	8253510423	825403345374	825004504514	150
8253510000	8253510444	8253510423	825403345374	825004504514	150
8227410000	8227410008	8227410159	822414313888	822604381472	150
8227410000	8227410008	8227410159	822414313888	822604381472	150
8418410000	8418410949	8418410069	841843214994	841110056477	150
8418410000	8418410949	8418410069	841843214994	841110056477	150
8309410000	8309410272	8309410947	830856592237	830522560768	150
8309410000	8309410272	8309410947	830856592237	830522560768	150
8322510000	8322510744	8322510123	832322126784	832931934347	150

8322510000	8322510744	8322510123	832322126784	832931934347	150
8297410000	8297410700	8297410848	829502176112	829433550922	150
8297410000	8297410700	8297410848	829502176112	829433550922	150
8297510000	8297510849	8297510905	829482710319	829647105827	150
8297510000	8297510849	8297510905	829482710319	829647105827	150
8340510000	8340510923	8340510330	834936076027	834655722930	150
8340510000	8340510923	8340510330	834936076027	834655722930	150
8299510000	8299510333	8299510894	829487569725	829136160959	150
8299510000	8299510333	8299510894	829487569725	829136160959	150
8329410000	8329410580	8329410144	832535315919	832294985622	150
8329410000	8329410580	8329410144	832535315919	832294985622	150
8391610000	8391610248	8391610883	839857208461	839072948795	150
8391610000	8391610248	8391610883	839857208461	839072948795	150
8307510000	8307510644	8307510017	830973361514	830031683233	150
8307510000	8307510644	8307510017	830973361514	830031683233	150
8537510000	8537510966	8537510338	853555898736	853325720273	150
8537510000	8537510966	8537510338	853555898736	853325720273	150
8529510000	8529510475	8529510231	852083459807	852433180899	150
8529510000	8529510475	8529510231	852083459807	852433180899	150
8543510000	8543510320	8543510351	854861888760	854998139569	150
8543510000	8543510320	8543510351	854861888760	854998139569	150
8467410000	8467410547	8467410572	846373768759	846020819523	150
8467410000	8467410547	8467410572	846373768759	846020819523	150
8467510000	8467510319	8467510628	846398152830	846294265285	150
8467510000	8467510319	8467510628	846398152830	846294265285	150
8426500000	8426500701	8426500107	842877095920	842835155912	150
8426500000	8426500701	8426500107	842877095920	842835155912	150
8539410000	8539410691	8539410263	853319474005	853757577426	150
8539410000	8539410691	8539410263	853319474005	853757577426	150
8487410000	8487410731	8487410769	848555240440	848301579098	150
8487410000	8487410731	8487410769	848555240440	848301579098	150
8487510000	8487510514	8487510826	848445417273	848251127311	150
8487510000	8487510514	8487510826	848445417273	848251127311	150
8518410000	8518410962	8518410079	851706024063	851430420403	150
8518410000	8518410962	8518410079	851706024063	851430420403	150
8430510000	8430510756	8430510240	843033894331	843037573797	150
8430510000	8430510756	8430510240	843033894331	843037573797	150
8447410000	8447410366	8447410371	844301929971	844328221292	150
8447410000	8447410366	8447410371	844301929971	844328221292	150
8447510000	8447510113	8447510429	844924252465	844877400813	150
8447510000	8447510113	8447510429	844924252465	844877400813	150
8477410000	8477410565	8477410670	847747490719	847661878833	150
8477410000	8477410565	8477410670	847747490719	847661878833	150
8493510000	8493510930	8493510843	849324274010	849638125237	150
8493510000	8493510930	8493510843	849324274010	849638125237	150
8504510000	8504510119	8504510957	850075008831	850025706006	150
8504510000	8504510119	8504510957	850075008831	850025706006	150

8490510000	8490510173	8490510833	849425495781	849084973821	150
8490510000	8490510173	8490510833	849425495781	849084973821	150
8460610000	8460610089	8460610607	846631085860	846364349213	150
8460610000	8460610089	8460610607	846631085860	846364349213	150
8521510000	8521510946	8521510144	852036976206	852219441051	150
8521510000	8521510946	8521510144	852036976206	852219441051	150
8545510000	8545510743	8545510389	854183136269	854461731022	150
8545510000	8545510743	8545510389	854183136269	854461731022	150
8422510000	8422510764	8422510133	842723578297	842862946504	150
8422510000	8422510764	8422510133	842723578297	842862946504	150
8531610000	8531610171	8531610307	853305206251	853838279380	150
8531610000	8531610171	8531610307	853305206251	853838279380	150
8645510000	8645510658	8645510400	864785348941	864206471256	150
8645510000	8645510658	8645510400	864785348941	864206471256	150
8631600000	8631600824	8631600249	863995590347	863353663392	150
8631600000	8631600824	8631600249	863995590347	863353663392	150
8635510000	8635510584	8635510291	863533001523	863632888364	150
8635510000	8635510584	8635510291	863533001523	863632888364	150
8570510000	8570510317	8570510647	857510240897	857488691682	150
8570510000	8570510317	8570510647	857510240897	857488691682	150
8658510000	8658510630	8658510542	865447250735	865785553927	150
8658510000	8658510630	8658510542	865447250735	865785553927	150
8549510000	8549510765	8549510429	854164725542	854136442702	150
8549510000	8549510765	8549510429	854164725542	854136442702	150
8665510000	8665510917	8665510620	866628542487	866905715290	150
8665510000	8665510917	8665510620	866628542487	866905715290	150
8557410000	8557410398	8557410481	855972747976	855221572487	150
8557410000	8557410398	8557410481	855972747976	855221572487	150
8571610000	8571610916	8571610703	857570608334	857755625967	150
8571610000	8571610916	8571610703	857570608334	857755625967	150
8639510000	8639510670	8639510340	863840300145	863478292694	150
8639510000	8639510670	8639510340	863840300145	863478292694	150
8687510000	8687510747	8687510845	868282282017	868942868000	150
8687510000	8687510747	8687510845	868282282017	868942868000	150
8731610000	8731610207	8731610327	873614847808	873653957645	150
8731610000	8731610207	8731610327	873614847808	873653957645	150
8714510000	8714510251	8714510080	871476032117	871252660105	150
8714510000	8714510251	8714510080	871476032117	871252660105	150
8732510000	8732510839	8732510264	873957298566	873742639712	150
8732510000	8732510839	8732510264	873957298566	873742639712	150
8709410000	8709410340	8709410987	870378480242	870895895716	150
8709410000	8709410340	8709410987	870378480242	870895895716	150
8748410000	8748410416	8748410395	874701872630	874465367849	150
8748410000	8748410416	8748410395	874701872630	874465367849	150
8797510000	8797510936	8797510954	879480418718	879915838894	150
8797510000	8797510936	8797510954	879480418718	879915838894	150
8697410000	8697410760	8697410888	869887708426	869062356151	150

8697410000	8697410760	8697410888	869887708426	869062356151	150
8786410000	8786410482	8786410808	878956486526	878634565804	150
8786410000	8786410482	8786410808	878956486526	878634565804	150
8688410000	8688410020	8688410777	868342073038	868069903158	150
8688410000	8688410020	8688410777	868342073038	868069903158	150
8678510000	8678510884	8678510738	867871810612	867152177361	150
8678510000	8678510884	8678510738	867871810612	867152177361	150
8679410000	8679410194	8679410671	867557267019	867666638268	150
8679410000	8679410194	8679410671	867557267019	867666638268	150
8778410000	8778410858	8778410687	877016604013	877663807677	150
8778410000	8778410858	8778410687	877016604013	877663807677	150
8753510000	8753510407	8753510470	875819557933	875757086994	150
8753510000	8753510407	8753510470	875819557933	875757086994	150
8749410000	8749410787	8749410383	874567497229	874186250146	150
8749410000	8749410787	8749410383	874567497229	874186250146	150
8749510000	8749510799	8749510449	874341879579	874936678415	150
8749510000	8749510799	8749510449	874341879579	874936678415	150
8729410000	8729410545	8729410184	872487603602	872038985248	150
8729410000	8729410545	8729410184	872487603602	872038985248	150
8897410000	8897410790	8897410908	889993752688	889390989479	150
8897410000	8897410790	8897410908	889993752688	889390989479	150
8877510000	8877510415	8877510766	887666543748	887517050241	150
8877510000	8877510415	8877510766	887666543748	887517050241	150
8847410000	8847410436	8847410410	884666152487	884427822120	150
8847410000	8847410436	8847410410	884666152487	884427822120	150
8836410000	8836410871	8836410316	883354217621	883310776196	150
8836410000	8836410871	8836410316	883354217621	883310776196	150
8881510000	8881510578	8881510768	888262445766	888169831117	150
8881510000	8881510578	8881510768	888262445766	888169831117	150
8867410000	8867410614	8867410611	886677893541	886647038415	150
8867410000	8867410614	8867410611	886677893541	886647038415	150
8813510000	8813510024	8813510082	881335548311	881872813847	150
8813510000	8813510024	8813510082	881335548311	881872813847	150
8898410000	8898410187	8898410897	889346637729	889943403849	150
8898410000	8898410187	8898410897	889346637729	889943403849	150
8858510000	8858510663	8858510563	885822926510	885805457759	150
8858510000	8858510663	8858510563	885822926510	885805457759	150
8816500000	8816500609	8816500047	881011807532	881930633353	150
8816500000	8816500609	8816500047	881011807532	881930633353	150
8808410000	8808410845	8808410009	880656297245	880551043034	150
8808410000	8808410845	8808410009	880656297245	880551043034	150
8879410000	8879410051	8879410691	887840891831	887747235420	150
8879410000	8879410051	8879410691	887840891831	887747235420	150
9028510000	9028510240	9028510183	902858096181	902508370988	150
9028510000	9028510240	9028510183	902858096181	902508370988	150
9048410000	9048410283	9048410327	904385471253	904959895080	150
9048410000	9048410283	9048410327	904385471253	904959895080	150

8991510000	8991510780	8991510879	899410001523	899707357991	150
8991510000	8991510780	8991510879	899410001523	899707357991	150
9046500000	9046500871	9046500267	904546663391	904607243687	150
9046500000	9046500871	9046500267	904546663391	904607243687	150
8928410000	8928410138	8928410216	892098214091	892911325812	150
8928410000	8928410138	8928410216	892098214091	892911325812	150
8983510000	8983510914	8983510793	898018793830	898123703508	150
8983510000	8983510914	8983510793	898018793830	898123703508	150
8959410000	8959410007	8959410502	895520403309	895809610317	150
8959410000	8959410007	8959410502	895520403309	895809610317	150
9045500000	9045500948	9045500251	904555632618	904868652507	150
9045500000	9045500948	9045500251	904555632618	904868652507	150
8970510000	8970510396	8970510687	897522413013	897089352953	150
8970510000	8970510396	8970510687	897522413013	897089352953	150
9002610000	9002610905	9002610954	900008773677	900134498803	150
9002610000	9002610905	9002610954	900008773677	900134498803	150
9038410000	9038410156	9038410227	903062498141	903525873548	150
9038410000	9038410156	9038410227	903062498141	903525873548	150
9068410000	9068410581	9068410522	906295493560	906607477906	150
9068410000	9068410581	9068410522	906295493560	906607477906	150
9099410000	9099410264	9099410808	909798793828	909963734269	150
9099410000	9099410264	9099410808	909798793828	909963734269	150
9166510000	9166510148	9166510594	916754691541	916946267738	150
9166510000	9166510148	9166510594	916754691541	916946267738	150
9080510000	9080510416	9080510697	908173247419	908709184139	150
9080510000	9080510416	9080510697	908173247419	908709184139	150
9080610000	9080610275	9080610769	908335396227	908638074069	150
9080610000	9080610275	9080610769	908335396227	908638074069	150
9085500000	9085500243	9085500651	908729536468	908026162351	150
9085500000	9085500243	9085500651	908729536468	908026162351	150
9072510000	9072510065	9072510598	907001039959	907097097359	150
9072510000	9072510065	9072510598	907001039959	907097097359	150
9110610000	9110610427	9110610085	911889670990	911036312568	150
9110610000	9110610427	9110610085	911889670990	911036312568	150
9118410000	9118410897	9118410040	911726267711	911680390362	150
9118410000	9118410897	9118410040	911726267711	911680390362	150
9159510000	9159510866	9159510490	915258695249	915137629865	150
9159510000	9159510866	9159510490	915258695249	915137629865	150
9069410000	9069410028	9069410513	906834033807	906977936682	150
9069410000	9069410028	9069410513	906834033807	906977936682	150
9125500000	9125500820	9125500064	912329031739	912700811799	150
9125500000	9125500820	9125500064	912329031739	912700811799	150
9088410000	9088410912	9088410718	908396422935	908006315572	150
9088410000	9088410912	9088410718	908396422935	908006315572	150
9062510000	9062510456	9062510496	906227923318	906467757947	150
9062510000	9062510456	9062510496	906227923318	906467757947	150
9245510000	9245510696	9245510357	924805473614	924578568636	150

9245510000	9245510696	9245510357	924805473614	924578568636	150
9233510000	9233510182	9233510223	923732168174	923312068118	150
9233510000	9233510182	9233510223	923732168174	923312068118	150
9248410000	9248410321	9248410347	924857006704	924090310301	150
9248410000	9248410321	9248410347	924857006704	924090310301	150
9221510000	9221510887	9221510115	922534510067	922079480655	150
9221510000	9221510887	9221510115	922534510067	922079480655	150
9235500000	9235500819	9235500173	923657574585	923878211628	150
9235500000	9235500819	9235500173	923657574585	923878211628	150
9236500000	9236500826	9236500188	923495271860	923952348544	150
9236500000	9236500826	9236500188	923495271860	923952348544	150
9225500000	9225500837	9225500074	922632503680	922562981271	150
9225500000	9225500837	9225500074	922632503680	922562981271	150
9197510000	9197510832	9197510896	919332955970	919909550411	150
9197510000	9197510832	9197510896	919332955970	919909550411	150
9286410000	9286410472	9286410760	928615733680	928228899926	150
9286410000	9286410472	9286410760	928615733680	928228899926	150
9204510000	9204510068	9204510925	920161506078	920583746937	150
9204510000	9204510068	9204510925	920161506078	920583746937	150
9249510000	9249510715	9249510400	924361197545	924055093152	150
9249510000	9249510715	9249510400	924361197545	924055093152	150
9220510000	9220510719	9220510123	922109212000	922751533838	150
9220510000	9220510719	9220510123	922109212000	922751533838	150
9268510000	9268510737	9268510602	926199157353	926090935316	150
9268510000	9268510737	9268510602	926199157353	926090935316	150
9213510000	9213510912	9213510023	921285320121	921722542105	150
9213510000	9213510912	9213510023	921285320121	921722542105	150
9256500000	9256500059	9256500388	925621079685	925757074255	150
9256500000	9256500059	9256500388	925621079685	925757074255	150
9243510000	9243510267	9243510322	924347374111	924550511368	150
9243510000	9243510267	9243510322	924347374111	924550511368	150
9384510000	9384510935	9384510750	938212037688	938522315277	150
9384510000	9384510935	9384510750	938212037688	938522315277	150
9358410000	9358410527	9358410454	935428026589	935533224785	150
9358410000	9358410527	9358410454	935428026589	935533224785	150
9302510000	9302510372	9302510920	930224450041	930125445333	150
9302510000	9302510372	9302510920	930224450041	930125445333	150
9375510000	9375510047	9375510698	937697790315	937624968738	150
9375510000	9375510047	9375510698	937697790315	937624968738	150
9304510000	9304510084	9304510936	930615802367	930970992734	150
9304510000	9304510084	9304510936	930615802367	930970992734	150
9336500000	9336500840	9336500198	933133849788	933854399426	150
9336500000	9336500840	9336500198	933133849788	933854399426	150
9306510000	9306510416	9306510009	930789256556	930511552752	150
9306510000	9306510416	9306510009	930789256556	930511552752	150
9419510000	9419510360	9419510122	941729723809	941683577001	150
9419510000	9419510360	9419510122	941729723809	941683577001	150

9408510000	9408510957	9408510025	940593624428	940432339056	150
9408510000	9408510957	9408510025	940593624428	940432339056	150
9380610000	9380610322	9380610799	938374981359	938456267684	150
9380610000	9380610322	9380610799	938374981359	938456267684	150
9352510000	9352510323	9352510425	935341979009	935941250984	150
9352510000	9352510323	9352510425	935341979009	935941250984	150
9424510000	9424510368	9424510150	942864499984	942514221255	150
9424510000	9424510368	9424510150	942864499984	942514221255	150
9381610000	9381610077	9381610784	938683011747	938213954293	150
9381610000	9381610077	9381610784	938683011747	938213954293	150
9399410000	9399410318	9399410837	939862530404	939111704132	150
9399410000	9399410318	9399410837	939862530404	939111704132	150
9414510000	9414510201	9414510049	941584311662	941923383885	150
9414510000	9414510201	9414510049	941584311662	941923383885	150
9373500000	9373500752	9373500606	937931267893	937770781215	150
9373500000	9373500752	9373500606	937931267893	937770781215	150
9307410000	9307410637	9307410970	930858145849	930749549108	150
9307410000	9307410637	9307410970	930858145849	930749549108	150
9364510000	9364510720	9364510550	936301556557	936931006563	150
9364510000	9364510720	9364510550	936301556557	936931006563	150
9518510000	9518510143	9518510134	951758076233	951948215689	150
9518510000	9518510143	9518510134	951758076233	951948215689	150
9476410000	9476410344	9476410678	947924992747	947836473103	150
9476410000	9476410344	9476410678	947924992747	947836473103	150
9513510000	9513510968	9513510054	951545245352	951404081380	150
9513510000	9513510968	9513510054	951545245352	951404081380	150
9499510000	9499510269	9499510915	949823540153	949754218409	150
9499510000	9499510269	9499510915	949823540153	949754218409	150
9517410000	9517410823	9517410091	951432068642	951992268495	150
9517410000	9517410823	9517410091	951432068642	951992268495	150
9503510000	9503510776	9503510951	950494894232	950708347711	150
9503510000	9503510776	9503510951	950494894232	950708347711	150
9461610000	9461610202	9461610595	946332568857	946242157394	150
9461610000	9461610202	9461610595	946332568857	946242157394	150
9468410000	9468410658	9468410560	946527779256	946967203785	150
9468410000	9468410658	9468410560	946527779256	946967203785	150
9566510000	9566510220	8566510633	956508018308	956414046395	150
9566510000	9566510220	8566510633	956508018308	956414046395	150
9676510000	9676510336	9676510746	967225660802	967153239720	150
9676510000	9676510336	9676510746	967225660802	967153239720	150
9559410000	9559410934	9559410464	955128611662	955226059782	150
9559410000	9559410934	9559410464	955128611662	955226059782	150
9560610000	9560610108	9560610618	956953488524	956639454988	150
9560610000	9560610108	9560610618	956953488524	956639454988	150
9619410000	9619410455	9619410076	961027168135	961613940945	150
9619410000	9619410455	9619410076	961027168135	961613940945	150
9609410000	9609410325	9609410978	960545989573	960930048954	150

9609410000	9609410325	9609410978	960545989573	960930048954	150
9595500000	9595500403	9595500816	959114463773	959818970974	150
9595500000	9595500403	9595500816	959114463773	959818970974	150
9679410000	9679410196	9679410672	967099366458	967119617257	150
9679410000	9679410196	9679410672	967099366458	967119617257	150
9561610000	9561610739	9561610605	956365525675	956171443076	150
9561610000	9561610739	9561610605	956365525675	956171443076	150
9643510000	9643510339	9643510363	964050036260	964373948762	150
9643510000	9643510339	9643510363	964050036260	964373948762	150
9659410000	9659410954	9659410473	965664638867	965769657739	150
9659410000	9659410954	9659410473	965664638867	965769657739	150
9616500000	9616500638	9616500028	961029260138	961542237891	150
9616500000	9616500638	9616500028	961029260138	961542237891	150
9604510000	9604510136	9604510968	960826556452	960189952349	150
9604510000	9604510136	9604510968	960826556452	960189952349	150
9563510000	9563510553	9563510551	956816316333	956678532375	150
9563510000	9563510553	9563510551	956816316333	956678532375	150
9614510000	9614510234	9614510071	961242629117	961945662728	150
9614510000	9614510234	9614510071	961242629117	961945662728	150
9592510000	9592510689	9592510846	959807077720	959592434960	150
9592510000	9592510689	9592510846	959807077720	959592434960	150
9636410000	9636410838	9636410297	963467786969	963369188427	150
9636410000	9636410838	9636410297	963467786969	963369188427	150
9636500000	9636500810	9636500228	963782335217	963524419634	150
9636500000	9636500810	9636500228	963782335217	963524419634	150
9681510000	9681510545	9681510748	968349180295	968272721073	150
9681510000	9681510545	9681510748	968349180295	968272721073	150
9756500000	9756500065	9756500438	975623742938	975096720280	150
9756500000	9756500065	9756500438	975623742938	975096720280	150
9713510000	9713510006	9713510073	971598677273	971594307034	150
9713510000	9713510006	9713510073	971598677273	971594307034	150
9849410000	9849410805	9849410394	984174467499	984501654526	150
9849410000	9849410805	9849410394	984174467499	984501654526	150
9706410000	9706410383	9706410006	970772609456	970642629580	150
9706410000	9706410383	9706410006	970772609456	970642629580	150
9806410000	9806410400	9806410017	980395847076	980794361877	150
9806410000	9806410400	9806410017	980395847076	980794361877	150
9806510000	9806510505	9806510060	980360905475	980674285634	150
9806510000	9806510505	9806510060	980360905475	980674285634	150
9785500000	9785500278	9785500727	978998539687	978380343710	150
9785500000	9785500278	9785500727	978998539687	978380343710	150
9688510000	9688510033	9688510840	968924780757	968369783017	150
9688510000	9688510033	9688510840	968924780757	968369783017	150
9727510000	9727510956	9727510257	972585173505	972530192392	150
9727510000	9727510956	9727510257	972585173505	972530192392	150
9762510000	9762510589	9762510568	976841723053	976562924799	150
9762510000	9762510589	9762510568	976841723053	976562924799	150

9720510000	9720510809	9720510173	972842599903	972061082492	150
9720510000	9720510809	9720510173	972842599903	972061082492	150
9736410000	9736410857	9736410307	973976836171	973339392518	150
9736410000	9736410857	9736410307	973976836171	973339392518	150
9819510000	9819510428	9819510163	981926269565	981237461481	150
9819510000	9819510428	9819510163	981926269565	981237461481	150
9888410000	9888410059	9888410799	988139510466	988392851951	150
9888410000	9888410059	9888410799	988139510466	988392851951	150
9888510000	9888510060	9888510860	988898176836	988466173827	150
9888510000	9888510060	9888510860	988898176836	988466173827	150
9876410000	9876410407	9876410720	987304274472	987211406632	150
9876410000	9876410407	9876410720	987304274472	987211406632	150
9836500000	9836500839	9836500247	983919020608	983073817653	150
9836500000	9836500839	9836500247	983919020608	983073817653	150
9864510000	9864510810	9864510601	986948648259	986111460825	150
9864510000	9864510810	9864510601	986948648259	986111460825	150
9820610000	9820610564	9820610254	982601822774	982894635638	150
9820610000	9820610564	9820610254	982601822774	982894635638	150
9832510000	9832510861	9832510274	983542789173	983206104323	150
9832510000	9832510861	9832510274	983542789173	983206104323	150
9835510000	9835510619	9835510314	983641224547	983377746432	150
9835510000	9835510619	9835510314	983641224547	983377746432	150
9924510000	9924510373	9924510201	992290697630	992712242878	150
9924510000	9924510373	9924510201	992290697630	992712242878	150
9927510000	9927510991	9927510278	992836760589	992271960780	150
9927510000	9927510991	9927510278	992836760589	992271960780	150
9858410000	9858410547	9858410503	985437630867	985667580165	150
9858410000	9858410547	9858410503	985437630867	985667580165	150
9950510000	9950510046	9950510491	995302053434	995795694611	150
9950510000	9950510046	9950510491	995302053434	995795694611	150
9960610000	9960610169	9960610658	996931841486	996253503442	150
9960610000	9960610169	9960610658	996931841486	996253503442	150
9997510000	9997510975	9997510975	999904657581	999254288403	150
9997510000	9997510975	9997510975	999904657581	999254288403	150
5354647273	5354647057	7118410038	535531707980	535788162420	150
5354647273	5354647057	7118410038	535531707980	535788162420	150
8801716781	8801716545	9510510054	880373541903	880955497709	150
8801716781	8801716545	9510510054	880373541903	880955497709	150
1875336811	1875336810	1129910000	187367712346	187735907019	150
1875336811	1875336810	1129910000	187367712346	187735907019	150
9490909798	9490909412	7619910000	949780931819	949264940845	150
9490909798	9490909412	7619910000	949780931819	949264940845	150
8302720957	8302720615	2171510592	830366731821	830019545557	150
8302720957	8302720615	2171510592	830366731821	830019545557	150
4681427780	4681427241	4413510039	468083674019	468655850019	150
4681427780	4681427241	4413510039	468083674019	468655850019	150
5342577954	5342577610	7896410917	534259775898	534956100967	150

5342577954	5342577610	7896410917	534259775898	534956100967	150
2228963763	2228963146	1379510699	222573166570	222609787560	150
2228963763	2228963146	1379510699	222573166570	222609787560	150
5123185307	5123185444	6145510343	512047699178	512608588843	150
5123185307	5123185444	6145510343	512047699178	512608588843	150
3452509666	3452509417	8360610597	345461890232	345671603745	150
3452509666	3452509417	8360610597	345461890232	345671603745	150
4109220903	4109220985	9241510311	410095717012	410013025181	150
4109220903	4109220985	9241510311	410095717012	410013025181	150
3043228004	3043228517	2886510860	304342477103	304441364843	150
3043228004	3043228517	2886510860	304342477103	304441364843	150
6774914563	6774914696	5010510000	677924122265	677554081200	150
6774914563	6774914696	5010510000	677924122265	677554081200	150
8081118587	8081118260	3471610688	808133646152	808581237017	150
8081118587	8081118260	3471610688	808133646152	808581237017	150
8058065423	8058065675	228510194	805467656528	805162871133	150
8058065423	8058065675	228510194	805467656528	805162871133	150
2588979099	2588979492	1331610284	258485937484	258601698010	150
2588979099	2588979492	1331610284	258485937484	258601698010	150
5604540380	5604540531	4357410457	560334999442	560417737908	150
5604540380	5604540531	4357410457	560334999442	560417737908	150
1083891348	1083891632	4709910000	108166126263	108102392964	150
1083891348	1083891632	4709910000	108166126263	108102392964	150
7471637814	7471637809	5869510654	747138719418	747724009319	150
7471637814	7471637809	5869510654	747138719418	747724009319	150
8886129383	8886129469	9268410541	888600017785	888733437739	150
8886129383	8886129469	9268410541	888600017785	888733437739	150
6176560985	6176560442	1459410446	617629595283	617566949850	150
6176560985	6176560442	1459410446	617629595283	617566949850	150
3554927675	3554927768	546510424	355315346639	355617032040	150
3554927675	3554927768	546510424	355315346639	355617032040	150
6405586272	6405586191	9230510223	640535114134	640151331224	150
6405586272	6405586191	9230510223	640535114134	640151331224	150
241494042	241494876	6746500335	24547353502	24175861002	150
241494042	241494876	6746500335	24547353502	24175861002	150
5650757018	5650757169	3495500800	565668411252	565937883733	150
5650757018	5650757169	3495500800	565668411252	565937883733	150
2188886171	2188886722	5038510278	218740561518	218302123637	150
2188886171	2188886722	5038510278	218740561518	218302123637	150
64072665	64072670	9698910000	6851350797	6771654477	150
64072665	64072670	9698910000	6851350797	6771654477	150
6402503600	6402503773	5246500284	640830753951	640326460995	150
6402503600	6402503773	5246500284	640830753951	640326460995	150
3047181379	3047181754	2848510456	304708326917	304681976388	150
3047181379	3047181754	2848510456	304708326917	304681976388	150
6711757141	6711757229	6541510337	671603883105	671080247070	150
6711757141	6711757229	6541510337	671603883105	671080247070	150

2262965109	2262965837	7526510231	226565009255	226512303260	150
2262965109	2262965837	7526510231	226565009255	226512303260	150
8745470735	8745470230	5795500833	874234087217	874870922453	150
8745470735	8745470230	5795500833	874234087217	874870922453	150
6797472436	6797472763	7371610682	679505783983	679864827777	150
6797472436	6797472763	7371610682	679505783983	679864827777	150
7118410000	7118410498	679510728	711547220018	711014184313	150
7118410000	7118410498	679510728	711547220018	711014184313	150
6051724678	6051724616	2866401658	605198489021	605128778716	150
6051724678	6051724616	2866401658	605198489021	605128778716	150
766470926	766470565	6826500145	76190409329	76415541688	150
766470926	766470565	6826500145	76190409329	76415541688	150
9606790034	9606790900	4211610081	960990195390	960600065083	150
9606790034	9606790900	4211610081	960990195390	960600065083	150
7598612947	7598612454	1919910000	759863073402	759429111491	150
7598612947	7598612454	1919910000	759863073402	759429111491	150
9212167685	9212167095	9978510769	921336636001	921084830076	150
9212167685	9212167095	9978510769	921336636001	921084830076	150
6069828130	6069828778	2558510526	606111803230	606705482360	150
6069828130	6069828778	2558510526	606111803230	606705482360	150
974684683	974684531	6445500288	97842431094	97628835876	150
974684683	974684531	6445500288	97842431094	97628835876	150
5052634177	5052634805	4277510702	505336894796	505807499455	150
5052634177	5052634805	4277510702	505336894796	505807499455	150
1433570742	1433570415	698410869	143793480404	143126206549	150
1433570742	1433570415	698410869	143793480404	143126206549	150
3742561212	3742561348	1798410880	374378968160	374141702457	150
3742561212	3742561348	1798410880	374378968160	374141702457	150
2046410000	2046410662	2046410330	204708431197	204025243803	150
2046410000	2046410662	2046410330	204708431197	204025243803	150
6261893545	6261893755	6238510299	626857244071	626956204631	150
6261893545	6261893755	6238510299	626857244071	626956204631	150
8121779812	8121779776	216500979	812077093439	812163210941	150
8121779812	8121779776	216500979	812077093439	812163210941	150
6135161732	6135161268	9009510980	613992935945	613083937090	150
6135161732	6135161268	9009510980	613992935945	613083937090	150
2698310221	2698310155	9534510261	269512685905	269806015267	150
2698310221	2698310155	9534510261	269512685905	269806015267	150
9939351783	9939351934	1173500578	993853368155	993461836452	150
9939351783	9939351934	1173500578	993853368155	993461836452	150
8132346632	8132346959	1388410740	813907066861	813767893307	150
8132346632	8132346959	1388410740	813907066861	813767893307	150
5172820910	5172820021	9669510638	517539549841	517804880729	150
5172820910	5172820021	9669510638	517539549841	517804880729	150
9766087515	9766087589	809410989	976373187150	976060788652	150
9766087515	9766087589	809410989	976373187150	976060788652	150
1434905399	1434905130	4678410674	143563238600	143078002612	150

1434905399	1434905130	4678410674	143563238600	143078002612	150
8294381324	8294381677	7146500275	829851334381	829798305774	150
8294381324	8294381677	7146500275	829851334381	829798305774	150
6916432063	6916432621	5434510248	691538564735	691680490908	150
6916432063	6916432621	5434510248	691538564735	691680490908	150
3378157923	3378157093	7856510560	337374908764	337278898719	150
3378157923	3378157093	7856510560	337374908764	337278898719	150
2786854709	2786854348	8366510612	278147616530	278355864592	150
2786854709	2786854348	8366510612	278147616530	278355864592	150
8755341100	8755341236	4626500123	875635980111	875232592959	150
8755341100	8755341236	4626500123	875635980111	875232592959	150
9508076760	9508076589	2259410427	950623811410	950551779000	150
9508076760	9508076589	2259410427	950623811410	950551779000	150
2945636298	2945636403	636410288	294970561064	294648654303	150
2945636298	2945636403	636410288	294970561064	294648654303	150
7150367029	7150367299	9528410176	715730378576	715081473852	150
7150367029	7150367299	9528410176	715730378576	715081473852	150
5678365775	5678365264	4507410985	567625681690	567302293618	150
5678365775	5678365264	4507410985	567625681690	567302293618	150
9079239523	9079239144	1086410732	907802984482	907544559596	150
9079239523	9079239144	1086410732	907802984482	907544559596	150
4922140549	4922140133	8916410126	492965894078	492522774180	150
4922140549	4922140133	8916410126	492965894078	492522774180	150
3771694888	3771694032	8787510855	377935806395	377477839115	150
3771694888	3771694032	8787510855	377935806395	377477839115	150
3645829046	3645829492	8740510370	364996853145	364371143892	150
3645829046	3645829492	8740510370	364996853145	364371143892	150
5272047182	5272047302	2918510166	527895791667	527350060624	150
5272047182	5272047302	2918510166	527895791667	527350060624	150
4487510000	4487510820	8597510934	448817767666	448389763662	150
4487510000	4487510820	8597510934	448817767666	448389763662	150
5860432019	5860432647	685500705	586145768101	586692587108	150
5860432019	5860432647	685500705	586145768101	586692587108	150
7059410000	7059410532	7059410412	705163605710	705737745604	150
7059410000	7059410532	7059410412	705163605710	705737745604	150
6492577798	6492577973	7677410688	649772461917	649269487934	150
6492577798	6492577973	7677410688	649772461917	649269487934	150
5105176345	5105176517	8620510162	510008042397	510715595323	150
5105176345	5105176517	8620510162	510008042397	510715595323	150
9807727787	9807727524	3700510968	980614170822	980041317239	150
9807727787	9807727524	3700510968	980614170822	980041317239	150
9327273927	9327273029	8782994765	932678089252	932583498797	150
9327273927	9327273029	8782994765	932678089252	932583498797	150
8042967168	8042967096	9789510847	804052640172	804400405808	150
8042967168	8042967096	9789510847	804052640172	804400405808	150
5836877291	5836877770	7465510597	583351024159	583471867129	150
5836877291	5836877770	7465510597	583351024159	583471867129	150

9734299691	9734299942	3628510237	973253386833	973250019935	150
9734299691	9734299942	3628510237	973253386833	973250019935	150
1020510000	1020510000	1020510096	102636596642	102310063149	150
1020510000	1020510000	1020510096	102636596642	102310063149	150
2385798531	2385798648	7347410361	238866931341	238147441807	150
2385798531	2385798648	7347410361	238866931341	238147441807	150
5879961495	5879961505	8885510857	587377595844	587997074027	150
5879961495	5879961505	8885510857	587377595844	587997074027	150
3589802920	3589802019	9839910000	358919262707	358210500852	150
3589802920	3589802019	9839910000	358919262707	358210500852	150
1466451648	1466451418	9143510313	146345130637	146278057836	150
1466451648	1466451418	9143510313	146345130637	146278057836	150
8056533842	8056533048	2769510641	805266204870	805441018042	150
8056533842	8056533048	2769510641	805266204870	805441018042	150
6675613578	6675613242	4073910000	667093598990	667996088782	150
6675613578	6675613242	4073910000	667093598990	667996088782	150
957826038	957826947	9149910000	95229010162	95070336695	150
957826038	957826947	9149910000	95229010162	95070336695	150
1256500000	1256500622	1256500380	125730483503	125486807502	150
1256500000	1256500622	1256500380	125730483503	125486807502	150
2809915225	2809915341	1928510264	280578430216	280428588142	150
2809915225	2809915341	1928510264	280578430216	280428588142	150
8487625852	8487625294	1229510195	848484556741	848382664639	150
8487625852	8487625294	1229510195	848484556741	848382664639	150
6508725199	6508725290	6001610965	650969295975	650315350589	150
6508725199	6508725290	6001610965	650969295975	650315350589	150
4457410000	4457410856	4457410467	445427619390	445680388373	150
4457410000	4457410856	4457410467	445427619390	445680388373	150
3734999619	3734999485	6171610661	373320851681	373627954028	150
3734999619	3734999485	6171610661	373320851681	373627954028	150
5894573430	5894573633	4167510594	589510540330	589375681648	150
5894573430	5894573633	4167510594	589510540330	589375681648	150
1503940725	1503940298	2087510780	150496294272	150141373298	150
1503940725	1503940298	2087510780	150496294272	150141373298	150
3315546040	3315546702	5904510994	331120379476	331743240016	150
3315546040	3315546702	5904510994	331120379476	331743240016	150
5802418592	5802418323	4063510497	580137496122	580568599167	150
5802418592	5802418323	4063510497	580137496122	580568599167	150
8583005984	8583005814	7448510420	858567895531	858670073092	150
8583005984	8583005814	7448510420	858567895531	858670073092	150
9523570103	9523570386	48410318	952982679810	952372670187	150
9523570103	9523570386	48410318	952982679810	952372670187	150
3360416248	3360416590	8629410174	336501929884	336308891352	150
3360416248	3360416590	8629410174	336501929884	336308891352	150
6989052634	6989052906	9648510442	698156805553	698528222608	150
6989052634	6989052906	9648510442	698156805553	698528222608	150
6265439458	6265439853	1586510829	626091379930	626363627069	150

6265439458	6265439853	1586510829	626091379930	626363627069	150
1880070538	1880070660	224510121	188000560503	188792699479	150
1880070538	1880070660	224510121	188000560503	188792699479	150
7980240710	7980240460	8535500201	798701604943	798309494919	150
7980240710	7980240460	8535500201	798701604943	798309494919	150
3381930581	3381930832	477510718	338049242844	338426072123	150
3381930581	3381930832	477510718	338049242844	338426072123	150
6026294118	6026294849	7809410995	602662378333	602893697017	150
6026294118	6026294849	7809410995	602662378333	602893697017	150
2618299630	2618299615	842510366	261025053138	261206435926	150
2618299630	2618299615	842510366	261025053138	261206435926	150
6684625876	6684625740	3407410974	668000160267	668347599399	150
6684625876	6684625740	3407410974	668000160267	668347599399	150
2727048719	2727048437	8647510450	272122564190	272538720294	150
2727048719	2727048437	8647510450	272122564190	272538720294	150
7674603514	7674603083	8789410780	767072789100	767142788419	150
7674603514	7674603083	8789410780	767072789100	767142788419	150
9172133151	9172133195	5127510193	917277800576	917492691605	150
9172133151	9172133195	5127510193	917277800576	917492691605	150
7769460792	7769460007	2811510068	776603604591	776855217790	150
7769460792	7769460007	2811510068	776603604591	776855217790	150
2361840657	2361840992	7692510854	236335436983	236690169576	150
2361840657	2361840992	7692510854	236335436983	236690169576	150
6136700264	6136700582	8997410918	613313229385	613607352405	150
6136700264	6136700582	8997410918	613313229385	613607352405	150
560473710	560473596	7469410551	56264008619	56426147775	150
560473710	560473596	7469410551	56264008619	56426147775	150
7723442566	7723442624	5912510080	772575888794	772704941129	150
7723442566	7723442624	5912510080	772575888794	772704941129	150
7400359661	7400359213	3800610049	740269535033	740490633622	150
7400359661	7400359213	3800610049	740269535033	740490633622	150
7806692201	7806692384	6215510041	780128798324	780476722620	150
7806692201	7806692384	6215510041	780128798324	780476722620	150
9173318476	9173318336	4420510138	917693038329	917110708711	150
9173318476	9173318336	4420510138	917693038329	917110708711	150
9420173468	9420173439	2195500766	942447201132	942875752850	150
9420173468	9420173439	2195500766	942447201132	942875752850	150
3890528455	3890528519	5026500064	389043314249	389781339656	150
3890528455	3890528519	5026500064	389043314249	389781339656	150
4926421580	4926421493	1708410992	492681311417	492931072769	150
4926421580	4926421493	1708410992	492681311417	492931072769	150
8586676033	8586676189	5520510149	858759786058	858864129697	150
8586676033	8586676189	5520510149	858759786058	858864129697	150
4958510000	4958510601	4958510568	495985226479	495793277123	150
4958510000	4958510601	4958510568	495985226479	495793277123	150
4515611476	4515611136	2734510275	451633288740	451746181986	150
4515611476	4515611136	2734510275	451633288740	451746181986	150

8293064254	8293064606	5426410172	829907825046	829304364105	150
8293064254	8293064606	5426410172	829907825046	829304364105	150
8586410000	8586410732	8586410788	858447784393	858687116597	150
8586410000	8586410732	8586410788	858447784393	858687116597	150
4633019421	4633019512	7491512072	463377035631	463544022960	150
4633019421	4633019512	7491512072	463377035631	463544022960	150
8396395654	8396395856	6679510734	839222297400	839256428845	150
8396395654	8396395856	6679510734	839222297400	839256428845	150
6342397019	6342397844	6716410103	634684176333	634549252736	150
6342397019	6342397844	6716410103	634684176333	634549252736	150
3639495978	3639495025	8380510726	363763526512	363222576813	150
3639495978	3639495025	8380510726	363763526512	363222576813	150
6865872377	6865872118	1118510086	686408732850	686422495289	150
6865872377	6865872118	1118510086	686408732850	686422495289	150
3520862296	3520862663	5454700470	352048196192	352146480388	150
3520862296	3520862663	5454700470	352048196192	352146480388	150
2396511559	2396511016	2709410981	239903302096	239800918343	150
2396511559	2396511016	2709410981	239903302096	239800918343	150
9931079919	9931079625	345500272	993982390634	993258251075	150
9931079919	9931079625	345500272	993982390634	993258251075	150
3270124631	3270124176	2408410963	327733225598	327249175872	150
3270124631	3270124176	2408410963	327733225598	327249175872	150
7008684484	7008684439	5757410498	700283765653	700649588512	150
7008684484	7008684439	5757410498	700283765653	700649588512	150
2826713003	2826713757	4607510043	282043412299	282099194671	150
2826713003	2826713757	4607510043	282043412299	282099194671	150
5026995080	5026995340	4381610779	502026323220	502060312057	150
5026995080	5026995340	4381610779	502026323220	502060312057	150
7139868534	7139868041	5615500007	713604561703	713730759978	150
7139868534	7139868041	5615500007	713604561703	713730759978	150
1109873020	1109873096	2597410872	110662489100	110679303909	150
1109873020	1109873096	2597410872	110662489100	110679303909	150
2843905199	2843905720	177410632	284470987591	284998976546	150
2481386219	2481386262	9788410789	248908194427	248245950738	150
2481386219	2481386262	9788410789	248908194427	248245950738	150
9669401443	9669401716	815500024	966503952671	966809306790	150
9669401443	9669401716	815500024	966503952671	966809306790	150
8566559720	8566559718	2023510096	856233955593	856887782796	150
8566559720	8566559718	2023510096	856233955593	856887782796	150
6719624438	6719624368	1771510651	671055570197	671887079785	150
6719624438	6719624368	1771510651	671055570197	671887079785	150
8577966475	8577966123	2359410437	857437074318	857149579169	150
8577966475	8577966123	2359410437	857437074318	857149579169	150
1631254931	1631254535	8568410569	163282306764	163602127596	150
1631254931	1631254535	8568410569	163282306764	163602127596	150
1468314114	1468314096	6915500041	146846845295	146102961788	150
2789858472	2789858425	5667510644	278736522241	278725275048	150

2789858472	2789858425	5667510644	278736522241	278725275048	150
2152510000	2152510735	2152510398	215905118026	215316104012	150
2152510000	2152510735	2152510398	215905118026	215316104012	150
7518063017	7518063828	2149410317	751294995613	751014879596	150
7518063017	7518063828	2149410317	751294995613	751014879596	150
4508785851	4508785823	5216500984	450115615676	450180891306	150
4508785851	4508785823	5216500984	450115615676	450180891306	150
1924486479	1924486790	7007510985	192532670874	192516219050	150
1924486479	1924486790	7007510985	192532670874	192516219050	150
1740850122	1740850225	5206500883	174012245727	174279235365	150
1740850122	1740850225	5206500883	174012245727	174279235365	150
1825432810	1825432266	8369410542	182905430731	182024171787	150
1825432810	1825432266	8369410542	182905430731	182024171787	150
7966477277	7966477956	3295500779	796853759676	796464330967	150
7966477277	7966477956	3295500779	796853759676	796464330967	150
9540425640	9540425267	2439410247	954304264412	954823044968	150
9540425640	9540425267	2439410247	954304264412	954823044968	150
7281158549	7281158851	7927410230	728676890363	728696817675	150
7281158549	7281158851	7927410230	728676890363	728696817675	150
1230456975	1230456232	8908510073	123854559752	123749717992	150
1230456975	1230456232	8908510073	123854559752	123749717992	150
720788218	720788556	119910000	72620435928	72885445813	150
720788218	720788556	119910000	72620435928	72885445813	150
1756389462	1756389318	435510264	175771248665	175067540648	150
1756389462	1756389318	435510264	175771248665	175067540648	150
2606410000	2606410144	2606410989	260937482035	260153305727	150
2606410000	2606410144	2606410989	260937482035	260153305727	150
4206133529	4206133880	4869410588	420989888043	420222224584	150
4206133529	4206133880	4869410588	420989888043	420222224584	150
2285256237	2285256750	9636510344	228742611576	228298048842	150
2285256237	2285256750	9636510344	228742611576	228298048842	150
2171488761	2171488679	3269510593	217031101350	217103140969	150
2171488761	2171488679	3269510593	217031101350	217103140969	150
5684710606	5684710413	9484510760	568236795467	568361048361	150
5684710606	5684710413	9484510760	568236795467	568361048361	150
3345456772	3345456336	1961610637	334124735909	334497192481	150
3345456772	3345456336	1961610637	334124735909	334497192481	150
727965109	727965843	4874510695	72079371471	72454488731	150
727965109	727965843	4874510695	72079371471	72454488731	150
7651316208	7651316598	1016510072	765966549695	765023730381	150
7651316208	7651316598	1016510072	765966549695	765023730381	150
4553866842	4553866780	6436510321	455652328818	455427461244	150
4438155008	4438155137	5776410704	443903564322	443989392441	150
4438155008	4438155137	5776410704	443903564322	443989392441	150
791370134	791370284	5378510705	79348880228	79200591565	150
791370134	791370284	5378510705	79348880228	79200591565	150
3628326303	3628326093	4471510624	362177650933	362397447700	150

3628326303	3628326093	4471510624	362177650933	362397447700	150
7228475592	7228475078	4147510396	722409544205	722557616487	150
7228475592	7228475078	4147510396	722409544205	722557616487	150
3123899592	3123899653	3780510760	312081622225	312946920459	150
3123899592	3123899653	3780510760	312081622225	312946920459	150
4379222765	4379222692	4358410449	437081105013	437506852432	150
4379222765	4379222692	4358410449	437081105013	437506852432	150
7266900507	7266900318	1880510768	726683524812	726355509024	150
7266900507	7266900318	1880510768	726683524812	726355509024	150
2922510000	2922510303	2922510176	292573309136	292822961003	150
2922510000	2922510303	2922510176	292573309136	292822961003	150
4301753534	4301753620	6937410323	430366984647	430045370626	150
4301753534	4301753620	6937410323	430366984647	430045370626	150
9580186386	9580186706	9451510428	958952940123	958774401382	150
9580186386	9580186706	9451510428	958952940123	958774401382	150
2546378053	2546378121	6219410034	254689056413	254037989813	150
2546378053	2546378121	6219410034	254689056413	254037989813	150
7257588176	7257588959	4318510109	725961214241	725571660962	150
7257588176	7257588959	4318510109	725961214241	725571660962	150
621924247	621924360	4197410835	62714657584	62390970601	150
621924247	621924360	4197410835	62714657584	62390970601	150
3945445277	3945445027	4178410624	394200613250	394635931129	150
3945445277	3945445027	4178410624	394200613250	394635931129	150
8489829547	8489829250	7305510951	848326732569	848618941597	150
8489829547	8489829250	7305510951	848326732569	848618941597	150
9537960125	9537960229	7168510590	953239697813	953006311496	150
9537960125	9537960229	7168510590	953239697813	953006311496	150
7391506559	7391506622	9961510579	739025286469	739299634273	150
7391506559	7391506622	9961510579	739025286469	739299634273	150
9026511699	9026511899	7406410975	902255202119	902235671039	150
9026511699	9026511899	7406410975	902255202119	902235671039	150
5257815639	5257815470	4937510377	525318703981	525875880581	150
5257815639	5257815470	4937510377	525318703981	525875880581	150
4976525082	4976525922	4791610919	497140246264	497413537351	150
4976525082	4976525922	4791610919	497140246264	497413537351	150
6906269077	6906269876	2581610797	690816999409	690909280078	150
6906269077	6906269876	2581610797	690816999409	690909280078	150
5387599249	5387599612	9725500124	538983758879	538670777431	150
5387599249	5387599612	9725500124	538983758879	538670777431	150
2798376205	2798376556	5476510722	279653960885	279843974346	150
2798376205	2798376556	5476510722	279653960885	279843974346	150
2560219053	2560219852	4761610620	256171614541	256820146310	150
2560219053	2560219852	4761610620	256171614541	256820146310	150
8545538415	8545538350	1077410623	854739012225	854896092996	150
8545538415	8545538350	1077410623	854739012225	854896092996	150
2695667684	2695667617	688410769	269872163785	269100238534	150
2695667684	2695667617	688410769	269872163785	269100238534	150

3627610000	3627610681	7130510211	362789997213	362427760298	150
3627610000	3627610681	7130510211	362789997213	362427760298	150
8215568273	8215568388	5640510357	821146603524	821705083818	150
8215568273	8215568388	5640510357	821146603524	821705083818	150
4590367715	4590367798	1398410841	459159239335	459308844374	150
4590367715	4590367798	1398410841	459159239335	459308844374	150
2184366760	2184366072	4089410707	218151975142	218515447051	150
2184366760	2184366072	4089410707	218151975142	218515447051	150
5285758217	5285758691	6767510655	528384350259	528212324806	150
5285758217	5285758691	6767510655	528384350259	528212324806	150
4058510000	4058510151	8489510816	405322466116	405913218011	150
4058510000	4058510151	8489510816	405322466116	405913218011	150
3134212478	3134212665	4058510478	313811859124	313752917847	150
3134212478	3134212665	4058510478	313811859124	313752917847	150
5950786963	5950786158	2777410693	595471457097	595880139088	150
5950786963	5950786158	2777410693	595471457097	595880139088	150
5279895948	5279895346	336410258	527311058312	527749259157	150
5279895948	5279895346	336410258	527311058312	527749259157	150
979262040	979262507	4099510872	97706559738	97280212158	150
979262040	979262507	4099510872	97706559738	97280212158	150
339524100	339524162	2244510329	33052261301	33987397436	150
339524100	339524162	2244510329	33052261301	33987397436	150
8707762638	8707762502	1680510748	870347691167	870240155748	150
8707762638	8707762502	1680510748	870347691167	870240155748	150
8001320770	8001320587	2402610986	800274693708	800543344138	150
8001320770	8001320587	2402610986	800274693708	800543344138	150
1701117727	1701117039	29510174	170240096899	170896020412	150
1701117727	1701117039	29510174	170240096899	170896020412	150
7473510000	7473510239	1267410544	747807660483	747761085275	150
7473510000	7473510239	1267410544	747807660483	747761085275	150
8776347244	8776347285	6909410004	877801763235	877163383233	150
8776347244	8776347285	6909410004	877801763235	877163383233	150
5687771312	5687771115	7919410104	568500027440	568078150422	150
5687771312	5687771115	7919410104	568500027440	568078150422	150
4002190913	4002190434	8747410400	400505314430	400139433597	150
4002190913	4002190434	8747410400	400505314430	400139433597	150
7949317293	7949317114	5648410383	794355128035	794566276289	150
7949317293	7949317114	5648410383	794355128035	794566276289	150
2250522906	2250522767	5726410202	225750270370	225514892035	150
2250522906	2250522767	5726410202	225750270370	225514892035	150
2023956227	2023956833	835500223	202921917014	202465759056	150
2023956227	2023956833	835500223	202921917014	202465759056	150
8402510000	8402510951	8402510929	840754722340	840186788162	150
8402510000	8402510951	8402510929	840754722340	840186788162	150
17871505	17871554	1847410403	1957146677	1563691500	150
17871505	17871554	1847410403	1957146677	1563691500	150
6337651011	6337651683	2198510883	633640523425	633170010570	150

6337651011	6337651683	2198510883	633640523425	633170010570	150
9065215450	9065215059	7473510640	906337882022	906427476437	150
9065215450	9065215059	7473510640	906337882022	906427476437	150
904779400	904779023	9631610318	90727789375	90318628214	150
904779400	904779023	9631610318	90727789375	90318628214	150
2051581668	2051581454	8469510617	205360414710	205687681751	150
2051581668	2051581454	8469510617	205360414710	205687681751	150
7445632025	7445632252	1594510863	744803524877	744143154417	150
7445632025	7445632252	1594510863	744803524877	744143154417	150
3762289272	3762289798	6939910000	376303709900	376628083596	150
3762289272	3762289798	6939910000	376303709900	376628083596	150
3535432429	3535432271	2373510625	353818816254	353397041808	150
3535432429	3535432271	2373510625	353818816254	353397041808	150
9731043140	9731043447	7723510172	973630843416	973331326537	150
9731043140	9731043447	7723510172	973630843416	973331326537	150
17968589	17968175	8769410582	1451317984	1232370131	150
17968589	17968175	8769410582	1451317984	1232370131	150
4695086884	4695086113	1868410592	469759697352	469034247916	150
4695086884	4695086113	1868410592	469759697352	469034247916	150
5639263313	5639263453	8209410937	563837026490	563223633624	150
5639263313	5639263453	8209410937	563837026490	563223633624	150
4458571545	4458571223	7502610001	445300062342	445643513485	150
4458571545	4458571223	7502610001	445300062342	445643513485	150
6888330557	6888330698	4395510904	688707870882	688956113621	150
6888330557	6888330698	4395510904	688707870882	688956113621	150
3083663634	3083663452	4336510309	308060687143	308307087763	150
3083663634	3083663452	4336510309	308060687143	308307087763	150
8851654889	8851654025	8750510469	885294543574	885078925732	150
8851654889	8851654025	8750510469	885294543574	885078925732	150
6169694783	6169694169	3949410398	616507940839	616296436496	150
6169694783	6169694169	3949410398	616507940839	616296436496	150
1252418636	1252418304	5006510975	125506531120	125360456732	150
1252418636	1252418304	5006510975	125506531120	125360456732	150
3817589078	3817589950	8947510479	381246849722	381342670760	150
3817589078	3817589950	8947510479	381246849722	381342670760	150
7269323169	7269323822	3328510207	726278050440	726879010615	150
7269323169	7269323822	3328510207	726278050440	726879010615	150
1969462626	1969462187	3949510464	196380452485	196671006416	150
1969462626	1969462187	3949510464	196380452485	196671006416	150
4965865677	4965865465	7526410184	496138072652	496482637352	150
4965865677	4965865465	7526410184	496138072652	496482637352	150
7077970190	7077970821	4056510477	707709066654	707933924185	150
7077970190	7077970821	4056510477	707709066654	707933924185	150
8434989269	8434989780	5579410658	843237168963	843064963233	150
8434989269	8434989780	5579410658	843237168963	843064963233	150
2003528789	2003528582	4680610824	200376935998	200368020345	150
2003528789	2003528582	4680610824	200376935998	200368020345	150

7937950731	7937950273	7335500181	793506471291	793840669575	150
7937950731	7937950273	7335500181	793506471291	793840669575	150
727610000	727610424	2588510823	72702930934	72904285180	150
727610000	727610424	2588510823	72702930934	72904285180	150
115426331	115426842	4867410607	11007379901	11855748229	150
115426331	115426842	4867410607	11007379901	11855748229	150
7783394796	7783394371	3727410205	778493892748	778430072966	150
7783394796	7783394371	3727410205	778493892748	778430072966	150
3584875716	3584875234	5738410294	358523699975	358288997310	150
3584875716	3584875234	5738410294	358523699975	358288997310	150
8542645663	8542645031	5439410250	854971514704	854097740857	150
8542645663	8542645031	5439410250	854971514704	854097740857	150
9779342311	9779342997	8706500936	977323042000	977987832994	150
9779342311	9779342997	8706500936	977323042000	977987832994	150
9317441571	9317441906	4517510134	931843914984	931606073692	150
9317441571	9317441906	4517510134	931843914984	931606073692	150
6127888303	6127888820	6169410520	612974292606	612619277625	150
6127888303	6127888820	6169410520	612974292606	612619277625	150
2243242666	2243242196	2368410544	224986968136	224929197673	150
2243242666	2243242196	2368410544	224986968136	224929197673	150
7887332782	7887332291	3117410045	788549432174	788634715145	150
7887332782	7887332291	3117410045	788549432174	788634715145	150
2420568877	2420568851	5931510278	242991425451	242128592601	150
2420568877	2420568851	5931510278	242991425451	242128592601	150
6363487331	6363487227	7449410352	636597195479	636911582863	150
6363487331	6363487227	7449410352	636597195479	636911582863	150
6914400870	6914400282	9349510410	691714271939	691120102395	150
6914400870	6914400282	9349510410	691714271939	691120102395	150
8612710483	8612710688	5151510394	861362269843	861830203795	150
8612710483	8612710688	5151510394	861362269843	861830203795	150
3994653248	3994653951	1423510136	399405126611	399324665057	150
3994653248	3994653951	1423510136	399405126611	399324665057	150
1895364871	1895364846	4376510711	189584459481	189395484393	150
1895364871	1895364846	4376510711	189584459481	189395484393	150
3507448522	3507448517	5106500874	350563845465	350406468455	150
3507448522	3507448517	5106500874	350563845465	350406468455	150
7457538582	7457538240	3939410298	745377348009	745022032514	150
7457538582	7457538240	3939410298	745377348009	745022032514	150
3470595444	3470595684	6482510731	347537588207	347016944717	150
3470595444	3470595684	6482510731	347537588207	347016944717	150
6261035748	6261035452	7433510241	626480443727	626091100602	150
6261035748	6261035452	7433510241	626480443727	626091100602	150
8324925893	8324925779	8182510704	832065240473	832184584628	150
8324925893	8324925779	8182510704	832065240473	832184584628	150
16058323	16058926	5976510772	1193084065	1262682352	150
16058323	16058926	5976510772	1193084065	1262682352	150
5924149408	5924149529	4825500129	592931702304	592266782637	150

5924149408	5924149529	4825500129	592931702304	592266782637	150
9193915788	9193915723	9499410847	919935752973	919630836648	150
9193915788	9193915723	9499410847	919935752973	919630836648	150
4271510000	4271510291	4271510603	427384908947	427917019712	150
4271510000	4271510291	4271510603	427384908947	427917019712	150
9214444769	9214444418	1761510552	921825950685	921166444202	150
9214444769	9214444418	1761510552	921825950685	921166444202	150
5408462230	5408462380	3497410863	540989966791	540883561032	150
5408462230	5408462380	3497410863	540989966791	540883561032	150
8558919078	8558919474	3418410064	855863105127	855613223429	150
8558919078	8558919474	3418410064	855863105127	855613223429	150
7381721349	7381721255	29410107	738752068013	738885573382	150
7381721349	7381721255	29410107	738752068013	738885573382	150
5100519112	5100519276	71610645	510821072134	510871762934	150
5100519112	5100519276	71610645	510821072134	510871762934	150
3647564870	3647564236	2489410744	364406771679	364697401402	150
3647564870	3647564236	2489410744	364406771679	364697401402	150
5366467478	5366467197	9076410639	536091282709	536415060628	150
5366467478	5366467197	9076410639	536091282709	536415060628	150
4565883892	4565883565	2763910000	456241967337	456982381402	150
4565883892	4565883565	2763910000	456241967337	456982381402	150
855910617	855910067	4898510955	85909516697	85356683699	150
855910617	855910067	4898510955	85909516697	85356683699	150
3870641090	3870641445	4410510039	387121798418	387333405825	150
3870641090	3870641445	4410510039	387121798418	387333405825	150
4621656858	4621656185	2744510380	462662776110	462711158767	150
4621656858	4621656185	2744510380	462662776110	462711158767	150
9138006190	9138006227	9726510253	913595983888	913153797737	150
9138006190	9138006227	9726510253	913595983888	913153797737	150
2954752815	2954752523	9168410531	295009162285	295394964158	150
2954752815	2954752523	9168410531	295009162285	295394964158	150
8785012539	8785012731	9315510055	878261436918	878717934923	150
8785012539	8785012731	9315510055	878261436918	878717934923	150
6184807560	6184807552	1427510219	618510277355	618331514300	150
6184807560	6184807552	1427510219	618510277355	618331514300	150
311610000	311610594	311610086	31931498360	31371909847	150
311610000	311610594	311610086	31931498360	31371909847	150
2639410000	2639410970	2639410267	263692943014	263266756552	150
2639410000	2639410970	2639410267	263692943014	263266756552	150
4466967988	4466967682	900510985	446229623992	446468715873	150
4466967988	4466967682	900510985	446229623992	446468715873	150
960029792	960029084	6316500995	96201569712	96696108291	150
960029792	960029084	6316500995	96201569712	96696108291	150
1127456011	1127456427	3441610391	112860430622	112775130520	150
1127456011	1127456427	3441610391	112860430622	112775130520	150
5892626763	5892626235	4654510475	589995304586	589481459790	150
5892626763	5892626235	4654510475	589995304586	589481459790	150

884158503	884158153	2127410142	88071143201	88926970465	150
2463085906	2463085166	7139410223	246180618773	246929777781	150
2463085906	2463085166	7139410223	246180618773	246929777781	150
6991171173	6991171328	247510402	699007802697	699071828029	150
7551006914	7551006424	9135500163	755531710268	755785368472	150
7551006914	7551006424	9135500163	755531710268	755785368472	150
754034656	754034285	290610880	75764534895	75694629773	150
754034656	754034285	290610880	75764534895	75694629773	150
2273075581	2273075373	2357510513	227649302395	227049296908	150
2273075581	2273075373	2357510513	227649302395	227049296908	150
7783609914	7783609183	6102510897	778123060064	778422537848	150
7783609914	7783609183	6102510897	778123060064	778422537848	150
5007553934	5007553455	6806500944	500291796563	500143090019	150
5007553934	5007553455	6806500944	500291796563	500143090019	150
9161343813	9161343071	7549410362	916069211476	916760305567	150
9161343813	9161343071	7549410362	916069211476	916760305567	150
2700490432	2700490049	7972510682	270023441711	270629389369	150
2700490432	2700490049	7972510682	270023441711	270629389369	150
6785986358	6785986363	2895510952	678305365494	678789880469	150
6785986358	6785986363	2895510952	678305365494	678789880469	150
8126067700	8126067775	6831610335	812824493829	812423587142	150
8126067700	8126067775	6831610335	812824493829	812423587142	150
1676938460	1676938091	5727410208	167601485137	167476369536	150
1676938460	1676938091	5727410208	167601485137	167476369536	150
8759895438	8759895694	4288410733	875248969391	875886684249	150
8759895438	8759895694	4288410733	875248969391	875886684249	150
3827292612	3827292689	8400610014	382984270985	382319411252	150
3827292612	3827292689	8400610014	382984270985	382319411252	150
3041754410	3041754239	6750610537	304852314334	304139077576	150
3041754410	3041754239	6750610537	304852314334	304139077576	150
5423157360	5423157758	9061510489	542829521022	542040871484	150
5423157360	5423157758	9061510489	542829521022	542040871484	150
8383889219	8383889179	4876510761	838819718938	838722008362	150
8383889219	8383889179	4876510761	838819718938	838722008362	150
979237264	979237413	9206510999	97012557498	97739483265	150
979237264	979237413	9206510999	97012557498	97739483265	150
3636980459	3636980191	3978510763	363068322847	363703535662	150
3636980459	3636980191	3978510763	363068322847	363703535662	150
4166115940	4166115647	5125500060	416108811343	416949751320	150
4166115940	4166115647	5125500060	416108811343	416949751320	150
7988784892	7988784730	5566500514	798346329686	798577803786	150
7988784892	7988784730	5566500514	798346329686	798577803786	150
1011981351	1011981208	985500740	101062783360	101558111287	150
1011981351	1011981208	985500740	101062783360	101558111287	150
7255969178	7255969530	8291510808	725863656330	725008099539	150
7255969178	7255969530	8291510808	725863656330	725008099539	150
2481584947	2481584576	1277410643	248593351341	248484577832	150

2481584947	2481584576	1277410643	248593351341	248484577832	150
3850584546	3850584440	5768410586	385125667851	385472069761	150
3850584546	3850584440	5768410586	385125667851	385472069761	150
3472348084	3472348603	6294510838	347268896274	347275608559	150
3472348084	3472348603	6294510838	347268896274	347275608559	150
4765244386	4765244118	7980610857	476493252581	476603844472	150
4765244386	4765244118	7980610857	476493252581	476603844472	150
9690483314	9690483082	6613510060	969022997825	969836023964	150
9690483314	9690483082	6613510060	969022997825	969836023964	150
5153141460	5153141287	8394510850	515333816960	515080126043	150
5153141460	5153141287	8394510850	515333816960	515080126043	150
1328238137	1328238339	4178510684	132571730870	132031968346	150
1328238137	1328238339	4178510684	132571730870	132031968346	150
2616379200	2616379083	2424510143	261080749553	261880804953	150
2616379200	2616379083	2424510143	261080749553	261880804953	150
8700107915	8700107249	9444510357	870750172176	870224511168	150
8700107915	8700107249	9444510357	870750172176	870224511168	150
6669657932	6669657267	7527410188	666225277547	666525839794	150
6669657932	6669657267	7527410188	666225277547	666525839794	150
9683788762	9683788990	5570610714	968578501714	968267988890	150
9683788762	9683788990	5570610714	968578501714	968267988890	150
3479613099	3479613866	3909410001	347744707416	347320692588	150
3479613099	3479613866	3909410001	347744707416	347320692588	150
2472030245	2472030735	7819410094	247378732366	247493057594	150
2472030245	2472030735	7819410094	247378732366	247493057594	150
3402156409	3402156520	7949510468	340323351312	340204089547	150
3402156409	3402156520	7949510468	340323351312	340204089547	150
3325736365	3325736719	3577510731	332392921357	332625367012	150
3325736365	3325736719	3577510731	332392921357	332625367012	150
2113571680	2113571667	5328410152	211852154256	211429041283	150
2113571680	2113571667	5328410152	211852154256	211429041283	150
7431528861	7431528344	7149410322	743997343635	743337872330	150
7431528861	7431528344	7149410322	743997343635	743337872330	150
3489048618	3489048890	3770510662	348203946117	348073635117	150
3489048618	3489048890	3770510662	348203946117	348073635117	150
2554627899	2554627883	7635500210	255347458259	255649848472	150
2554627899	2554627883	7635500210	255347458259	255649848472	150
461107816	461107840	987410810	46541027534	46291685322	150
461107816	461107840	987410810	46541027534	46291685322	150
2484870275	2484870888	9251610475	248280254209	248804446977	150
2484870275	2484870888	9251610475	248280254209	248804446977	150
5527235480	5527235649	987510867	552388526247	552526800505	150
5527235480	5527235649	987510867	552388526247	552526800505	150
5517593346	5517593089	919410097	551425397626	551092791993	150
5517593346	5517593089	919410097	551425397626	551092791993	150
5556240662	5556240539	4235500168	555371080855	555972232478	150
5556240662	5556240539	4235500168	555371080855	555972232478	150

6395865386	6395865275	4087410725	639277726220	639348588508	150
6395865386	6395865275	4087410725	639277726220	639348588508	150
4700165712	4700165001	227410151	470512311729	470952191045	150
4700165712	4700165001	227410151	470512311729	470952191045	150
9842832612	9842832673	4219510097	984558392893	984407370140	150
9842832612	9842832673	4219510097	984558392893	984407370140	150
6261138687	6261138181	4358510508	626495930826	626939006459	150
6261138687	6261138181	4358510508	626495930826	626939006459	150
1603687221	1603687003	2707510051	160404197632	160727218709	150
1603687221	1603687003	2707510051	160404197632	160727218709	150
8196359329	8196359826	8641610415	819460513939	819328688434	150
8196359329	8196359826	8641610415	819460513939	819328688434	150
4441106678	4441106514	7388410746	444221288645	444390247733	150
4441106678	4441106514	7388410746	444221288645	444390247733	150
5367300733	5367300326	5690610924	536939698349	536685340846	150
5367300733	5367300326	5690610924	536939698349	536685340846	150
6185937891	6185937346	4755510514	618701380708	618867189086	150
6185937891	6185937346	4755510514	618701380708	618867189086	150
8949064820	8949064952	101510894	894291585416	894881945618	150
8949064820	8949064952	101510894	894291585416	894881945618	150
4418803878	4418803335	6987410816	441476528920	441445052407	150
4418803878	4418803335	6987410816	441476528920	441445052407	150
9118561750	9118561460	1079410605	911478577288	911153944476	150
9118561750	9118561460	1079410605	911478577288	911153944476	150
3722197821	3722197912	7793510872	372122510177	372957092344	150
3722197821	3722197912	7793510872	372122510177	372957092344	150
4963471027	4963471503	3968510664	496353806794	496714917015	150
4963471027	4963471503	3968510664	496353806794	496714917015	150
9840352274	9840352264	4269410528	984998370638	984191044845	150
9840352274	9840352264	4269410528	984998370638	984191044845	150
8766672033	8766672889	2917410122	876828508866	876890772701	150
8766672033	8766672889	2917410122	876828508866	876890772701	150
1901623417	1901623297	118410031	190252982869	190682971223	150
1901623417	1901623297	118410031	190252982869	190682971223	150
8202610651	8202610593	9585510828	820959694507	820193163047	150
8202610651	8202610593	9585510828	820959694507	820193163047	150
7917478128	7917478616	6458410461	791194938374	791684363333	150
7917478128	7917478616	6458410461	791194938374	791684363333	150
6008812553	6008812506	279410624	600132688881	600674538778	150
6008812553	6008812506	279410624	600132688881	600674538778	150
2460509995	2460509910	6459410451	246714654608	246075578489	150
2460509995	2460509910	6459410451	246714654608	246075578489	150
9603325805	9603325824	3027410133	960287054494	960369625208	150
9603325805	9603325824	3027410133	960287054494	960369625208	150
1186893314	1186893052	689510828	118323214262	118341229898	150
1186893314	1186893052	689510828	118323214262	118341229898	150
2457509925	2457509953	4823510179	245783288348	245132351897	150

2457509925	2457509953	4823510179	245783288348	245132351897	150
3685505684	3685505034	6596410886	368319529240	368817930891	150
3685505684	3685505034	6596410886	368319529240	368817930891	150
6226399798	6226399361	5327510213	622013355269	622318294082	150
6226399798	6226399361	5327510213	622013355269	622318294082	150
901019797	901019132	6418510121	90985338143	90923963320	150
901019797	901019132	6418510121	90985338143	90923963320	150
9611084567	9611084514	57510481	961097961234	961615369812	150
9611084567	9611084514	57510481	961097961234	961615369812	150
5207689817	5207689657	1891510861	520044381044	520755366499	150
5207689817	5207689657	1891510861	520044381044	520755366499	150
6983702586	6983702157	9577410680	698920551351	698709136209	150
6983702586	6983702157	9577410680	698920551351	698709136209	150
2625040240	2625040636	9291610874	262787677064	262624531075	150
2625040240	2625040636	9291610874	262787677064	262624531075	150
3210018226	3210018669	1047410327	321086114523	321210329173	150
3210018226	3210018669	1047410327	321086114523	321210329173	150
7291910850	7291910546	8060510500	729896340355	729666349150	150
7291910850	7291910546	8060510500	729896340355	729666349150	150
6616012373	6616012693	4496410874	661684672743	661582678372	150
6616012373	6616012693	4496410874	661684672743	661582678372	150
5036505800	5036505923	969910000	503532523621	503379665226	150
5036505800	5036505923	969910000	503532523621	503379665226	150
8091915664	8091915103	5079510673	809312598683	809233937874	150
8091915664	8091915103	5079510673	809312598683	809233937874	150
6978940638	6978940671	6033510201	697349693105	697033016393	150
6978940638	6978940671	6033510201	697349693105	697033016393	150
8796876228	8796876313	5345500277	879221799891	879322204496	150
8796876228	8796876313	5345500277	879221799891	879322204496	150
1909468571	1909468396	382510716	190636635401	190603856210	150
1909468571	1909468396	382510716	190636635401	190603856210	150
8968944292	8968944617	9226410156	896457617417	896492810819	150
8968944292	8968944617	9226410156	896457617417	896492810819	150
356993757	356993049	9985500751	35400775373	35288453762	150
356993757	356993049	9985500751	35400775373	35288453762	150
4582030350	4582030136	5517410087	458943471548	458070422371	150
4582030350	4582030136	5517410087	458943471548	458070422371	150
1200030930	1200030183	632510246	120158077580	120338503368	150
1200030930	1200030183	632510246	120158077580	120338503368	150
6876907924	6876907809	8054510417	687097301817	687555519166	150
6876907924	6876907809	8054510417	687097301817	687555519166	150
7665195965	7665195935	4629510237	766489210994	766947860570	150
7665195965	7665195935	4629510237	766489210994	766947860570	150
9582150864	9582150060	5875510748	958273685829	958872545385	150
9582150864	9582150060	5875510748	958273685829	958872545385	150
2374306628	2374306914	8529410164	237661689130	237277769807	150
2374306628	2374306914	8529410164	237661689130	237277769807	150

5169826463	5169826564	3478410653	516399401280	516752726315	150
5169826463	5169826564	3478410653	516399401280	516752726315	150
3467489268	3467489579	7468410558	346531697492	346738839926	150
3467489268	3467489579	7468410558	346531697492	346738839926	150
8590532982	8590532259	1236500180	859269197559	859362640535	150
8590532982	8590532259	1236500180	859269197559	859362640535	150
6507173292	6507173460	3085500645	650886455584	650150276926	150
6507173292	6507173460	3085500645	650886455584	650150276926	150
2426510000	2426510950	2426510215	242064121532	242467637980	150
2426510000	2426510950	2426510215	242064121532	242467637980	150
2014069564	2014069926	6893510882	201301832858	201407594034	150
355323211	355323753	1167410534	35649100689	35170257907	150
355323211	355323753	1167410534	35649100689	35170257907	150
2128961053	2128961227	3871610728	212991796597	212776409746	150
2128961053	2128961227	3871610728	212991796597	212776409746	150
5167571961	5167571498	7233500201	516552952484	516658904483	150
5167571961	5167571498	7233500201	516552952484	516658904483	150
1095580099	1095580661	8463510540	109528327095	109522871042	150
1095580099	1095580661	8463510540	109528327095	109522871042	150
9645848981	9645848605	228410138	964192477002	964984379103	150
9645848981	9645848605	228410138	964192477002	964984379103	150
1789430255	1789430448	3177510691	178885342315	178458362576	150
1789430255	1789430448	3177510691	178885342315	178458362576	150
4326939997	4326939160	9727410212	432068853040	432832519983	150
4326939997	4326939160	9727410212	432068853040	432832519983	150
7340969389	7340969727	5557410478	734484356086	734435493585	150
7340969389	7340969727	5557410478	734484356086	734435493585	150
2686043366	2686043725	3549410358	268250283866	268505681136	150
2686043366	2686043725	3549410358	268250283866	268505681136	150
3474317658	3474317646	3883510777	347836649930	347741926220	150
3474317658	3474317646	3883510777	347836649930	347741926220	150
8406305483	8406305636	1445500283	840178570555	840922437540	150
8406305483	8406305636	1445500283	840178570555	840922437540	150
7105958982	7105958335	8390610898	710408194890	710493152120	150
7105958982	7105958335	8390610898	710408194890	710493152120	150
9721546662	9721546037	1727510249	972299095779	972088854666	150
9721546662	9721546037	1727510249	972299095779	972088854666	150
8824686291	8824686433	3982510778	882509027626	882092325187	150
8824686291	8824686433	3982510778	882509027626	882092325187	150
606653839	606653173	8817410118	60668983259	60295609806	150
606653839	606653173	8817410118	60668983259	60295609806	150
8109486712	8109486267	2667410586	810114599878	810072826809	150
8109486712	8109486267	2667410586	810114599878	810072826809	150
138390290	138390532	5738510348	13979075241	13465388534	150
138390290	138390532	5738510348	13979075241	13465388534	150
4343188805	4343188929	5116410043	434674306777	434179550765	150
4343188805	4343188929	5116410043	434674306777	434179550765	150

5287368712	5287368864	9787410799	528620702442	528126191587	150
5287368712	5287368864	9787410799	528620702442	528126191587	150
1254606897	1254606080	539510322	125369325263	125188854486	150
1254606897	1254606080	539510322	125369325263	125188854486	150
837285563	837285882	2955510534	83599082106	83052420235	150
837285563	837285882	2955510534	83599082106	83052420235	150
2853207581	2853207201	6881610831	285072246486	285775621807	150
2853207581	2853207201	6881610831	285072246486	285775621807	150
7718542976	7718542412	3379410637	771324369355	771681917212	150
7718542976	7718542412	3379410637	771324369355	771681917212	150
596912131	596912579	6528410173	59937744472	59095204765	150
596912131	596912579	6528410173	59937744472	59095204765	150
5717666997	5717666700	110610076	571279221575	571823696720	150
5717666997	5717666700	110610076	571279221575	571823696720	150
3672202556	3672202457	8659510538	367009880042	367510284722	150
3672202556	3672202457	8659510538	367009880042	367510284722	150
3103066205	3103066160	2129711369	310904382973	310890124708	150
6783025132	6783025098	6287510804	678054689236	678130940087	150
6783025132	6783025098	6287510804	678054689236	678130940087	150
5772727149	5772727140	8926500157	577536522694	577417369170	150
5772727149	5772727140	8926500157	577536522694	577417369170	150
7268303348	7268303425	9028410127	726302762423	726907007796	150
7268303348	7268303425	9028410127	726302762423	726907007796	150
508848069	508848534	3722510157	50807431555	50164214673	150
508848069	508848534	3722510157	50807431555	50164214673	150
18311356	18311897	4780610834	1838720014	1037422644	150
18311356	18311897	4780610834	1838720014	1037422644	150
3790077792	3790077840	4101610973	379334106132	379739673952	150
3790077792	3790077840	4101610973	379334106132	379739673952	150
2145656424	2145656155	7598410866	214426487743	214056964185	150
2145656424	2145656155	7598410866	214426487743	214056964185	150
6039218534	6039218356	6537410286	603414187976	603509511309	150
6039218534	6039218356	6537410286	603414187976	603509511309	150
9436018020	9436018276	2385810848	943940628435	943319294736	150
9436018020	9436018276	2385810848	943940628435	943319294736	150
4374558931	4374558082	951510470	437639204786	437812611644	150
4374558931	4374558082	951510470	437639204786	437812611644	150
2387998316	2387998262	4070610663	238093788321	238772656724	150
2387998316	2387998262	4070610663	238093788321	238772656724	150
9710889237	9710889418	7846500346	971812519828	971564308296	150
9710889237	9710889418	7846500346	971812519828	971564308296	150
8944767079	8944767866	7135510241	894446669598	894224395750	150
8944767079	8944767866	7135510241	894446669598	894224395750	150
2591276184	2591276526	9708410000	259714672958	259779908692	150
9231010030	9231010191	2449410347	923666022037	923716950364	150
9231010030	9231010191	2449410347	923666022037	923716950364	150
4970993333	4970993568	3327410164	497818417429	497392297040	150

4970993333	4970993568	3327410164	497818417429	497392297040	150
6687155968	6685048980	5064510516	668027308718	668789249422	150
6687155968	6685048980	5064510516	668027308718	668789249422	150
3413144161	3413144342	8894510900	341050409285	341899574864	150
3413144161	3413144342	8894510900	341050409285	341899574864	150
8993308382	8993308540	3081510683	899693757932	899354238251	150
8993308382	8993308540	3081510683	899693757932	899354238251	150
2321132758	2321132392	9157410442	232066593917	232672006476	150
2321132758	2321132392	9157410442	232066593917	232672006476	150
7296150747	7296150688	3446410371	729463660146	729124097453	150
7296150747	7296150688	3446410371	729463660146	729124097453	150
5464338145	5464338080	5187410736	546595754525	546088965287	150
5464338145	5464338080	5187410736	546595754525	546088965287	150
8398221665	8398221558	5218410047	839825198191	839661339569	150
8398221665	8398221558	5218410047	839825198191	839661339569	150
1936104503	1936104243	6923510191	193135189534	193166923743	150
1936104503	1936104243	6923510191	193135189534	193166923743	150
5991539734	5996296005	3369410537	599497932247	599340469621	150
5991539734	5996296005	3369410537	599497932247	599340469621	150
4487031267	4487031394	7909510069	448919506334	448575824157	150
4487031267	4487031394	7909510069	448919506334	448575824157	150
6915935746	6910249043	9808410010	691463370705	691500729135	150
6915935746	6910249043	9808410010	691463370705	691500729135	150
6915935746	6910249043	9808410010	691170586465	691500729135	150
6915935746	6910249043	9808410010	691432400872	691500729135	150
7801893180	7806129065	5927410228	780958794550	780211380681	150
7801893180	7806129065	5927410228	780958794550	780211380681	150
7194122753	7190444825	950510481	719280640242	719718723299	150
7194122753	7190444825	950510481	719280640242	719718723299	150
4291664035	4294741238	4679910000	429721764478	429868500145	150
4291664035	4294741238	4679910000	429721764478	429868500145	150
6472119247	6477423177	4779410677	647938345090	647991600207	150
6472119247	6477423177	4779410677	647938345090	647991600207	150
5780215438	5784810203	1259910000	578353780521	578866770839	150
5780215438	5784810203	1259910000	578353780521	578866770839	150
9204127469	9202229352	9439410254	920553980717	920622722135	150
2341462163	2343398965	1460510533	234492943592	234441751527	150
2341462163	2343398965	1460510533	234492943592	234441751527	150
9778159845	9778081623	615510078	977704477274	977376292493	150
9778159845	9778081623	615510078	977704477274	977376292493	150
1199423839	1196989894	7856500446	119653349668	119558740870	150
1199423839	1196989894	7856500446	119653349668	119558740870	150
3963512535	3966366267	8455510486	396053424012	396221160735	150
3963512535	3966366267	8455510486	396053424012	396221160735	150
6762950280	6762914393	5047510387	676679263974	676188141103	150
6762950280	6762914393	5047510387	676679263974	676188141103	150
2022945130	2026559726	3783510767	202541361264	202576826271	150

2022945130	2026559726	3783510767	202541361264	202576826271	150
3364515638	3363812684	5815500030	336525709021	336123815427	150
3364515638	3363812684	5815500030	336525709021	336123815427	150
6945374978	6942709779	4229910000	694407855325	694672287108	150
6945374978	6942709779	4229910000	694407855325	694672287108	150
3778973022	3777840825	6690510851	377021201046	377174568902	150
3778973022	3777840825	6690510851	377021201046	377174568902	150
3860500316	3863599613	6505510970	386914672505	386102897004	150
3860500316	3863599613	6505510970	386914672505	386102897004	150
3266756797	3264279360	1718410091	326462006894	326628426269	150
3266756797	3264279360	1718410091	326462006894	326628426269	150
6474285568	6474027676	3611610119	647286691486	647288347779	150
6474285568	6474027676	3611610119	647286691486	647288347779	150
7676080961	7677413565	9890510874	767604154648	767486185960	150
7676080961	7677413565	9890510874	767604154648	767486185960	150
8278739046	8273306767	9079410613	827047764421	827086911064	150
8278739046	8273306767	9079410613	827047764421	827086911064	150
700686599	701572005	8828410206	70293440217	70003186634	150
700686599	701572005	8828410206	70293440217	70003186634	150
2521102638	2520437504	4967510672	252313909087	252195768887	150
2521102638	2520437504	4967510672	252313909087	252195768887	150
4937572902	4932163028	6036410234	493239566755	493081009844	150
4937572902	4932163028	6036410234	493239566755	493081009844	150
6512200606	6513710588	7701542012	651296012700	651464754646	150
6512200606	6513710588	7701542012	651296012700	651464754646	150
8497631597	8492433863	5155510451	849336730722	849003600803	150
8497631597	8492433863	5155510451	849336730722	849003600803	150
4458134393	4455140495	818510155	445399500798	445078630576	150
4458134393	4455140495	818510155	445399500798	445078630576	150
9383699130	9383823510	1738510343	938105869611	938292372940	150
9383699130	9383823510	1738510343	938105869611	938292372940	150
4383795644	4381924813	5791510855	438639186644	438479018104	150
4383795644	4381924813	5791510855	438639186644	438479018104	150
7499211063	7497071492	279510688	749294310153	749887075522	150
7499211063	7497071492	279510688	749294310153	749887075522	150
305330259	300325459	830510272	30519972144	30816781658	150
305330259	300325459	830510272	30519972144	30816781658	150
9590958071	9594063967	953510483	959218392948	959484098500	150
9590958071	9594063967	953510483	959218392948	959484098500	150
6359495754	6352474866	2157510493	635984681480	635937514648	150
6359495754	6352474866	2157510493	635984681480	635937514648	150
1174123650	1173118790	8967410620	117400800479	117320602869	150
1174123650	1173118790	8967410620	117400800479	117320602869	150
1806503225	1806402325	6452510432	180766409877	180899837152	150
1806503225	1806402325	6452510432	180766409877	180899837152	150
5303147999	5302713223	1559410456	530834648576	530054251299	150
5303147999	5302713223	1559410456	530834648576	530054251299	150

1041939392	1046931586	3454510454	104072846921	104727709799	150
1041939392	1046931586	3454510454	104072846921	104727709799	150
9546809030	9546968992	3096510881	954493399037	954570313318	150
9269645987	9264481459	6706410003	926835332419	926892357306	150
9269645987	9264481459	6706410003	926835332419	926892357306	150
5569508844	5568549908	3614510065	556453247989	556849297898	150
5569508844	5568549908	3614510065	556453247989	556849297898	150
8879163277	8870423977	8319410046	887490365186	887364147122	150
8879163277	8870423977	8319410046	887490365186	887364147122	150
2400583150	2406256221	5208410946	240189277788	240118291579	150
2400583150	2406256221	5208410946	240189277788	240118291579	150
4741918270	4744884312	2161610558	474582066169	474931223054	150
4741918270	4744884312	2161610558	474582066169	474931223054	150
9373601049	9377942068	708510046	937797323034	937576263746	150
9373601049	9377942068	708510046	937797323034	937576263746	150
7610778484	7614476852	5548510428	761249820735	761184491059	150
7610778484	7614476852	5548510428	761249820735	761184491059	150
5393912911	5391110491	6921510182	539520733225	539194786213	150
5393912911	5391110491	6921510182	539520733225	539194786213	150
4125373326	4120253203	6151610463	412801732414	412700088332	150
4125373326	4120253203	6151610463	412801732414	412700088332	150
9117778969	9116819974	9673510662	911765381204	911715411339	150
9117778969	9116819974	9673510662	911765381204	911715411339	150
4978412630	4970545096	2318410054	497310003336	497989221031	150
4978412630	4970545096	2318410054	497310003336	497989221031	150
6349410000	6349410837	6349410341	634826587819	634990353858	150
6349410000	6349410836	6349410341	634205355096	634990353858	150
6349410000	6349410836	6349410341	634205355096	634990353858	150
8460610000	8460610090	8460610607	846142911020	846217926552	150
2695667684	2695667794	688410769	269734193242	269235914394	150
4428020784	4428020040	535500193	442752334344	442721049905	150
8460610000	8460610089	8460610607	846814208947	846217926552	150
2695667684	2695667617	688410769	269932936042	269235914394	150
2695667684	2695667617	688410769	269932936042	269235914394	150
4428020784	4428020661	535500193	442445231152	442721049905	150
4428020784	4428020661	535500193	442445231152	442721049905	150
8261496745	8261496835	907799912	826790837666	826782287493	150
8261496745	8261496781	907799912	826948874518	826782287493	150
8261496745	8261496781	907799912	826948874518	826782287493	150
175310000	175310941	175310604	17217702232	17880780706	150
7414900000	7414900037	7414900075	741084490279	741783159631	150
7414900000	7414900037	7414900075	741084490279	741783159631	150
9764478372	9764478525	4825110268	976737185607	976825399958	150
9764478372	9764478525	4825110268	976737185607	976825399958	150
175310000	175310942	175310604	17336108903	17880780706	150
7414900000	7414900038	7414900075	741042366199	741783159631	150
9764478372	9764478393	4825110268	976675497666	976825399958	150

6853935263	6853935037	4986059804	685804543963	685422091472	150
6853935263	6853935037	4986059804	685804543963	685422091472	150
7847401518	7847401171	6409857011	784621288624	784229855052	150
7847401518	7847401171	6409857011	784621288624	784229855052	150
5447935942	5447935844	9417310009	544704512370	544782991118	150
5447935942	5447935844	9417310009	544704512370	544782991118	150
7847401518	7847401474	6409857011	784276992074	784229855052	150
6853935263	6853935012	4986059804	685532849012	685422091472	150
5447935942	5447935802	9417310009	544749930699	544782991118	150
7133864322	7135207182	3134500159	713311924197	713604026084	150
7133864322	7138140619	3134500159	713357282061	713604026084	150
5310000	5310799	5310858	122392400	249079349	150
36500000	36500783	36500159	3855544071	3494275173	150
3500000	3500851	3500879	813190343	737844217	150
64500000	64500151	64500438	6463056326	6646796107	150
71500000	71500569	71500591	7421510924	7960048324	150
93500000	93500172	93500762	9926057344	9835246054	150
84600000	84600285	84600663	8548982212	8070203817	150
72500000	72500628	72500581	7183020502	7301582935	150
91500000	91500925	91500784	9146303991	9750270933	150
94500000	94500097	94500729	9404744148	9498293800	150
85400000	85400373	85400709	8901961246	8982989287	150
213400000	213400054	213400039	21070712259	21234050450	150
204400000	204400562	204400924	20512449997	20440828002	150
229400000	229400465	229400136	22409662484	22503188087	150
237400000	237400228	237400264	23803733976	23810239231	150
227400000	227400082	227400166	22260400730	22630952738	150
183500000	183500872	183500674	18847229365	18433416265	150
184400000	184400210	184400707	18104252400	18869183602	150
200500000	200500441	200500929	20277451372	20497388293	150
233500000	233500275	233500194	23895917150	23930379910	150
173400000	173400391	173400620	17661975251	17655233463	150
129400000	129400452	129400126	12784866206	12976899872	150
130500000	130500797	130500215	13223569195	13618794267	150
123610000	123610978	123610141	12397906422	12596812822	150
134400000	134400927	134400212	13386785297	13147154263	150
135400000	135400767	135400215	13123214303	13456759904	150
137610000	137610566	137610193	13639423810	13060435709	150
150500000	150500003	150500411	15139244267	15394791624	150
342500000	342500608	342500312	34214046107	34007320671	150
343400000	343400751	343400343	34248288405	34947929394	150
358610000	358610467	358610399	35620683695	35869536150	150
360500000	360500152	360500531	36703990658	36580437660	150
331500000	331500098	331500225	33242440900	33580172578	150
355500000	355500653	355500373	35717009392	35896275877	150
310610000	310610447	310610096	31557725668	31744928462	150
362400000	362400123	362400551	36260607149	36893016826	150

365400000	365400200	365400539	36674340229	36520906831	150
362500000	362500675	362500511	36107615309	36662430298	150
363500000	363500456	363500499	36616854601	36519694571	150
274500000	274500364	274500551	27157105876	27291793655	150
283500000	283500890	283500684	28412750798	28955114943	150
254500000	254500825	254500358	25374078319	25103118356	150
442500000	442500627	442500322	44750148107	44696500767	150
435400000	435400825	435400247	43796204188	43713156662	150
466400000	466400569	466400562	46283185629	46685520411	150
467400000	467400489	467400581	46721534308	46522891369	150
484500000	484500997	484500670	48371165803	48602672001	150
447400000	447400279	447400381	44111221573	44527330223	150
418400000	418400079	418400073	41161213659	41867616407	150
375400000	375400357	375400639	37735703467	37144105395	150
424400000	424400818	424400143	42132441544	42031160949	150
408410000	408410878	408410961	40211384658	40846527678	150
383500000	383500907	383500694	38959301198	38658554640	150
402500000	402500112	402500922	40673757534	40321758442	150
385400000	385400421	385400739	38630412760	38956205439	150
594810000	594810967	594810031	59616763953	59376900607	150
611500000	611500878	611500056	61842496111	61256676752	150
597400000	597400780	597400886	59540083448	59803228692	150
616400000	616400869	616400066	61829567408	61661124533	150
592400000	592400312	592400870	59541356899	59346635566	150
534400000	534400868	534400252	53644684634	53924443528	150
551500000	551500425	551500441	55677004099	55930918988	150
505500000	505500565	505500879	50910690219	50153951680	150
709400000	709400293	709400988	70737501431	70560813380	150
721500000	721500999	721500164	72955033541	72408710376	150
684500000	684500034	684500689	68630529467	68583212872	150
681500000	681500752	681500749	68518245325	68872472355	150
624400000	624400849	624400162	62601005010	62461392172	150
653400000	653400887	653400472	65956418400	65093790040	150
619400000	619400370	619400078	61101823978	61080582030	150
670500000	670500320	670500660	67264554076	67477373992	150
652500000	652500550	652500441	65430316575	65779012608	150
630500000	630500764	630500263	63036112933	63219038307	150
827400000	827400170	827400224	82049690942	82418970083	150
844500000	844500756	844500320	84775270627	84618949493	150
860500000	860500242	860500580	86084010364	86465477769	150
822500000	822500466	822500161	82884117155	82825957810	150
824500000	824500489	824500126	82143233496	82103661419	150
764400000	764400971	764400568	76327795983	76444958140	150
800500000	800500552	800500988	80083522837	80142633232	150
801500000	801500745	801500976	80236030207	80449188842	150
770500000	770500339	770500670	77435682120	77897004752	150
794500000	794500444	794500798	79126956384	79786099472	150

768400000	768400770	768400593	76974187059	76585909394	150
756700000	756700949	756700472	75427570174	75142626116	150
754500000	754500908	754500408	75702899954	75477964128	150
943500000	943500780	943500360	94043445135	94391312303	150
969400000	969400147	969400600	96600607934	96655800120	150
985400000	985400517	985400797	98447964147	98902850487	150
935400000	935400852	935400298	93594239930	93037048947	150
979400000	979400310	979400698	97339608704	97434863534	150
936400000	936400184	936400296	93261862414	93573814928	150
912500000	912500287	912500070	91560804631	91973950975	150
905400000	905400425	905400984	90813825184	90016438883	150
922400000	922400066	922400217	92247178593	92885581103	150
907400000	907400121	907400038	90126545200	90798903609	150
924400000	924400897	924400192	92015350144	92719451785	150
925500000	925500942	925500135	92768174357	92727158210	150
868400000	868400792	868400603	86629173986	86058348241	150
897410000	897410778	897410900	89469618501	89471992568	150
930500000	930500808	930500292	93968895175	93525948125	150
887700000	887700654	887700777	88184516887	88031690927	150
1102500000	1102500056	1102500893	110160443368	110951948125	150
1094500000	1094500099	1094500730	109684618240	109656347068	150
1096400000	1096400930	1096400837	109240422740	109009207351	150
1073400000	1073400378	1073400611	107268884742	107734246602	150
1057400000	1057400378	1057400442	105580027519	105749214721	150
1004500000	1004500362	1004500862	100290327143	100547649796	150
1008400000	1008400863	1008400935	100746697945	100871751958	150
1052400000	1052400298	1052400422	105399529862	105635149490	150
1020500000	1020500629	1020500108	102613273037	102952427766	150
1193400000	1193400218	1193400819	119859382574	119552981254	150
1193500000	1193500191	1193500774	119347139144	119490690472	150
1205500000	1205500522	1205500850	120844719923	120639391252	150
1235610000	1235610753	1235610233	123981312788	123015058445	150
1236400000	1236400070	1236400225	123089231485	123516504478	150
1214500000	1214500013	1214500975	121581222525	121467126188	150
1215500000	1215500666	1215500956	121135470379	121808019585	150
1192400000	1192400240	1192400831	119413140604	119553422299	150
1184310000	1184310412	1184310670	118690504731	118135235803	150
1184500000	1184500947	1184500643	118689932703	118980044319	150
1124400000	1124400776	1124400114	112095979376	112303109703	150
1141500000	1141500152	1141500304	114426497071	114990328085	150
1165700000	1165700776	1165700524	116661997769	116706482502	150
1132400000	1132400102	1132400238	113074375666	113224022865	150
1333500000	1333500291	1333500205	133981710241	133346128557	150
1352500000	1352500492	1352500413	135742984543	135904006859	150
1349400000	1349400859	1349400345	134988115255	134043930067	150
1328400000	1328400189	1328400164	132474655842	132694701164	150
1365700000	1365700816	1365700544	136294626227	136499248541	150

1310500000	1310500638	1310500039	131924312488	131760680661	150
1354400000	1354400748	1354400430	135539863329	135843211752	150
1324500000	1324500214	1324500078	132698588354	132429684969	150
1287400000	1287400658	1287400759	128245002178	128229252110	150
1303500000	1303500902	1303500909	130907147063	130628139773	150
1264500000	1264500192	1264500459	126861992694	126989748215	150
1265700000	1265700796	1265700534	126454885768	126358536636	150
1281500000	1281500680	1281500710	128165679418	128560037614	150
1284500000	1284500963	1284500652	128026357373	128303630064	150
1255500000	1255500639	1255500364	125254003521	125522591498	150
1273400000	1273400409	1273400631	127538956337	127954979665	150
1258400000	1258400597	1258400448	125729383826	125303266010	150
1477400000	1477400521	1477400681	147404603605	147340434617	150
1483500000	1483500929	1483500705	148456634469	148077315843	150
1442410000	1442410075	1442410360	144070207056	144378021903	150
1594500000	1594500414	1594500779	159876761898	159713925314	150
1590500000	1590500618	1590500847	159801210378	159338646398	150
1512400000	1512400006	1512400079	151032450726	151215945487	150
1515500000	1515500709	1515500991	151345609737	151888871895	150
1552500000	1552500533	1552500432	155973786050	155305300449	150
1526500000	1526500708	1526500110	152050318024	152779225887	150
1553400000	1553400872	1553400463	155297247264	155269659759	150
1494800000	1494800765	1494800886	149970615532	149335830250	150
1521500000	1521500963	1521500146	152791837506	152759823944	150
1708700000	1708700939	1708700965	170646725740	170792996181	150
1724500000	1724500471	1724500117	172732467340	172749626522	150
1702400000	1702400871	1702400000	170642411611	170972003292	150
1697410000	1697410752	1697410881	169611994785	169706126340	150
1722400000	1722400035	1722400198	172975774411	172618035984	150
1734400000	1734400905	1734400273	173212947476	173910579053	150
1693500000	1693500285	1693500823	169827846616	169068780508	150
1675400000	1675400312	1675400670	167782212007	167281831630	150
1657410000	1657410403	1657410484	165526621847	165598889262	150
1665400000	1665400247	1665400570	166430600221	166360646770	150
1620500000	1620500723	1620500167	162865266654	162627992889	150
1633500000	1633500560	1633500234	163817129059	163984942125	150
1649400000	1649400844	1649400375	164561683155	164058244096	150
1626500000	1626500723	1626500120	162376167111	162904316035	150
1824400000	1824400883	1824400183	182795900756	182299468322	150
1809400000	1809400310	1809400999	180827321735	180142623005	150
1842500000	1842500401	1842500363	184207992611	184006155595	150
1815400000	1815400581	1815400082	181511376662	181055609989	150
1808410000	1808410835	1808410002	180257513909	180227024255	150
1745400000	1745400997	1745400381	174001128876	174167494855	150
1777400000	1777400574	1777400710	177136375596	177961896768	150
1795400000	1795400614	1795400878	179390243638	179261159007	150
1774400000	1774400149	1774400668	177671708739	177594236831	150

1758400000	1758400557	1758400496	175939850821	175773670358	150
1934500000	1934500688	1934500234	193386455824	193669736152	150
1965400000	1965400297	1965400600	196069405688	196834501106	150
1947400000	1947400363	1947400432	194422455159	194383782981	150
1974400000	1974400180	1974400688	197273712573	197701020005	150
1988400000	1988400077	1988400812	198276097068	198645795185	150
1914400000	1914400745	1914400095	191616811140	191435038504	150
1927400000	1927400184	1927400235	192204478978	192413099688	150
1887400000	1887400660	1887400818	188284931872	188017008326	150
1888400000	1888400060	1888400802	188178492438	188388016708	150
1895400000	1895400631	1895400888	189924231825	189713251150	150
1880500000	1880500493	1880500779	188813269837	188671910454	150
1878400000	1878400877	1878400703	187851866754	187993140896	150
1874400000	1874400165	1874400678	187413461783	187586854672	150
1910500000	1910500613	1910500098	191815456726	191732203062	150
1913700000	1913700347	1913700138	191607227470	191513516578	150
1869400000	1869400131	1869400591	186120060960	186394995172	150
1900500000	1900500568	1900500999	190031675364	190780717012	150
2093600000	2093600876	2093600770	209058754225	209079812852	150
2057410000	2057410462	2057410425	205720628524	205916107381	150
2072400000	2072400253	2072400623	207792704680	207914085681	150
2056400000	2056400404	2056400414	205035004163	205787087413	150
2105310000	2105310822	2105310870	210747837911	210403135102	150
2113500000	2113500039	2113500989	211252238129	211493425642	150
2051500000	2051500325	2051500393	205774722634	205929095278	150
2084310000	2084310394	2084310661	208491839223	208721274647	150
2054500000	2054500794	2054500341	205035262414	205292511845	150
2042500000	2042500553	2042500284	204187569450	204716796042	150
2013400000	2013400023	2013400021	201315912394	201381890187	150
2023400000	2023400183	2023400120	202433088725	202246491353	150
1990500000	1990500693	1990500887	199413042970	199565581103	150
2015400000	2015400446	2015400996	201770738984	201943981138	150
2015500000	2015500647	2015500934	201563439468	201549810931	150
2032400000	2032400088	2032400229	203743482108	203130772214	150
2004500000	2004500364	2004500863	200484176697	200598693109	150
2187410000	2187410669	2187410733	218205819467	218835147782	150
2228400000	2228400173	2228400155	222706445739	222294343595	150
2230500000	2230500816	2230500227	223857037748	223413913317	150
2224400000	2224400793	2224400125	222569687492	222153079186	150
2222400000	2222400948	2222400149	222366343519	222885919914	150
2235400000	2235400789	2235400227	223438118090	223068247729	150
2171600000	2171600218	2171600595	217354848449	217140711071	150
2172400000	2172400270	2172400634	217692709842	217213189523	150
2125400000	2125400593	2125400113	212446966946	212730525127	150
2352210000	2352210533	2352210503	235015724346	235551443083	150
2323610000	2323610017	2323610162	232648877060	232326889256	150
2334500000	2334500583	2334500176	233912435081	233027123187	150

2284310000	2284310383	2284310681	228394121231	228847925473	150
2297400000	2297400730	2297400858	229128968381	229290576243	150
2293500000	2293500211	2293500785	229174887358	229388288732	150
2294400000	2294400250	2294400818	229852896883	229337374247	150
2257400000	2257400298	2257400463	225388437085	225075869582	150
2454500000	2454500865	2454500380	245052899140	245319057456	150
2463400000	2463400285	2463400552	246500741042	246967828869	150
2464500000	2464500230	2464500480	246292155524	246501569935	150
2434500000	2434500603	2434500185	243296745877	243953823388	150
2443400000	2443400689	2443400355	244176792745	244860173751	150
2459400000	2459400976	2459400454	245389796701	245156352872	150
2413500000	2413500089	2413500019	241262010749	241516057648	150
2404400000	2404400600	2404400946	240355536374	240847898452	150
2394500000	2394500152	2394500760	239718530673	239543941672	150
2394800000	2394800751	2394800877	239017190080	239382219443	150
2411500000	2411500850	2411500038	241291813547	241551674504	150
2424500000	2424500410	2424500089	242444685097	242925063772	150
2388400000	2388400973	2388400754	238895588716	238228922709	150
2367400000	2367400476	2367400573	236967872036	236836004430	150
2367410000	2367410521	2367410556	236449232265	236097139379	150
2374400000	2374400090	2374400629	237453269738	237906376698	150
2571500000	2571500670	2571500643	257937153089	257114046022	150
2583400000	2583400121	2583400762	258145876586	258864365919	150
2583600000	2583600771	2583600720	258373609833	258386633706	150
2606400000	2606400764	2606400968	260887294534	260591774349	150
2563500000	2563500496	2563500519	256753973770	256482868456	150
2534500000	2534500620	2534500195	253629635319	253275247050	150
2525400000	2525400660	2525400155	252584397396	252633342134	150
2505400000	2505400361	2505400947	250631808335	250866482471	150
2535400000	2535400846	2535400259	253960394407	253137987145	150
2699400000	2699400497	2699400871	269391860515	269006763222	150
2693400000	2693400298	2693400869	269890152514	269593367339	150
2677700000	2677700117	2677700661	267666146930	267912507352	150
2729400000	2729400545	2729400188	272184477204	272008849682	150
2713700000	2713700329	2713700119	271584589962	271560348250	150
2637400000	2637400161	2637400306	263574967414	263624063140	150
2650500000	2650500001	2650500464	265490462875	265018019893	150
2625500000	2625500891	2625500107	262689154524	262427184286	150
2642500000	2642500671	2642500344	264609605639	264970324375	150
2672400000	2672400839	2672400684	267688781872	267324872325	150
2852500000	2852500588	2852500463	285535394303	285422471821	150
2815500000	2815500760	2815500026	281493394539	281838397735	150
2832400000	2832400094	2832400305	283288840238	283831851815	150
2835400000	2835400901	2835400290	283208126785	283399123788	150
2857400000	2857400399	2857400523	285491124655	285174829967	150
2832500000	2832500516	2832500264	283902595077	283897114124	150
2783400000	2783400156	2783400781	278653224214	278573237520	150

2783500000	2783500976	2783500734	278735213564	278561699795	150
2786400000	2786400885	2786400807	278840882637	278113366870	150
2759400000	2759400030	2759400482	275352874315	275064917544	150
2749400000	2749400862	2749400386	274443953695	274263222340	150
2765400000	2765400266	2765400581	276755327408	276766045276	150
2956400000	2956400553	2956400511	295809158476	295354257694	150
2972500000	2972500783	2972500674	297217031540	297357360655	150
2957410000	2957410454	2957410515	295184839967	295586159145	150
2924500000	2924500510	2924500138	292097685721	292222140972	150
2952500000	2952500606	2952500473	295111654535	295733184076	150
2931500000	2931500214	2931500285	293294327211	293325018443	150
2968400000	2968400814	2968400615	296126893432	296598432599	150
2889400000	2889400370	2889400790	288715812524	288754663370	150
3094400000	3094400218	3094400799	309782536448	309429041748	150
3097410000	3097410660	3097410824	309891718530	309873390800	150
3068400000	3068400613	3068400528	306434344361	306284309391	150
3104500000	3104500384	3104500874	310687255452	310890914895	150
3107400000	3107400003	3107400959	310551372932	310205084572	150
3070500000	3070500221	3070500603	307650336083	307010290213	150
3046400000	3046400206	3046400310	304982893520	304346299749	150
3055500000	3055500612	3055500345	305858770732	305728131095	150
3048400000	3048400386	3048400333	304693626316	304604596247	150
2984400000	2984400200	2984400788	298080201404	298538705996	150
3004400000	3004400535	3004400908	300144957146	300102511862	150
3021610000	3021610802	3021610158	302359566119	302731343039	150
3038400000	3038400318	3038400234	303218009690	303096692403	150
2991500000	2991500017	2991500874	299078111899	299383375591	150
3024500000	3024500158	3024500051	302013705008	302760701046	150
2993500000	2993500344	2993500853	299807213832	299420654584	150
3009400000	3009400182	3009400922	300015478723	300961979654	150
2997400000	2997400847	2997400926	299310372129	299503359749	150
2994500000	2994500476	2994500820	299788709895	299933722357	150
3202400000	3202400787	3202400953	320903622974	320361564217	150
3218400000	3218400052	3218400056	321934657885	321022186539	150
3221500000	3221500990	3221500118	322175203742	322329548493	150
3192500000	3192500855	3192500792	319853316262	319804806502	150
3208400000	3208400896	3208400957	320762230346	320408951047	150
3194410000	3194410107	3194410822	319204300740	319395459768	150
3197400000	3197400715	3197400850	319222517977	319960986249	150
3216400000	3216400810	3216400029	321459760612	321567985770	150
3166400000	3166400588	3166400533	316512061104	316034859594	150
3131500000	3131500067	3131500208	313499944915	313094895389	150
3138400000	3138400338	3138400244	313694153531	313765846247	150
3154400000	3154400720	3154400412	315409306406	315006179523	150
3148400000	3148400402	3148400343	314752267286	314625200564	150
3127400000	3127400069	3127400159	312672832313	312563209861	150
3316400000	3316400823	3316400039	331433708103	331892926753	150

3317400000	3317400184	3317400081	331294673700	331125255699	150
3350500000	3350500952	3350500435	335155842784	335669213444	150
3307400000	3307400032	3307400981	330757226960	330120153724	150
3326400000	3326400987	3326400138	332602305947	332371956693	150
3336400000	3336400093	3336400236	333339613267	333230975508	150
3354700000	3354700464	3354700458	335722998912	335846467066	150
3329400000	3329400488	3329400149	332968080705	332869254648	150
3300500000	3300500463	3300500942	330534652249	330139629338	150
3282400000	3282400943	3282400743	328245804673	328417815767	150
3292400000	3292400261	3292400843	329816975694	329527043053	150
3287410000	3287410688	3287410744	328816151897	328714901588	150
3287700000	3287700540	3287700720	328147052331	328147145822	150
3238400000	3238400356	3238400254	323507582301	323084626524	150
3254700000	3254700445	3254700448	325342169842	325344411586	150
3234500000	3234500567	3234500168	323025661313	323560234910	150
3293400000	3293400238	3293400830	329039072409	329055385508	150
3293500000	3293500213	3293500786	329933096277	329676401303	150
3231500000	3231500085	3231500218	323947187644	323158668474	150
3458610000	3458610359	3458610412	345446080559	345300189433	150
3468400000	3468400720	3468400566	346908577075	346724021806	150
3405400000	3405400345	3405400938	340794454737	340953521310	150
3382500000	3382500714	3382500715	338440992913	338809874213	150
3383400000	3383400088	3383400743	338182899028	338561974778	150
3387510000	3387510490	3387510811	338417176061	338141494728	150
3410500000	3410500660	3410500051	341176230473	341858532087	150
3580500000	3580500511	3580500751	358413220915	358338004470	150
3584400000	3584400274	3584400749	358157849104	358622818734	150
3574500000	3574500427	3574500584	357812456853	357919048987	150
3565400000	3565400234	3565400562	356794188898	356035170498	150
3538400000	3538400407	3538400284	353426003684	353246902606	150
3522400000	3522400001	3522400180	352090909649	352520701154	150
3508410000	3508410896	3508410974	350539639890	350921878717	150
3525500000	3525500877	3525500098	352637999935	352357515785	150
3545400000	3545400966	3545400363	354561198241	354764185712	150
3504400000	3504400614	3504400957	350308109381	350447598163	150
3713400000	3713400134	3713400092	371537756160	371438374139	150
3725400000	3725400702	3725400177	372302475731	372932671109	150
3725710000	3725710618	3725710109	372742807127	372187910486	150
3684500000	3684500040	3684500692	368860604118	368242646015	150
3704400000	3704400645	3704400977	370240850636	370080933465	150
3714400000	3714400719	3714400077	371821079608	371639563153	150
3671500000	3671500568	3671500654	367999778848	367545101611	150
3652400000	3652400001	3652400484	365553101254	365173775044	150
3618400000	3618400116	3618400096	361942525863	361252709348	150
3653400000	3653400893	3653400475	365611412039	365713056385	150
3613400000	3613400120	3613400082	361679261284	361139843740	150
3802400000	3802400891	3802400012	380027447939	380347974647	150

3846400000	3846400370	3846400393	384368580329	384531491223	150
3854500000	3854500934	3854500421	385375740201	385167548376	150
3792500000	3792500961	3792500852	379101964420	379930664573	150
3740500000	3740500942	3740500375	374319451409	374173425112	150
3794400000	3794400338	3794400869	379643661451	379843379523	150
3950500000	3950500096	3950500494	395366454941	395248489881	150
3935400000	3935400857	3935400301	393719241676	393374389303	150
3959400000	3959400069	3959400503	395476313417	395650143741	150
3984500000	3984500087	3984500722	398128880636	398825680498	150
3982400000	3982400054	3982400813	398398908424	398439989630	150
3955700000	3955700743	3955700506	395229255050	395622299215	150
3926400000	3926400027	3926400197	392314043331	392807005874	150
3938400000	3938400472	3938400323	393465367647	393573219502	150
3904500000	3904500961	3904500947	390248772425	390663858460	150
3897700000	3897700786	3897700879	389560041132	389495135519	150
3884500000	3884500073	3884500712	388292201571	388257949357	150
3901500000	3901500764	3901500989	390449730669	390821247019	150
3891500000	3891500000	3891500865	389477697768	389815132902	150
3894500000	3894500463	3894500811	389066509402	389510781611	150
4054700000	4054700406	4054700429	405597406165	405149753734	150
4083500000	4083500860	4083500668	408665385067	408326411626	150
4042400000	4042400131	4042400326	404148008442	404474300165	150
4047400000	4047400228	4047400346	404288755240	404310552783	150
4093400000	4093400208	4093400812	409325036597	409139760989	150
4069400000	4069400086	4069400514	406964963670	406353546433	150
4094310000	4094310531	4094310762	409039079872	409605862458	150
3987410000	3987410641	3987410813	398922094892	398914862582	150
3987700000	3987700677	3987700790	398659171774	398562002092	150
4210500000	4210500626	4210500032	421082786767	421795992993	150
4165400000	4165400173	4165400523	416308900125	416024136350	150
4164400000	4164400880	4164400512	416809173540	416288875255	150
4198400000	4198400120	4198400835	419627207000	419746350326	150
4209510000	4209510207	4209510995	420768396795	420505786109	150
4219400000	4219400316	4219400042	421347989399	421329164653	150
4173500000	4173500707	4173500581	417767414114	417755174741	150
4103400000	4103400411	4103400934	410744053899	410660758913	150
4322400000	4322400970	4322400161	432857022591	432822457668	150
4136400000	4136400060	4136400218	413109437471	413145620080	150
4123400000	4123400203	3123400131	412763074538	412638339980	150
4152410000	4152410192	4152410437	415201504014	415822381807	150
4124610000	4124610946	4124610137	412348483770	412790656058	150
4156400000	4156400424	4156400427	415040122385	415005010127	150
4309400000	4309400237	4309400953	430872422781	430179321364	150
4312400000	4312400976	3312400062	431096037186	431615292809	150
4294800000	4294800740	4294800869	429764152918	429101529156	150
4344400000	4344400003	4344400334	434943129271	434477913047	150
4301500000	4301500762	4301500930	430069207026	430665159763	150

4323700000	4323700425	4323700178	432502024687	432481278067	150
4279410000	4279410104	4279410628	427435458510	427218079447	150
4257500000	4257500331	4257500368	425988143412	425663319382	150
4259400000	4259400947	4259400437	425161006039	425293732518	150
4261500000	4261500430	4261500515	426604688692	426626513830	150
4232500000	4232500409	4232500205	423689812179	423519321846	150
4255500000	4255500643	4255500367	425533004624	425399070028	150
4253400000	4253400825	4253400436	425730023801	425948944667	150
4426500000	4426500696	4426500103	442069626994	442679871406	150
4458400000	4458400641	4458400470	445921255852	445767991396	150
4444500000	4444500694	4444500285	444554533747	444707111493	150
4431500000	4431500125	4431500238	443131594998	443707704715	150
4440500000	4440500895	4440500346	444779408127	444255236185	150
4456700000	4456700903	4456700446	445525387022	445260233313	150
4438400000	4438400393	4438400275	443410409315	443941884862	150
4457400000	4457400334	4457400485	445972010305	445841132802	150
4393400000	4393400258	4393400841	439092229775	439819520469	150
4391500000	4391500898	4391500816	439087957771	439845769532	150
4564400000	4564400944	4564400552	456988237667	456768247524	150
4558400000	4558400657	4558400480	455151230582	455891204247	150
4567400000	4567400514	4567400595	456106648350	456282487614	150
4568500000	4568500511	4568500516	456193626511	456724821435	150
4577400000	4577400543	4577400694	457411807477	457048256155	150
4565710000	4565710007	4565710485	456387812788	456323818097	150
4543400000	4543400711	4543400367	454455443216	454985041086	150
4587400000	4587400718	4587400792	458092825526	458328267829	150
4484310000	4484310422	4484310702	448483503939	448611087281	150
4476400000	4476400751	4476400670	447376527203	447608030565	150
4469500000	4469500678	4469500528	446312269326	446890777736	150
4494500000	4494500402	4494500772	449091198212	449819952862	150
4473400000	4473400446	4473400654	447890677383	447001716200	150
4502400000	4502400837	4502400984	450172564657	450202266251	150
4683400000	4683400140	4683400773	468477679181	468720758326	150
4710500000	4710500585	4710500081	471011829405	471449979801	150
4715400000	4715400569	4715400073	471123988029	471395489719	150
4594800000	4594800781	4594800900	459586601684	459479147620	150
4600500000	4600500512	4600500973	460838720210	460766772852	150
4615500000	4615500729	4615500006	461372214264	461096306116	150
4634400000	4634400893	4634400266	463459696420	463942669607	150
4609400000	4609400283	4609400982	460471557772	460000626355	150
4595400000	4595400585	4595400861	459900580349	459040728310	150
4607400000	4607400083	4607400012	460983138656	460106500401	150
4807400000	4807400114	4807400032	480850458401	480775448341	150
4815400000	4815400588	4815400085	481824107182	481992795433	150
4817400000	4817400029	4817400130	481858590321	481775397878	150
4834500000	4834500677	4834500227	483928520474	483612829924	150
4829400000	4829400616	4829400200	482378075638	482214612513	150

4784800000	4784800667	4784800820	478448841036	478234788718	150
4767400000	4767400548	4767400615	476109742481	476810254632	150
4719400000	4719400393	4719400092	471200525292	471881698090	150
4720500000	4720500742	4720500179	472299180647	472789002351	150
4744500000	4744500745	4744500314	474166338761	474320775247	150
4927400000	4927400189	4927400238	492681500318	492986483013	150
4923500000	4923500224	4923500168	492492744807	492037809501	150
4929400000	4929400635	4929400209	492869676140	492547346799	150
4939400000	4939400804	4939400308	493117774576	493219984085	150
4915500000	4915500778	4915500039	491952386727	491354570570	150
4908400000	4908400003	4908400027	490997833808	490738482453	150
4934400000	4934400938	4934400294	493596197526	493413561473	150
4922400000	4922400073	4922400221	492172699201	492248715785	150
4904400000	4904400679	4904400998	490833621427	490234972481	150
4882600000	4882600824	4882600758	488646398584	488500677210	150
4902400000	4902400910	4902400023	490873742577	490728855431	150
4845400000	4845400018	4845400394	484819306490	484654993724	150
4903400000	4903400011	4903400013	490334272155	490704335282	150
4844400000	4844400093	4844400384	484140277203	484985300998	150
4873400000	4873400504	4873400694	487077820861	487360544021	150
4852400000	4852400038	4852400505	485765623542	485377985346	150
5059400000	5059400913	5059400419	505930763157	505069200358	150
5062400000	5062400076	5062400526	506246674294	506894312131	150
5025400000	5025400627	5025400105	502169272252	502758370433	150
5043500000	5043500636	5043500277	504271481917	504677095806	150
5008700000	5008700826	5008700901	500024318953	500321468068	150
5014500000	5014500983	5014500959	501810080801	501394506795	150
4971500000	4971500628	4971500684	497362743600	497905713579	150
4964400000	4964400028	4964400591	496743387120	496358086747	150
5194310000	5194310552	5194310773	519111846280	519561276829	150
5194500000	5194500125	5194500744	519357573057	519295347697	150
5182400000	5182400928	5182400735	518339174030	518451135888	150
5197410000	5197410681	5197410836	519983632501	519087494516	150
5199400000	5199400423	5199400823	519148731674	519998126545	150
5199400000	5199400423	5199400823	519318299952	519009340101	150
5199400000	5199400423	5199400823	519055177162	519009340101	150
5157400000	5157400284	5157400456	515871460715	515765938292	150
5205310000	5205310849	5205310883	520235339343	520440688931	150
5160500000	5160500130	5160500516	516818968928	516318235711	150
5193600000	5193600901	5193600783	519333162453	519849735692	150
5152210000	5152210501	5152210486	515641280168	515354500437	150
5133400000	5133400564	5133400231	513920900958	513585070515	150
5136610000	5136610473	5136610214	513890036408	513136311574	150
5147400000	5147400247	5147400356	514870646278	514329653795	150
5094800000	5094800710	5094800851	509266387002	509768720368	150
5102500000	5102500066	5102500897	510650133059	510686817680	150
5122400000	5122400934	5122400142	512873195027	512380708797	150

5314500000	5314500039	5314500988	531863666904	531546850190	150
5325500000	5325500847	5325500080	532191130577	532275217352	150
5287510000	5287510477	5287510803	528681740805	528362322630	150
5273500000	5273500727	5273500592	527688980980	527592250345	150
5305400000	5305400330	5305400930	530919696844	530375421658	150
5211500000	5211500823	5211500021	521739070726	521386432344	150
5419400000	5419400347	5419400063	541306469596	541208999039	150
5436610000	5436610519	5436610242	543567996186	543164529151	150
5407400000	5407400051	5407400994	540582001647	540901606296	150
5406400000	5406400736	5406400951	540332535906	540417494001	150
5413400000	5413400091	5413400064	541202753467	541217520573	150
5426400000	5426400004	5426400150	542885618735	542030147014	150
5457500000	5457500368	5457500389	545098391951	545329700188	150
5339400000	5339400703	5339400250	533872320046	533277070953	150
5348400000	5348400443	5348400365	534737783690	534004188255	150
5351500000	5351500394	5351500426	535706275837	535467808818	150
5354500000	5354500854	5354500373	535648566997	535669181926	150
5334400000	5334400845	5334400237	533339045483	533070314063	150
5392600000	5392600827	5392600809	539154816269	539844975044	150
5573400000	5573400460	5573400665	557740814615	557576590036	150
5573500000	5573500779	5573500621	557069480770	557565197955	150
5544400000	5544400042	5544400355	554583765923	554394282905	150
5574400000	5574400125	5574400652	557161118351	557323655490	150
5546400000	5546400324	5546400364	554743091848	554136460360	150
5568400000	5568400742	5568400578	556928756321	556795979711	150
5534400000	5534400877	5534400257	553288790415	553616265192	150
5556400000	5556400493	5556400471	555205281205	555603729584	150
5523700000	5523700462	5523700198	552883947862	552345986023	150
5572400000	5572400829	5572400677	557296895848	557367375885	150
5505500000	5505500573	5505500884	550325360788	550851533493	150
5512500000	5512500220	5512500034	551088071082	551288906646	150
5471500000	5471500655	5471500636	547927840720	547943350415	150
5474400000	5474400109	5474400642	547072836682	547959139116	150
5492600000	5492600848	5492600819	549725046979	549167792213	150
5519400000	5519400361	5519400073	551072308971	551273052029	150
5504500000	5504500458	5504500912	550876040537	550344472255	150
5693500000	5693500291	5693500827	569202838467	569923951272	150
5662500000	5662500570	5662500546	566455102961	566432357381	150
5627400000	5627400149	5627400209	562168812864	562333636312	150
5588400000	5588400012	5588400776	558956585064	558560826740	150
5615400000	5615400552	5615400064	561745050349	561013740119	150
5631500000	5631500167	5631500259	563250083554	563401019222	150
5644500000	5644500734	5644500305	564541321209	564233454667	150
5644700000	5644700330	5644700393	564772420916	564689427939	150
5635410000	5635410472	5635410277	563117294232	563821798884	150
5626400000	5626400033	5626400169	562268690792	562269437853	150
5799400000	5799400515	5799400884	579604511801	579049014087	150

5784500000	5784500060	5784500704	578014768933	578434496232	150
5784600000	5784600675	5784600737	578027393694	578965169416	150
5813400000	5813400154	5813400104	581613864929	581058825050	150
5794500000	5794500451	5794500803	579108657680	579759145168	150
5784400000	5784400175	5784400771	578372737845	578492788805	150
5736400000	5736400161	5736400280	573996258175	573006379956	150
5725500000	5725500915	5725500120	572550714611	572860964785	150
5728400000	5728400268	5728400206	572873277062	572314828269	150
5751500000	5751500472	5751500467	575163128540	575318396202	150
5761500000	5761500524	5761500566	576041754658	576547913018	150
5932400000	5932400116	5932400317	593822594239	593445568680	150
5894800000	5894800828	5894800934	589355541534	589005353666	150
5897410000	5897410787	5897410905	589465857330	589635693379	150
5856400000	5856400540	5856400503	585924127463	585161127233	150
5884400000	5884400188	5884400781	588667284220	588030040930	150
5837400000	5837400200	5837400327	583508224930	583582774529	150
5857500000	5857500429	5857500430	585676160264	585520062529	150
5848400000	5848400533	5848400413	584110541754	584144886332	150
6040500000	6040500833	6040500308	604995876546	604544385781	150
6026400000	6026400943	6026400111	602327519731	602744669869	150
6024500000	6024500167	6024500054	602382195510	602340314589	150
6017400000	6017400144	6017400054	601134919678	601082920186	150
6034400000	6034400921	6034400208	603172239702	603237721871	150
5995400000	5995400654	5995400901	599492240209	599894080914	150
5999400000	5999400403	5999400904	599339253086	599363825457	150
5954400000	5954400848	5954400493	595764781133	595357875490	150
5994400000	5994400373	5994400891	599529890753	599269338400	150
6010500000	6010500594	6010500014	601455058580	601215747095	150
6149400000	6149400834	6149400330	614324791295	614573355533	150
6183400000	6183400057	6183400726	618198659940	618836278378	150
6159400000	6159400933	6159400430	615661990301	615023854587	150
6143500000	6143500657	6143500288	614447952816	614746826898	150
6192600000	6192600786	6192600790	619384639538	619858847492	150
6168400000	6168400654	6168400540	616938637733	616389823305	150
6162500000	6162500651	6162500497	616612996439	616176718752	150
6169400000	6169400104	6169400526	616037559459	616597816979	150
6169500000	6169500634	6169500500	616551948959	616438624597	150
6179400000	6179400189	6179400625	617297002055	617835389782	150
6142500000	6142500581	6142500298	614932128118	614256079358	150
6111500000	6111500806	6111500012	611131937285	611180264885	150
6128400000	6128400208	6128400149	612436859746	612324364193	150
6114400000	6114400715	6114400020	611296648027	611386683916	150
6075400000	6075400322	6075400615	607905730335	607355675499	150
6119400000	6119400302	6119400034	611000412785	611002932034	150
6092600000	6092600866	6092600780	609890283162	609507231472	150
6304400000	6304400590	6304400940	630282402866	630126711280	150
6314400000	6314400751	6314400040	631390938832	631821078044	150

6314500000	6314500041	6314500989	631439183650	631701733948	150
6320500000	6320500681	6320500142	632480987612	632516710071	150
6296400000	6296400965	6296400864	629294015762	629814802727	150
6291500000	6291500999	6291500808	629390461427	629076318556	150
6245400000	6245400917	6245400336	624455609052	624900626765	150
6256400000	6256400444	6256400440	625365745545	625662428201	150
6208410000	6208410855	6208410947	620310787476	620540373624	150
6204500000	6204500407	6204500886	620950238055	620822265003	150
6244500000	6244500660	6244500268	624762992075	624671228288	150
6227400000	6227400090	6227400172	622656000894	622453869535	150
6423610000	6423610044	6423610176	642160708475	642535576284	150
6425500000	6425500866	6425500091	642599000605	642235413485	150
6392400000	6392400285	6392400856	639407837416	639315719498	150
6387410000	6387410709	6387410757	638115266473	638969968392	150
6330500000	6330500836	6330500241	633875884130	633702813810	150
6349610000	6349610304	6349610295	634605218216	634896714848	150
6373500000	6373500747	6373500603	637882836991	637832973145	150
6554500000	6554500888	6554500394	655677165888	655673802138	150
6548400000	6548400483	6548400384	654699818908	654777002264	150
6557400000	6557400353	6557400497	655530723174	655373680842	150
6558610000	6558610378	6558610425	655794406981	655504715293	150
6513700000	6513700301	6513700103	651202813854	651232448332	150
6563400000	6563400307	6563400566	656834919417	656420743068	150
6456710000	6456710831	6456710398	645813252879	645349722657	150
6481500000	6481500727	6481500735	648848563934	648081575542	150
6486510000	6486510401	6486510824	648296771176	648337975898	150
6445400000	6445400954	6445400356	644533127349	644962268655	150
6487400000	6487400703	6487400784	648452071179	648070143001	150
6449610000	6449610320	6449610305	644540509598	644023767519	150
6649610000	6649610355	6649610325	664227282871	664971220571	150
6666400000	6666400613	6666400590	666246279796	666223322465	150
6682400000	6682400011	6682400786	668794029825	668908942445	150
6684400000	6684400159	6684400762	668189970933	668087270813	150
6678400000	6678400849	6678400689	667528505444	667205902043	150
6629400000	6629400537	6629400182	662638437986	662173975354	150
6632400000	6632400196	6632400292	663877556239	663197517940	150
6648400000	6648400500	6648400394	664386689139	664065811405	150
6654400000	6654400802	6654400465	665044862550	665051161159	150
6689400000	6689400345	6689400774	668748346033	668980033510	150
6584500000	6584500028	6584500685	658475691185	658711594324	150
6614400000	6614400707	6614400070	661478265440	661367025988	150
6614500000	6614500094	6614500016	661931997084	661948036946	150
6601500000	6601500722	6601500962	660001152712	660017739568	150
6612500000	6612500241	6612500045	661928514296	661828986056	150
6764500000	6764500292	6764500511	676002201218	676240945603	150
6793500000	6793500312	6793500838	679953089837	679673166247	150
6805500000	6805500622	6805500915	680781147043	680205011271	150

6754400000	6754400817	6754400474	675133433553	675680374274	150
6783600000	6783600823	6783600744	678567150028	678578135528	150
6772500000	6772500757	6772500658	677169879160	677119486386	150
6782500000	6782500793	6782500757	678081243822	678021681348	150
6733400000	6733400660	6733400290	673840457948	673449741990	150
6743400000	6743400744	6743400389	674220492478	674805457369	150
6723500000	6723500191	6723500150	672251809642	672027118491	150
6692400000	6692400337	6692400886	669337369231	669079376175	150
6716400000	6716400897	6716400081	671166068205	671029745503	150
6707400000	6707400103	6707400024	670723837525	670872601344	150
6913400000	6913400172	6913400114	691511557403	691902153873	150
6876400000	6876400814	6876400716	687628391903	687355860675	150
6886400000	6886400906	6886400822	688101841933	688406324708	150
6861500000	6861500545	6861500577	686445752833	686417299892	150
6844500000	6844500766	6844500326	684741255496	684572149301	150
6862400000	6862400225	6862400607	686828046769	686705902691	150
6853400000	6853400936	6853400496	685460375624	685599725878	150
6853500000	6853500375	6853500456	685893321460	685714753373	150
7015400000	7015400456	7015400002	701870715293	701711770453	150
7015500000	7015500654	7015500940	701081217253	701279269693	150
7052210000	7052210488	7052210478	705588585463	705643081156	150
7052500000	7052500446	7052500389	705929920947	705697970464	150
7024400000	7024400768	7024400110	702377213074	702080233195	150
7019400000	7019400289	7019400025	701404318472	701666288770	150
7054500000	7054500803	7054500346	705542529505	705361533882	150
6991400000	6991400918	6991400926	699511549068	699373315013	150
6987400000	6987400685	6987400833	698220006808	698757499256	150
6958400000	6958400600	6958400521	695389142242	695477346965	150
7166700000	7166700024	7166700519	716737576183	716491432663	150
7167400000	7167400456	7167400558	716195211526	716632588063	150
7125400000	7125400601	7125400118	712559172499	712733914942	150
7162400000	7162400101	7162400538	716916501251	716519498705	150
7121610000	7121610831	7121610172	712872167999	712134231629	150
7123500000	7123500087	7123500092	712742348107	712059636738	150
7115400000	7115400472	7115400012	711784140969	711826915666	150
7115500000	7115500668	7115500952	711234710003	711016600228	150
7094500000	7094500108	7094500736	709823034723	709467041420	150
7085400000	7085400384	7085400716	708353960251	708686662530	150
7292500000	7292500878	7292500806	729616990850	729396593797	150
7298400000	7298400045	7298400847	729899062864	729110633229	150
7287400000	7287400668	7287400765	728520057655	728822303043	150
7299400000	7299400443	7299400836	729467141433	729869240561	150
7246400000	7246400251	7246400336	724052726758	724536322467	150
7207400000	7207400023	7207400975	720311857879	720948141797	150
7202400000	7202400794	7202400957	720785625859	720007645384	150
7182500000	7182500824	7182500699	718175802440	718012730714	150
7208400000	7208400902	7208400961	720367950851	720895038415	150

7222610000	7222610265	7222610170	722357085862	722006825422	150
7225500000	7225500835	7225500072	722746345234	722281747257	150
7386510000	7386510385	7386510815	738654953033	738576611023	150
7421800000	7421800677	7421800122	742638120588	742632000381	150
7422500000	7422500401	7422500127	742050120115	742899422729	150
7397400000	7397400758	7397400873	739684659819	739996537836	150
7342400000	7342400186	7342400359	734495053758	734930064750	150
7332400000	7332400145	7332400264	733883347564	733632806300	150
7332500000	7332500433	7332500218	733200745067	733376020387	150
7338400000	7338400382	7338400268	733389663544	733466229016	150
7323400000	7323400240	7323400154	732226023267	732028163532	150
7352400000	7352400357	7352400458	735569902504	735107178825	150
7355500000	7355500664	7355500380	735618291893	735867730282	150
7514400000	7514400693	7514400061	751039191222	751817221077	150
7514500000	7514500077	7514500007	751916220569	751430861302	150
7450500000	7450500976	7450500449	745555484690	745491334970	150
7483400000	7483400112	7483400757	748986067864	748083083236	150
7447400000	7447400291	7447400388	744996837148	744129624400	150
7432400000	7432400160	7432400274	743294303792	743116494617	150
7475400000	7475400289	7475400656	747655893481	747249888242	150
7472400000	7472400816	7472400669	747905699569	747801937528	150
7443500000	7443500704	7443500318	744119666350	744309568822	150
7488400000	7488400000	7488400769	748564747341	748404922633	150
7625400000	7625400688	7625400170	762619150043	762755420746	150
7626500000	7626500732	7626500126	762098218673	762046739872	150
7664500000	7664500276	7664500503	766668306594	766131066140	150
7635400000	7635400875	7635400274	763076520478	763268233753	150
7628400000	7628400253	7628400198	762454149460	762571835217	150
7656400000	7656400511	7656400484	765909283445	765742685612	150
7636400000	7636400145	7636400272	763366975847	763286304335	150
7598400000	7598400101	7598400877	759778890521	759190551507	150
7604500000	7604500916	7604500923	760086057142	760606277894	150
7569400000	7569400091	7569400567	756495592522	756709447741	150
7578400000	7578400833	7578400680	757044973486	757980169787	150
7596400000	7596400017	7596400897	759530614362	759470183651	150
7579400000	7579400259	7579400665	757843863986	757731265319	150
7567410000	7567410563	7567410581	756307230157	756256695029	150
7586510000	7586510425	7586510835	758085720615	758119710520	150
7612400000	7612400036	7612400094	761352066301	761756871787	150
7603500000	7603500965	7603500945	760130596059	760929097678	150
7763500000	7763500537	7763500544	776795751114	776438526521	150
7754500000	7754500922	7754500415	775380397143	775330938638	150
7792400000	7792400354	7792400897	779671062542	779262691075	150
7741500000	7741500277	7741500368	774210593633	774598955388	150
7715500000	7715500751	7715500020	771311367859	771507979185	150
7691400000	7691400876	7691400897	769132615109	769197100183	150
7673500000	7673500800	7673500632	767223226579	767632705890	150

7875400000	7875400352	7875400696	787745363480	787313549843	150
7827610000	7827610528	7827610171	782059605769	782368166640	150
7815500000	7815500768	7815500032	781407072592	781466288816	150
7884500000	7884500079	7884500716	788890844319	788498131189	150
7834400000	7834400928	7834400289	783390804771	783459589379	150
7874600000	7874600261	7874600650	787737115910	787838598096	150
7826500000	7826500763	7826500146	782181287102	782526276684	150
7881500000	7881500895	7881500772	788871818274	788871182930	150
7814500000	7814500130	7814500036	781564916186	781779599267	150
7909400000	7909400335	7909400015	790620086582	790015411150	150
7867400000	7867400435	7867400627	786242671878	786749988448	150
7803500000	7803500999	7803500965	780359098848	780986408952	150
7804400000	7804400666	7804400991	780617046313	780061924960	150
7871500000	7871500612	7871500677	787769130118	787609254496	150
8022400000	8022400921	8022400135	802963199025	802368793402	150
8022500000	8022500322	8022500088	802994378836	802004605048	150
7960500000	7960500213	7960500597	796219330716	796715245438	150
7925400000	7925400743	7925400202	792351629150	792321947161	150
7997410000	7997410806	7997410917	799521331301	799294354064	150
7953500000	7953500392	7953500467	795921669631	795450821772	150
8039400000	8039400658	8039400223	803990293940	803226308462	150
8001500000	8001500719	8001500904	800805657755	800230685795	150
7973500000	7973500849	7973500661	797482909565	797061624469	150
7926500000	7926500777	7926500156	792203036979	792383032441	150
7974400000	7974400190	7974400694	797279909759	797840999595	150
8055500000	8055500618	8055500350	805350716380	805994432332	150
8155400000	8155400082	8155400427	815992145578	815847907995	150
8151500000	8151500357	8151500409	815107724492	815727105452	150
8134400000	8134400939	8134400220	813191023589	813332601498	150
8152500000	8152500467	8152500400	815635147428	815635807678	150
8125500000	8125500819	8125500063	812401902011	812453317603	150
8083400000	8083400044	8083400718	808348193348	808113289680	150
8142400000	8142400152	8142400340	814237131462	814501292325	150
8074500000	8074500341	8074500539	807115474321	807480056706	150
8144500000	8144500645	8144500260	814927239166	814283477828	150
8062500000	8062500632	8062500489	806452449176	806112795422	150
8136610000	8136610478	8136610217	813194948533	813376915328	150
8108700000	8108700846	8108700914	810281958894	810103260223	150
8110610000	8110610426	8110610084	811403455118	811611747353	150
8082400000	8082400917	8082400728	808271882258	808346112707	150
8082500000	8082500809	8082500690	808827207316	808916959946	150
8214400000	8214400736	8214400032	821593455404	821385991416	150
8255400000	8255400100	8255400437	825134927779	825880137583	150
8205500000	8205500531	8205500857	820183264940	820631104291	150
8222500000	8222500360	8222500108	822188978889	822472041154	150
8236610000	8236610495	8236610227	823862851219	823634232754	150
8224400000	8224400802	8224400131	822717263876	822117495911	150

8284500000	8284500977	8284500659	828019469123	828422319555	150
8174400000	8174400068	8174400615	817299622613	817181892237	150
8223400000	8223400226	8223400145	822522200431	822417431449	150
8269500000	8269500650	8269500512	826546082569	826013277106	150
8295400000	8295400540	8295400835	829418906391	829986481938	150
8413500000	8413500099	8413500025	841483419312	841507657977	150
8333400000	8333400600	8333400252	833078743644	833887311327	150
8319400000	8319400338	8319400056	831988645397	831746791966	150
8402500000	8402500128	8402500930	840958308074	840753321873	150
8335400000	8335400821	8335400245	833826267976	833266809749	150
8324610000	8324610883	8324610160	832274050323	832332254389	150
8322500000	8322500382	8322500118	832843181975	832120754872	150
8397410000	8397410716	8397410858	839575512345	839699848762	150
8384400000	8384400250	7384400734	838528915512	838438476150	150
8303400000	8303400448	8303400958	830910829055	830121677302	150
8303500000	8303500916	8303500916	830295330172	830599719343	150
8532400000	8532400180	8532400284	853136632326	853823898698	150
8430500000	8430500744	8430500251	843917985323	843940759016	150
8536610000	8536610538	8536610255	853631873770	853937639254	150
8425400000	8425400654	8425400151	842989758387	842320056340	150
8433400000	8433400617	8433400262	843654983673	843754727266	150
8521500000	8521500977	8521500153	852107869547	852107988795	150
8653500000	8653500342	8653500438	865457664921	865282028944	150
8574500000	8574500438	8574500589	857928451840	857604509203	150
8561500000	8561500491	8561500549	856626358829	856678223518	150
8594500000	8594500427	8594500786	859582007806	859100356284	150
8611500000	8611500894	8611500064	861855414643	861092325179	150
8587700000	8587700613	8587700755	858183844318	858858618331	150
8643500000	8643500741	8643500338	864959642040	864632260813	150
8684310000	8684310464	8684310726	868625553213	868365395453	150
8775400000	8775400338	8775400687	877086210311	877872953559	150
8682500000	8682500778	8682500749	868549007496	868673057359	150
8722400000	8722400048	8722400205	872084194164	872716158537	150
8693400000	8693400309	8693400875	869378761794	869911138221	150
8748400000	8748400521	8748400406	874283501815	874771478326	150
8784310000	8784310481	8784310736	878579127478	878381495559	150
8712400000	8712400053	8712400105	871791934762	871772049812	150
8755400000	8755400112	8755400487	875740391451	875812529830	150
8741500000	8741500279	8741500369	874423520749	874968882894	150
8673400000	8673400478	8673400678	867319935043	867196183022	150
8787410000	8787410782	8787410798	878785911569	878959800570	150
8832500000	8832500525	8832500270	883186355795	883568455130	150
8883600000	8883600848	8883600756	888241855923	888828340282	150
8812400000	8812400070	8812400115	881671731738	881611872536	150
8912500000	8912500304	8912500078	891508693258	891098574031	150
8802500000	8802500203	8802500969	880359626544	880780439732	150
8846400000	8846400379	8846400399	884101566015	884437471388	150

8862500000	8862500611	8862500569	886144454356	886354090797	150
8833500000	8833500606	8833500260	883146018878	883368720880	150
8821800000	8821800747	8821800168	882954192856	882166127359	150
9044400000	9044400961	9044400309	904139104649	904174781990	150
9005400000	9005400396	9005400904	900091240166	900115876367	150
8977410000	8977410647	8977410719	897703151533	897691561054	150
8947500000	8947500294	8947500342	894288756069	894450150507	150
8979400000	8979400322	8979400706	897475600061	897380733202	150
9037400000	9037400213	9037400253	903007835240	903817644588	150
9025500000	9025500803	9025500054	902372850098	902456157013	150
8972400000	8972400904	8972400719	897103774498	897146589279	150
8974500000	8974500924	8974500630	897967547742	897946846776	150
9045400000	9045400887	9045400318	904315681145	904475878368	150
9020500000	9020500643	9020500116	902712165420	902017726286	150
9006400000	9006400677	9006400915	900683612811	900351661606	150
8948400000	8948400556	8948400426	894244025813	894689296824	150
9008410000	9008410828	9008410929	900468576906	900046525697	150
8967400000	8967400452	8967400638	896364940644	896435855752	150
9055400000	9055400064	9055400419	905150479364	905875050032	150
9055500000	9055500620	9055500351	905093993655	905243211657	150
9150500000	9150500928	9150500420	915309009133	915879722063	150
9124500000	9124500190	9124500066	912119598026	912057151445	150
9101500000	9101500739	9101500915	910858465018	910092569829	150
9105400000	9105400413	9105400914	910659724374	910297648802	150
9167410000	9167410500	9167410542	916683147134	916203297701	150
9132400000	9132400115	9132400246	913667957796	913016801651	150
9124810000	9124810468	9124810189	912955405431	912148345307	150
9077400000	9077400469	9077400649	907993933391	907072954392	150
9166400000	9166400600	9166400540	916115242428	916283844291	150
9094500000	9094500112	9094500738	909331126223	909882411217	150
9272400000	9272400301	9272400651	927852260225	927180130532	150
9274500000	9274500382	9274500560	927434038986	927881891128	150
9283400000	9283400079	9283400739	928599131379	928239679403	150
9269400000	9269400124	9269400539	926055016199	926994542630	150
9176400000	9176400698	9176400646	917444322421	917359943683	150
9205400000	9205400429	9205400924	920326945253	920457709815	150
9178400000	9178400867	9178400642	917379805222	917258016478	150
9235610000	9235610765	9235610241	923856276133	923292372269	150
9264500000	9264500206	9264500467	926137151347	926535758859	150
9213400000	9213400066	9213400048	921936860304	921314042000	150
9415500000	9415500705	9415500987	941381669799	941759626105	150
9310610000	9310610462	9310610105	931199896431	931442364076	150
9379400000	9379400227	9379400648	937555862526	937865512374	150
9365400000	9365400214	9365400548	936627284182	936666510059	150
9308400000	9308400923	9308400973	930333336131	930304146722	150
9381500000	9381500715	9381500728	938614577567	938212393480	150
9325500000	9325500854	9325500084	932074202571	932031982498	150

9355400000	9355400120	9355400448	935798805620	935365046383	150
9387600000	9387600953	9387600678	938362873469	938694847714	150
9305500000	9305500550	9305500868	930504002607	930707026822	150
9356400000	9356400468	9356400454	935331373654	935611668157	150
9429400000	9429400512	9429400165	942046066876	942631584128	150
9454500000	9454500874	9454500387	945551122437	945818920918	150
9504400000	9504400624	9504400963	950081623445	950695446357	150
9521600000	9521600740	9521600135	952530690636	952640379226	150
9521800000	9521800697	9521800135	952237226424	952720767964	150
9523400000	9523400273	9523400176	952926871917	952342731896	150
9465710000	9465710997	9465710480	946491273807	946266547755	150
9523500000	9523500161	9523500133	952177802488	952504764332	150
9452400000	9452400376	9452400470	945976581336	945108798193	150
9497410000	9497410732	9497410869	949941725794	949421351001	150
9543500000	9543500726	9543500329	954881353280	954134489921	150
9499400000	9499400478	9499400858	949505270951	949912230251	150
9425500000	9425500871	9425500094	942992453404	942260896601	150
9467410000	9467410550	9467410573	946558968346	946677267436	150
9453500000	9453500306	9453500419	945829501283	945085464691	150
9441500000	9441500225	9441500342	944834804210	944178781240	150
9542400000	9542400224	9542400381	954890789329	954534676781	150
9498400000	9498400085	9498400869	949710370761	949580435781	150
9644400000	9644400065	9644400369	964935853388	964756321118	150
9615500000	9615500737	9615500011	961731998171	961281081437	150
9617400000	9617400007	9617400115	961677152846	961413007769	150
9605500000	9605500597	9605500897	960527186463	960099286078	150
9677410000	9677410604	9677410690	967524192984	967430039074	150
9637400000	9637400173	9637400313	963218743764	963647327430	150
9584310000	9584310447	9584310717	958609888446	958754871802	150
9557500000	9557500392	9557500405	955464182239	955485277204	150
9586400000	9586400868	9586400793	958758994008	958195193219	150
9657400000	9657400377	9657400510	965270695521	965360938718	150
9657410000	9657410417	9657410492	965974900945	965337832548	150
9564400000	9564400952	9564400557	956330635666	956210125607	150
9608410000	9608410815	9608410990	960917917919	960049725759	150
9798400000	9798400142	9798400899	979806877691	979470993490	150
9798510000	9798510131	9798510950	979204071881	979104426085	150
9691500000	9691500971	9691500851	969185563426	969505905521	150
9708700000	9708700955	9708700973	970247921942	970818797231	150
9725400000	9725400711	9725400183	972050874720	972178545673	150
9785400000	9785400500	9785400786	978103536990	978083430326	150
9773500000	9773500818	9773500644	977723660253	977598017513	150
9771500000	9771500597	9771500669	977559543176	977479082187	150
9777410000	9777410618	9777410700	977228684668	977496262834	150
9684500000	9684500049	9684500698	968667524644	968126020073	150
9768500000	9768500499	9768500544	976915739268	976623536386	150
9714500000	9714500115	9714500028	971440681058	971144271774	150

9833400000	9833400682	9833400303	983489293114	983792075114	150
9822500000	9822500345	9822500170	982779650792	982309073398	150
9882400000	9882400048	9882400809	988501417508	988762444263	150
9840500000	9840500968	9840500391	984791995326	984512326068	150
9873500000	9873500836	9873500653	987484263486	987903239048	150
9903500000	9903500018	9903500976	990454605298	990143408979	150
9854500000	9854500132	9854500427	985482273279	985785362210	150
9883500000	9883500153	9883500751	988552404630	988311050945	150
9841500000	9841500300	9841500380	984422060222	984537203569	150
9812610000	9812610199	9812610132	981641368830	981779345391	150
9921500000	9921500045	9921500193	992963528465	992515300426	150
9898400000	9898400158	9898400909	989345371199	989658017537	150
9902500000	9902500223	9902500979	990350632591	990526022929	150
9965400000	9965400310	9965400608	996497807912	996468910396	150
9943500000	9943500796	9943500369	994920264315	994100090885	150
9980500000	9980500523	9980500796	998866374906	998366661446	150
9970500000	9970500417	9970500698	997381582552	997748722006	150
6914603845	6914603482	9739400293	691974978638	691553130193	150
1812610000	1812610278	4102400944	181048693465	181249886560	150
6961959135	6961959229	4993400900	696857032662	696837664633	150
1795631490	1795631136	5794800923	179211925305	179560829575	150
6242446723	6242446428	5444700373	624462378440	624908657532	150
5038454027	5038454430	8442400370	503424595483	503499506895	150
660321636	660321981	131800191	66381476932	66015941385	150
8916317444	8916317943	6742400398	891910092199	891451524871	150
7990492248	7990492317	1663400571	799529642719	799223368440	150
3587947405	3587947614	3877400722	358282996484	358228783264	150
7837516746	7837516070	2992910000	783114522963	783583057991	150
3108433950	3108433599	7270500627	310891463159	310633568035	150
3661423246	3661423984	9327400185	366556053919	366542962097	150
4456441102	4456441915	5638400296	445434356412	445078513865	150
1909400000	1909400205	3944400393	190841191905	190248496253	150
6822584129	6822584217	6279959514	682461794480	682760364938	150
1682572973	1682572406	9493910000	168586371835	168063025007	150
5591641389	5591641370	3500302483	559719085839	559884854831	150
5962931605	5962931645	593910000	596368618494	596629773505	150
5938040345	5938040663	4562500535	593624106045	593520159559	150
3074406251	3074406436	7493910000	307343330708	307234298131	150
3468500000	3468500482	3593910000	346246322318	346378746982	150
9714400000	9714400114	3468500504	971360587999	971107872559	150
9306853254	9306853526	4493910000	930514681839	930648918728	150
1938265261	1938265357	6983400804	193436804021	193731244219	150
7307920069	7307920637	3890500879	730344032041	730838700043	150
787379678	787379807	7494310805	78949986592	78389596660	150
6405346065	6405346140	4308700929	640208702340	640416801282	150
860681043	860681597	803400999	86267577168	86492221200	150
5323005453	5323005836	377400670	532567143047	532193405589	150

5917880508	5917880121	7427400193	591074398803	591606881551	150
3327542204	3327542864	8044500250	332779891483	332601864785	150
4756728920	4756728319	2493910000	475904456818	475776285012	150
2677100000	2677100181	2215400017	267929505295	267500065840	150
539510000	539510348	2434400244	53941486158	53120121538	150
8923557979	8923557313	4693910000	892889073422	892778541055	150
5687410000	5687410151	5687410785	568981688606	568991908514	150
6288218585	6288218063	7212500007	628771118160	628244581056	150
6692304266	6692304267	3668500527	669478478164	669336217616	150
9396989969	9396989027	5153400427	939214773582	939240442322	150
9396562666	9396562114	2214400026	939639353294	939143713224	150
146134642	146134727	4944700421	14335456966	14333635672	150
8185050432	8185050972	9982600773	818779809075	818298927442	150
7109498414	7109498723	9714400083	710606677452	710455431457	150
301671542	301671041	5963500562	30523407704	30486830387	150
2328639796	2328639738	2256710375	232841396023	232074129994	150
8529758910	8529758833	4635610275	852517595213	852228076817	150
4705400000	4705400600	4705400969	470797090180	470124364062	150
7629452704	7629452199	7080500706	762600926755	762410009366	150
1187079622	1187079074	9444500290	118701198898	118713280137	150
4353505815	4353505369	1877700680	435670443441	435411498194	150
752065354	752065458	5433500219	75733548031	75798649080	150
886360793	886360607	9188400741	88622543845	88903798566	150
7468884616	7468884542	2344500274	746125002649	746934422178	150
1086130205	1086130270	3095400810	108619603759	108115909788	150
2132177414	2132177243	4927610178	213916489451	213875837034	150
9481447987	9481447933	7510610123	948169385046	948879949811	150
34735206	34735912	1253500391	3685099381	3085515183	150
7865020696	7865020566	3169500497	786995869911	786130191608	150
6626374750	6626374846	1915400092	662426268831	662086965460	150
3568229578	3568229410	3747400414	356094093227	356030152833	150
2554016299	2554016655	7843910000	255370386037	255090003122	150
9498972037	9498972890	806400986	949454561713	949550471137	150
7912046471	7912046920	9258400456	791869688224	791093771955	150
7260179122	7260179613	7027400153	726793643829	726887001958	150
1834329175	1834329554	9711500075	183843094492	183301636244	150
8778880435	8778880698	2622500142	877367612058	877128168975	150
3855800000	3855800216	3855800549	385676544433	385373621253	150
7469819029	7469819203	8687400806	746109878819	746835397981	150
8117793302	8117793526	7953400507	811530501874	811868377621	150
3049930228	3049930658	2429400158	304264397068	304225997241	150
3577777726	3577777537	9643400382	357566174304	357972532597	150
7184449698	7184449600	1415400038	718453421096	718915048437	150
6368406081	6368406164	9539400273	636355926992	636201774783	150
3311506353	3311506698	9825400193	331292527534	331495820729	150
7612183434	7612183130	6587510834	761737532150	761056173993	150
9008114406	9008114538	2203400942	900503008711	900327519343	150

3211105863	3211105076	7911500092	321567371326	321015281600	150
950143014	950143740	7662400588	95180217688	95454648392	150
2291500000	2291500953	2291500804	229234800518	229993835681	150
5288643217	5288643350	78400623	528362937071	528246562268	150
9558510000	9558510189	9558510533	955609774886	955892554017	150
4628244270	4628244558	5797400911	462568361690	462675756659	150
6107927501	6107927024	1005500829	610936895405	610777217008	150
6469943206	6469943971	5012400034	646046034274	646869024370	150
8243142612	8243142234	900020000	824185968167	824921310420	150
1684031363	1684031724	9341500332	168564004018	168024886940	150
4998120265	4998120178	3891400913	499415354866	499838083213	150
1992824519	1992824121	6170500616	199333441569	199544354945	150
2394063707	2394063079	3515400050	239987828259	239417736403	150
4957341734	4957341859	691500842	495663597927	495508047884	150
3772973916	3772973125	1240500323	377705810743	377721703382	150
3859477176	3859477085	583500714	385378110945	385001336170	150
4216452858	4216452024	2389400740	421999481671	421828864542	150
1187510000	1187510760	1187510789	118546387836	118677706787	150
5820974667	5820974392	3508700947	582167502092	582621911303	150
1157766387	1157766041	9853910000	115615793946	115426242547	150
1849485482	1849485080	8181600701	184327168762	184692976278	150
7431115929	7431115830	3194400809	743528568407	743283923483	150
1640594010	1640594990	8816400093	164870416899	164471016667	150
534842740	534842609	1826500140	53108927268	53909647066	150
5824683407	5824683573	9674500600	582706538889	582327030496	150
4080000202	4080000728	4678794679	408762830913	408669590903	150
2929911695	2929911944	8905500929	292213755693	292432808286	150
3225915227	3225915082	8053910000	322279784987	322840733418	150
1737703506	1737703761	494500768	173984810575	173723839632	150
860955431	860955237	3774039950	86766959090	86763278254	150
2270553440	2270553368	823400197	227930715534	227998018007	150
9028287753	9028287521	8032500189	902663482447	902210126281	150
3449423855	3449423286	5232400252	344387467778	344907873571	150
4134323945	4134323797	7683600735	413174761657	413777609893	150
8316144173	8316144982	363400540	831432585256	831885859047	150
4081909931	4081909652	8624610190	408207985196	408463952912	150
2996296758	2996296172	4225400125	299465817630	299634333377	150
295108546	295108854	5912400122	29182728789	29565103689	150
6188243181	6188243474	3788400794	618292301080	618083636284	150
2568887174	2568887102	3462400564	256429462117	256232999449	150
5389070009	5389070642	4368400557	538200351120	538979856319	150
4307296393	4307296076	7962400618	430171150771	430650163575	150
4586601540	4586601765	8782400798	458413785454	458192073640	150
7769088994	7769088125	5324500082	776899803312	776765246356	150
8334998323	8334998116	9061500500	833244153287	833902625239	150
9160911166	9160911176	6556700458	916358654604	916187471454	150
476180784	476180872	5663500532	47533532671	47129771796	150

4817274682	4817274473	3655400472	481786463470	481102134922	150
9948554350	9948554209	7594400853	994192554111	994804404097	150
2024892767	2024892065	8863500555	202485869315	202075440469	150
5458611620	5458611712	8613500045	545474688421	545254074574	150
5779713638	5779713090	2484800789	577996447308	577937851141	150
9522238445	9522238355	4023610135	952914288807	952501519787	150
5548190456	5548190941	9977510777	554907412037	554683513598	150
6155796438	6155796117	955400499	615748610203	615346742882	150
2277522194	2277522874	725500115	227207939710	227205390401	150
4695262050	4695262344	821800158	469970705202	469998931240	150
4056520460	4056520284	983400798	405067104086	405344630670	150
3340405063	3340405158	4892133075	334950992548	334084478618	150
5915862624	5915862644	1909400009	591498806484	591425380694	150
6361334332	6361334858	1974500623	636549282192	636181353094	150
8160033997	8160033027	2454400441	816653979019	816278283243	150
3602874391	3602874323	423610170	360488213441	360951621954	150
6541228863	6541228325	7196400854	654002495631	654142729407	150
3656724977	3656724214	624500106	365908776199	365004817362	150
734659440	734659113	3108400947	73940342960	73087085990	150
3045254010	3045254775	6175400625	304073248499	304003029022	150
3007400000	3007400633	3007400948	300569780691	300011732403	150
4783465768	4783465792	1503500929	478527027723	478596409797	150
3511951149	3511951858	9470500649	351697751463	351139490414	150
5343745048	5343745914	8921800179	534148988251	534581157477	150
7304414570	7304414088	3035400208	730389383020	730465703745	150
2377433853	2377433292	5088400727	237320421121	237156818580	150
609064725	609064642	1397410851	60424508016	60519790632	150
3834923739	3834923153	6998510967	383298769638	383494875468	150
4890019334	4890019176	2223610153	489291170709	489370358628	150
4023500000	4023500287	4023500079	402454095129	402657636477	150
7374500000	7374500416	7374500569	737063156786	737931281264	150
6867891671	6867891979	8192400838	686958088291	686439484293	150
8072952763	8072952965	8185400727	807971759012	807663215797	150
6272479059	6272479515	5171500606	627420784816	627562860710	150
7057055560	7057055940	1919400109	705201981087	705898899649	150
8287700000	8287700631	8287700725	828290536748	828973833233	150
9261751370	9261751905	9432500230	926523006085	926202733678	150
3160804132	3160804606	6549610315	316862425833	316796310849	150
8113621759	8113621291	2263500491	811483148465	811094039529	150
3979830186	3979830517	7642400389	397169381340	397837224539	150
7048425168	7048425451	8079400617	704441074428	704125422211	150
5830271028	5830271030	7252210498	583172705106	583268698138	150
9378302415	9378302762	6271500617	937268981043	937718198121	150
7108955975	7108955712	1203500899	710730162315	710333811677	150
1959283798	1959283544	1818400114	195782916912	195339600233	150
425978838	425978722	7603400986	42004954074	42053289804	150
5462156427	5462156978	4582500735	546812056344	546463934560	150

9940702688	9940702866	6005500834	994131073046	994497744138	150
9288558063	9288558249	8172500599	928220632881	928672569524	150
906431738	906431536	3195400820	90239909262	90598012491	150
3980884202	3980884690	790500866	398786190979	398080326002	150
323237107	323237940	3493400850	32959967895	32896888694	150
7939546319	7939546589	8117400066	793002703763	793606163236	150
5643554489	5643554431	8493910000	564378055279	564836318513	150
1103890146	1103890956	4594310812	110428918641	110673785749	150
3991492439	3991492713	4618400097	399229893451	399879329482	150
6436510000	6436510873	1092400821	643152767274	643764124071	150
321192206	321192673	7855700500	32615340847	32919520029	150
3441217956	3441217417	4067400545	344583719543	344250913583	150
4145416964	4145416919	3937400335	414675389343	414343361049	150
8411677760	8411677531	9818400122	841803801991	841358039550	150
2729936476	2729936643	3913500068	272394108067	272181184877	150
5803499606	5803499996	3813500058	580572619947	580738131853	150
5030150273	5030150183	1943400404	503196818837	503392390446	150
2995688491	2995688412	6575400665	299765491253	299759145760	150
6967251933	6967251158	8023700153	696023019628	696229022691	150
1965352289	1965352590	6280500725	196717188750	196735064257	150
4791610000	4791610483	4636610261	479052211592	479988826729	150
9607389308	9607389098	2562400573	960101482829	960549017447	150
1598098759	1598098416	664500496	159534304650	159022218780	150
5637694705	5637694764	704500926	563879931546	563986259100	150
812253912	812253230	2377410654	81596648919	81747528689	150
3291516692	3291516831	4425400147	329788953027	329443932258	150
2414408952	2414408763	6273400636	241197705497	241276535896	150
8595852788	8595852829	5983600763	859486440347	859366566828	150
119239619	119239128	4234400226	11369082409	11846540342	150
6772400000	6772400909	6772400698	677948671921	677322329035	150
4812984699	4812984807	1105500840	481654309839	481029463103	150
4855828035	4855828970	7239400242	485254078459	485827511024	150
5992956164	5992956004	742410391	599967108029	599767967318	150
1236332230	1236332927	4305500863	123195287790	123560578503	150
5854531287	5854531755	3065400512	585007247369	585236677020	150
67515789	67515924	624610182	6260295058	6130720008	150
2368195815	2368195135	9912610142	236355321366	236103433670	150
3034558502	3034558533	5081500695	303680886864	303756580458	150
3149830333	3149830304	1694810043	314036056039	314638737495	150
3201030945	3201030601	4513400073	320626358352	320299146464	150
8283391987	8283391555	2602400992	828557118217	828850882280	150
5212909773	5212909326	43400314	521177184554	521644157941	150
9896400000	9896400170	9896400932	989316937674	989645314013	150
8424314367	8424314644	5621800142	842671686459	842443105002	150
5778142309	5778142250	1028400134	577361964875	577281044886	150
672105232	672105793	6864500519	67137895635	67709393853	150
777797263	777797873	9184400716	77287292434	77897553728	150

7082181799	7082181693	4881600765	708601254835	708041209347	150
9075572637	9075572303	3524400155	907700027755	907921534077	150
8136462003	8136462139	8684500697	813768253902	813762526703	150
1069025489	1069025337	4453810511	106761525443	106838151166	150
7172189345	7172189167	3018400036	717736526400	717755575350	150
6016761163	6016761298	7484500677	601399158238	601598042604	150
7655899501	7655899638	9871600672	765289337085	765369419172	150
1657433884	1657433176	4622400191	165856439139	165807802815	150
2068810960	2068810318	8505400953	206863314971	206297564642	150
602571905	602571121	2774500603	60474745501	60301476985	150
2317506479	2317506101	6118400049	231419165318	231295845430	150
9979694066	9979694524	1577410673	997971570411	997216917170	150
7718365231	7718365647	9872400710	771462339969	771738835023	150
7331557469	7331557893	4087700702	733716745409	733740399612	150
7854967941	7854967972	4321500129	785156558243	785816100543	150
1956406870	1956406109	1805500910	195250047997	195364942867	150
2432497356	2432497767	6892500865	243812053319	243168998798	150
1173644506	1173644536	1121810167	117784750786	117509459843	150
2629398992	2629398366	6146400324	262680350186	262723048409	150
9995430890	9995430963	6391500818	999756267584	999883564573	150
7400823730	7400823777	3399400842	740514839789	740212352999	150
3445055240	3445055688	1315500967	344186581294	344819430072	150
8260506275	8260506030	8416400054	826102708513	826253559387	150
593361599	593361027	7294500755	59862036924	59466424690	150
8468196400	8468196821	4549400368	846440682393	846660300333	150
1247652036	1247652321	2484600704	124575882897	124877077676	150
9448961109	9448961496	6934310263	944677391799	944497835422	150
4484887830	4484887020	2365710464	448804021045	448781162376	150
557852882	557852916	4413700091	55202514655	55040082502	150
8773956956	8773956569	9686510847	877380097155	877236272990	150
3756677278	3756677011	1724400173	375345134807	375399060794	150
4675585833	4675585917	4838400315	467911601379	467333038136	150
5672983497	5672983484	9049400323	567831571713	567913726801	150
6185558823	6185558686	2053400414	618571450982	618466004264	150
6980206940	6980206629	6753400487	698976340253	698372566256	150
5975686716	5975686560	9774500610	597342247480	597198556945	150
7521304689	7521304097	6724500122	752537330033	752558391909	150
4829465554	4829465366	7867410610	482551733997	482910840809	150
5364202076	5364202788	1157500355	536325218336	536697884800	150
4590486798	4590486868	3537400297	459276465347	459149949706	150
4192438184	4192438983	9461500540	419037882812	419059040483	150
1439885878	1439885202	7756700479	143459884344	143696060369	150
1760536051	1760536512	2584500681	176524362067	176276494209	150
3527692440	3527692984	6428400179	352897485120	352806224474	150
3775154815	3775154592	2956700494	377087821265	377099013912	150
7736923478	7736923094	5452210516	773021998077	773757372177	150
7382297518	7382297155	7684600729	738206064997	738433103855	150

919954323	919954404	3000500912	91653023604	91101884009	150
2866033142	2866033440	4921500188	286589555167	286757355343	150
9082725958	9082725584	481600722	908857084055	908991470567	150
5470179654	5470179084	5639400279	547574184586	547696810374	150
3915450005	3915450222	7697400903	391192939565	391211550320	150
9866410437	9866410057	5427610130	986470489118	986189570109	150
6365426204	6365426058	6703500954	636112161632	636381694768	150
3969282512	3969282114	1036400205	396951934807	396052329888	150
3959393054	3959393811	1032500182	395568061108	395057500678	150
8858437578	8858437230	6509910000	885399173410	885204356106	150
6237420854	6237420804	758610439	623531169300	623155840614	150
1199630589	1199630497	5608400998	119748425196	119619199203	150
391221560	391221656	3959710427	39529626203	39725536097	150
1790458490	1790458662	942500372	179253947167	179656563800	150
1891788798	1891788763	453500410	189716120511	189347051312	150
9714461043	9714461960	9512400086	971544718423	971016402069	150
1614621879	1614621511	3493500806	161334676137	161794135386	150
2540237846	2540237147	1465710472	254405354100	254452276455	150
3497060505	3497060085	3357500377	349255253384	349183492394	150
8801303730	8801303664	3627610147	880769310071	880238091472	150
622720369	622720892	602500943	62033212532	62812573555	150
3395409960	3395409018	8793500840	339401384787	339441362071	150
416747747	416747686	3394400829	41528458039	41938545542	150
5663329285	5663329119	3735400280	566803660758	566817017035	150
9295781872	9295781907	4762500555	929708464990	929209360953	150
1376372024	1376372306	9642500351	137704526596	137723638917	150
9576571626	9576571412	4906400000	957066012930	957922974274	150
9537361969	9537361336	2654500400	953184403747	953954610452	150
9639831109	9639831640	727610154	963713803538	963778246214	150
8143137257	8143137442	5164500453	814304350075	814229080813	150
8268049761	8268049639	3996400937	826182613373	826319065605	150
170901252	170901530	8448400376	17299222103	17038624839	150
4203769051	4203769216	5385400744	420308189889	420591324890	150
2643148735	2643148361	3357400474	264221033741	264840692084	150
2893207297	2893207818	6589400764	289398024555	289928298139	150
3221201784	3221201055	7370500637	322278556836	322472635651	150
7098757588	7098757907	6702500957	709451407412	709718706995	150
4760182475	4760182894	7487700744	476996339349	476399360551	150
6831361794	6831361094	4386400766	683486875421	683772812339	150
8596701315	8596701886	5074500536	859093700377	859510355247	150
3292915577	3292915615	8581600740	329197716376	329226709189	150
1612186561	1612186681	7202500909	161427156456	161599364142	150
6746708053	6746708599	456710392	674409531248	674448212178	150
601986155	601986215	4112500994	60056297265	60168569206	150
381298561	381298002	6084500638	38195689197	38109601177	150
1689917178	1689917042	2061500493	168119322970	168151182947	150
6593118392	6593118228	6983500758	659005462286	659285152805	150

317789376	317789112	8747400419	31157145605	31665789038	150
2475415985	2475415105	6474500577	247928313178	247088011657	150
5831402813	5831402997	9243500301	583588818522	583294092105	150
3601788007	3601788030	2064400500	360409354405	360981900843	150
1260822933	1260822773	9112400048	126666471520	126417831688	150
8293378644	8293378314	7294310785	829478752710	829358671312	150
9223327335	9223327468	4220500130	922428477572	922827173394	150
7334619922	7334619595	8730500280	733689336993	733558520783	150
5055944711	5055944986	7375400646	505301421199	505841072354	150
8688253954	8688253874	8533910000	868173244554	868870434246	150
3692409321	3692409936	9622500150	369114104163	369969535573	150
5044960703	5044960463	1114500965	504567688024	504210590532	150
4794924014	4794924767	2615400061	479075378851	479352786755	150
8769152768	8769152517	6077410628	876324021451	876556289365	150
7882719585	7882719384	6404500905	788464346759	788155921745	150
8589408230	8589408377	9574400656	858224754984	858187834008	150
4006902381	4006902375	7892400907	400313985900	400898634479	150
5660425701	5660425453	1775400680	566246575648	566288292450	150
1199666866	1199666378	2206400928	119558951038	119823813740	150
5313967552	5313967927	2325400134	531173752189	531785607519	150
9251570964	9251570431	4487510822	925487974510	925179875052	150
3736266034	3736266121	1812610124	373498173304	373650572393	150
6066582917	6066582922	9554400458	606837946722	606010205014	150
6956607408	6956607036	1524610173	695299620680	695911885392	150
3619758003	3619758154	3393500796	361619389361	361229806776	150
9702689515	9702689753	6493500809	970130880353	970367867725	150
6711602498	6711602554	6435610258	671212966699	671587381520	150
9677708679	9677708436	8315500974	967622569236	967890296507	150
6968303816	6968303757	4781500760	696160706401	696890433538	150
9397324728	9397324984	4156710367	939252198839	939899467465	150
8052082484	8052082502	126400115	805430690680	805891573563	150
7169839198	7169839720	1498400861	716506615361	716306965490	150
415671926	415671466	9237400273	41532638296	41139463395	150
5839009975	5839009799	1615500003	583051261352	583623642789	150
905973005	905973933	7977700695	90880814074	90321261862	150
3870353522	3870353827	9410610115	387462949291	387554733693	150
1754418408	1754418908	9058400437	175424446460	175620822265	150
6476482706	6476482671	6297700823	647451676075	647357121076	150
299813946	299813823	1455500384	29261367315	29456049652	150
1202091420	1202091629	9692400889	120254668709	120553320896	150
2169083837	2169083858	3472810712	216404140979	216452877364	150
5277404642	5277404965	1579400660	527817544372	527625927783	150
4021478198	4021478812	5003400925	402264317397	402387169087	150
2521993413	2521993326	6752500457	252399836650	252851649213	150
1920052532	1920052102	8598510929	192526500112	192071532167	150
2592667964	2592667668	5978400717	259938428352	259350160931	150
6486494972	6486494941	5576400682	648694554084	648546033932	150

1028493044	1028493047	1584600713	102326153994	102948995583	150
6805525905	6805525075	2315400028	680940745791	680211518670	150
3937531808	3937531464	3553810520	393186699691	393282269558	150
6279771702	6279771623	1264400519	627247316168	627597721064	150
9898647916	9898647340	7704500932	989356293853	989957254121	150
9784093578	9784093296	5870500684	978637021829	978403797908	150
2319702431	2319702802	8612610111	231314950954	231793489350	150
6665638470	6665638750	402400970	666216193025	666475575574	150
7652265810	7652265512	5356700438	765889062496	765754168254	150
1943464926	1943464666	6224810196	194041564340	194321514434	150
7073394845	7073394575	1222610164	707889883406	707936773513	150
2903670466	2903670304	8402810014	290963275844	290509187364	150
4746813363	4746813529	1292600795	474964630655	474247032201	150
9556271913	9556271234	5952400516	955835321171	955500289855	150
4206111782	4206111123	2446400350	420842314070	420588376986	150
6951266969	6951266824	7353400449	695768352554	695965670879	150
7839683285	7839683892	9304500898	783745927477	783133373527	150
1243328032	1243328967	1865400590	124843911860	124518494081	150
2212457735	2212457770	5698400885	221431740265	221723479180	150
6302195502	6302195937	5272500607	630189431023	630354381898	150
2035716185	2035716938	8472500630	203771350179	203761261866	150
7629911440	7629911164	1942400412	762166710083	762317164272	150
4574249280	4574249446	3508400987	457181851517	457981106466	150
6318505589	6318505819	3695400870	631805224577	631707705700	150
7162901192	7162901848	1402810007	716916856076	716035307496	150
5424107592	5424107175	5905400989	542356737224	542743586225	150
458613328	458613210	3393600801	45946809524	45593826137	150
3065319771	3065319732	9086400740	306522485479	306719798848	150
6749767489	6749767298	6415400043	674414739908	674589996781	150
7901068091	7901068881	226400125	790693537151	790982694509	150
7752222700	7752222900	313500007	775297929543	775324775867	150
3134886624	3134886929	3511610109	313764642780	313826560811	150
2361653378	2361653119	284600683	236649119788	236047852221	150
556740005	556740189	755400479	55302389311	55761571435	150
7523705964	7523705963	24400104	752104375837	752814485622	150
8270828496	8270828337	4781600756	827122429807	827492372994	150
6024795930	6024795431	7073500574	602207532020	602938971932	150
797008837	797008124	4302400964	79130063138	79495132207	150
2861354957	2861354873	1863400591	286456137281	286098590719	150
6941786504	6941786697	9923986872	694621577489	694079531263	150
7572705461	7572705109	4066700506	757174563894	757073934024	150
7604599577	7604599193	1452500423	760777868895	760944137073	150
9773546721	9773546398	2564500489	977093024214	977046820479	150
5556162457	5556162339	143400324	555250712014	555981778067	150
9320121627	9320121851	2805400977	932249432436	932732451874	150
9830514990	9830514508	3826400187	983753927476	983868137473	150
2010996471	2010996635	7584083778	201987989051	201435058509	150

8040110254	8040110003	2555400461	804877518358	804122917077	150
6527755904	6527755244	1286400752	652192474520	652736826932	150
8417938804	8417938987	6163400526	841313399144	841673966974	150
2157465171	2157465459	1262445943	215207547651	215141178878	150
2937372781	2937372130	3784500702	293296207459	293341734915	150
9221967951	9221967659	2683500725	922823301446	922246707645	150
4672578169	4672578985	964400587	467812500929	467313164826	150
9543343810	9543343896	1721800148	954961670407	954891184541	150
607440288	607440537	1587410772	60107830004	60980944728	150
5742448164	5742448536	7014400011	574105694374	574455430720	150
9901932231	9901932653	7064500445	990313123688	990735414964	150
508848069	508848253	3722510157	50380994399	50032431129	150
1925871790	1925871826	8592500837	192425948079	192535994774	150
5035827896	5035827193	7021610162	503641378717	503999053091	150
4127292557	4127292010	6632500248	412867666890	412977048303	150
5669446941	5669446554	1482500723	566914711584	566354881303	150
3671305679	3671305169	2884500711	367236221382	367763223389	150
8814278626	8814278659	5610610131	881670912007	881476178659	150
2598231748	2598231682	4496400883	259714373066	259164990832	150
8224431960	8224431698	9711610134	822998501856	822022798443	150
8736470309	8736470085	9697700865	873067314636	873255075287	150
1494277598	1494277837	1035710136	149078910799	149553204046	150
6488079178	6488920206	8195400825	648227478934	648344043581	150
325460071	325510159	4497700841	32993158975	32771044863	150
5200159456	5202091185	6646400376	520399012269	520747365966	150
9995218408	9998336958	3893400890	999708243472	999543663822	150
7997217557	7997217156	6190500813	799331168944	799845648702	150
8947540845	8947540293	2981600773	894239580781	894165990958	150
7854065303	7854065004	7634500210	785178582239	785096789091	150
9494450496	9494450865	4236500183	949944832106	949488622980	150
8963380503	8963380864	3340500335	896931229854	896978460326	150
1341233794	1345870787	3021810159	134831146117	134278217616	150
6915935746	6919988657	9808410010	691714136761	691949808585	150
7080877032	7080877643	1593910000	708565813662	708145528488	150
1363559548	1362069451	3859710417	136679675890	136890083169	150
3273284424	3274042705	8917400144	327401577795	327763330808	150
3479591232	3473229860	9097700806	347320371549	347238491665	150
2872502750	2870079683	4364400532	287532079317	287891850706	150
4256414179	4251467050	9682600743	425855591729	425326919692	150
5703221598	5708688316	2252400443	570962806019	570843559085	150
3398833332	3392558237	9611610125	339907774023	339459557612	150
5437874690	5432013669	2591500834	543383467648	543057234249	150
2220579736	2220629574	7733500249	222373343056	222501587742	150
4323638805	4323496397	1896400923	432724506051	432550363333	150
2560142883	2566032382	7104500878	256580323132	256767144884	150
6440379371	6448796569	5393500798	644265821858	644219328140	150
6437228802	6434664072	9744700407	643792588686	643012116688	150

1883440304	1882105461	6390500832	188579108184	188282548307	150
6352372908	6356451796	6684500695	635450810388	635840704563	150
3651733632	3651453330	640500362	365740087117	365683754495	150
2016937143	2017712526	6306400942	201390583556	201109492424	150
6378052680	6371267045	6189400724	637838691933	637972691032	150
792074021	793255334	8381600720	79034456704	79286162926	150
647673209	642801535	6582400776	64738300262	64507434595	150
5372787505	5375437149	6009510977	537334361947	537579903721	150
9461085259	9461005044	4507400003	946140664776	946788157123	150
611080491	611802842	520500156	61186830383	61381642801	150
681158977	685443236	994400886	68107447627	68632067335	150
8427784452	8423639906	2495400849	842466967371	842347395037	150
3739115239	3730652373	8466400571	373298506358	373932579014	150
9021870302	9029331656	9924500145	902317909274	902782234196	150
1177550795	1179049560	7021500102	117932801648	117315802194	150
6595550681	6597129286	9392500818	659516737262	659387969943	150
693216885	698473457	763400580	69204217415	69311615826	150
1104682825	1108681680	3633400277	110184145194	110063137325	150
1740704394	1744858329	4605400959	174332540363	174731404943	150
2886752986	2881598385	4384600696	288236593027	288460237310	150
9489023164	9486423513	578400673	948742457094	948822394672	150
5219467972	5210304580	4016400010	521353196155	521377244762	150
4120623248	4124983909	5454700470	412290161971	412885674779	150
9898125792	9893189064	5505310913	989763738641	989864895609	150
9712997034	9714609284	9698510940	971427591214	971047114350	150
2109740012	2109276029	5780500773	210833901867	210682755532	150
5310000	5310798	5310858	348152197	249079349	150
5310000	5310798	5310858	348152197	249079349	150
36500000	36500782	36500159	3285276293	3494275173	150
3500000	3500850	3500879	863363687	737844217	150
3500000	3500850	3500879	863363687	737844217	150
71500000	71500568	71500591	7850208613	7960048324	150
71500000	71500568	71500591	7850208613	7960048324	150
93500000	93500171	93500762	9381107232	9835246054	150
93500000	93500171	93500762	9381107232	9835246054	150
84600000	84600284	84600663	8796291801	8070203817	150
84600000	84600284	84600663	8796291801	8070203817	150
72500000	72500627	72500581	7909509678	7301582935	150
72500000	72500627	72500581	7909509678	7301582935	150
91500000	91500924	91500784	9045874234	9750270933	150
91500000	91500924	91500784	9045874234	9750270933	150
94500000	94500096	94500729	9195646307	9498293800	150
94500000	94500096	94500729	9195646307	9498293800	150
64500000	64500150	64500438	6633399644	6646796107	150
64500000	64500150	64500438	6633399644	6646796107	150
85400000	85400372	85400709	8200590609	8982989287	150
213400000	213400053	213400039	21434231657	21234050450	150

213400000	213400053	213400039	21434231657	21234050450	150
204400000	204400561	204400924	20534248502	20440828002	150
204400000	204400561	204400924	20534248502	20440828002	150
229400000	229400464	229400136	22046996513	22503188087	150
229400000	229400464	229400136	22046996513	22503188087	150
237400000	237400227	237400264	23183509203	23810239231	150
237400000	237400227	237400264	23183509203	23810239231	150
227400000	227400081	227400166	22189239806	22630952738	150
227400000	227400081	227400166	22189239806	22630952738	150
184400000	184400209	184400707	18416833930	18869183602	150
184400000	184400209	184400707	18416833930	18869183602	150
200500000	200500440	200500929	20489523077	20497388293	150
200500000	200500440	200500929	20489523077	20497388293	150
233500000	233500274	233500194	23829335769	23930379910	150
233500000	233500274	233500194	23829335769	23930379910	150
173400000	173400390	173400620	17400202647	17655233463	150
173400000	173400390	173400620	17400202647	17655233463	150
183500000	183500871	183500674	18553526154	18433416265	150
183500000	183500871	183500674	18553526154	18433416265	150
175310000	175310943	175310772	17646853240	17880780706	150
175310000	175310943	175310772	17646853240	17880780706	150
175310000	175310945	175310845	17511833118	17880780706	150
175310000	175310946	175310262	17428821520	17880780706	150
175310000	175310946	175310262	17428821520	17880780706	150
175310000	175310947	175310738	17534839027	17880780706	150
175310000	175310948	175310856	17061308688	17880780706	150
175310000	175310949	175310094	17545102058	17880780706	150
175310000	175310950	175310281	17993483056	17880780706	150
175310000	175310950	175310281	17993483056	17880780706	150
175310000	175310951	175310829	17005532621	17880780706	150
175310000	175310952	175310365	17091626847	17880780706	150
129400000	129400451	129400126	12690043809	12976899872	150
129400000	129400451	129400126	12690043809	12976899872	150
130500000	130500796	130500215	13119046305	13618794267	150
130500000	130500796	130500215	13119046305	13618794267	150
123610000	123610977	123610141	12248030906	12596812822	150
123610000	123610977	123610141	12248030906	12596812822	150
134400000	134400926	134400212	13673817493	13147154263	150
134400000	134400926	134400212	13673817493	13147154263	150
135400000	135400766	135400215	13864790940	13456759904	150
135400000	135400766	135400215	13864790940	13456759904	150
137610000	137610565	137610193	13826010099	13060435709	150
137610000	137610565	137610193	13826010099	13060435709	150
150500000	150500002	150500411	15918925966	15394791624	150
150500000	150500002	150500411	15918925966	15394791624	150
342500000	342500607	342500312	34919957859	34007320671	150
342500000	342500607	342500312	34919957859	34007320671	150

358610000	358610466	358610399	35664500871	35869536150	150
358610000	358610466	358610399	35664500871	35869536150	150
343400000	343400750	343400343	34646449708	34947929394	150
343400000	343400750	343400343	34646449708	34947929394	150
360500000	360500151	360500531	36101299599	36580437660	150
360500000	360500151	360500531	36101299599	36580437660	150
331500000	331500097	331500225	33036320587	33580172578	150
331500000	331500097	331500225	33036320587	33580172578	150
355500000	355500652	355500373	35728144655	35896275877	150
355500000	355500652	355500373	35728144655	35896275877	150
310610000	310610446	310610096	31470038108	31744928462	150
310610000	310610446	310610096	31470038108	31744928462	150
362400000	362400122	362400551	36024284217	36893016826	150
362400000	362400122	362400551	36024284217	36893016826	150
365400000	365400199	365400539	36177950178	36520906831	150
365400000	365400199	365400539	36177950178	36520906831	150
362500000	362500674	362500511	36183883350	36662430298	150
362500000	362500674	362500511	36183883350	36662430298	150
363500000	363500455	363500499	36684704497	36519694571	150
363500000	363500455	363500499	36684704497	36519694571	150
274500000	274500363	274500551	27083390833	27291793655	150
274500000	274500363	274500551	27083390833	27291793655	150
283500000	283500889	283500684	28277020186	28955114943	150
283500000	283500889	283500684	28277020186	28955114943	150
254500000	254500824	254500358	25008769023	25103118356	150
254500000	254500824	254500358	25008769023	25103118356	150
442500000	442500626	442500322	44888859728	44696500767	150
442500000	442500626	442500322	44888859728	44696500767	150
435400000	435400824	435400247	43632381135	43713156662	150
435400000	435400824	435400247	43632381135	43713156662	150
466400000	466400568	466400562	46006577212	46685520411	150
466400000	466400568	466400562	46006577212	46685520411	150
467400000	467400488	467400581	46382146779	46522891369	150
467400000	467400488	467400581	46382146779	46522891369	150
484500000	484500996	484500670	48992427285	48602672001	150
484500000	484500996	484500670	48992427285	48602672001	150
447400000	447400278	447400381	44225573311	44527330223	150
447400000	447400278	447400381	44225573311	44527330223	150
375400000	375400356	375400639	37398277316	37144105395	150
375400000	375400356	375400639	37398277316	37144105395	150
424400000	424400817	424400143	42677231753	42031160949	150
424400000	424400817	424400143	42677231753	42031160949	150
408410000	408410877	408410961	40758034063	40846527678	150
408410000	408410877	408410961	40758034063	40846527678	150
383500000	383500906	383500694	38567248694	38658554640	150
383500000	383500906	383500694	38567248694	38658554640	150
402500000	402500111	402500922	40690710014	40321758442	150

402500000	402500111	402500922	40690710014	40321758442	150
385400000	385400420	385400739	38986695582	38956205439	150
385400000	385400420	385400739	38986695582	38956205439	150
418400000	418400078	418400073	41147993570	41867616407	150
418400000	418400078	418400073	41147993570	41867616407	150
594810000	594810966	594810031	59507287692	59376900607	150
594810000	594810966	594810031	59507287692	59376900607	150
611500000	611500877	611500056	61020627518	61256676752	150
611500000	611500877	611500056	61020627518	61256676752	150
597400000	597400779	597400886	59717867792	59803228692	150
597400000	597400779	597400886	59717867792	59803228692	150
616400000	616400868	616400066	61995577628	61661124533	150
616400000	616400868	616400066	61995577628	61661124533	150
592400000	592400311	592400870	59240744115	59346635566	150
592400000	592400311	592400870	59240744115	59346635566	150
534400000	534400869	534400252	53062312440	53924443528	150
534400000	534400869	534400252	53062312440	53924443528	150
551500000	551500424	551500441	55584177879	55930918988	150
551500000	551500424	551500441	55584177879	55930918988	150
505500000	505500564	505500879	50724511352	50153951680	150
505500000	505500564	505500879	50724511352	50153951680	150
684500000	684500033	684500689	68689364902	68583212872	150
684500000	684500033	684500689	68689364902	68583212872	150
709400000	709400292	709400988	70697160626	70560813380	150
709400000	709400292	709400988	70697160626	70560813380	150
721500000	721500998	721500164	72115006246	72408710376	150
721500000	721500998	721500164	72115006246	72408710376	150
624400000	624400848	624400162	62206085089	62461392172	150
624400000	624400848	624400162	62206085089	62461392172	150
653400000	653400886	653400472	65595532991	65093790040	150
653400000	653400886	653400472	65595532991	65093790040	150
619400000	619400369	619400078	61255592446	61080582030	150
619400000	619400369	619400078	61255592446	61080582030	150
670500000	670500319	670500660	67284437922	67477373992	150
670500000	670500319	670500660	67284437922	67477373992	150
681500000	681500751	681500749	68375264555	68872472355	150
681500000	681500751	681500749	68375264555	68872472355	150
652500000	652500549	652500441	65735766582	65779012608	150
652500000	652500549	652500441	65735766582	65779012608	150
630500000	630500763	630500263	63540824865	63219038307	150
630500000	630500763	630500263	63540824865	63219038307	150
827400000	827400169	827400224	82218660874	82418970083	150
827400000	827400169	827400224	82218660874	82418970083	150
844500000	844500755	844500320	84809802901	84618949493	150
844500000	844500755	844500320	84809802901	84618949493	150
860500000	860500241	860500580	86325354961	86465477769	150
860500000	860500241	860500580	86325354961	86465477769	150

822500000	822500465	822500161	82635490037	82825957810	150
822500000	822500465	822500161	82635490037	82825957810	150
824500000	824500488	824500126	82387548957	82103661419	150
824500000	824500488	824500126	82387548957	82103661419	150
764400000	764400970	764400568	76282895538	76444958140	150
764400000	764400970	764400568	76282895538	76444958140	150
800500000	800500551	800500988	80039474845	80142633232	150
800500000	800500551	800500988	80039474845	80142633232	150
770500000	770500338	770500670	77367733878	77897004752	150
770500000	770500338	770500670	77367733878	77897004752	150
801500000	801500744	801500976	80927345894	80449188842	150
801500000	801500744	801500976	80927345894	80449188842	150
794500000	794500443	794500798	79119252719	79786099472	150
794500000	794500443	794500798	79119252719	79786099472	150
768400000	768400769	768400593	76824612550	76585909394	150
768400000	768400769	768400593	76824612550	76585909394	150
756700000	756700948	756700472	75261876594	75142626116	150
756700000	756700948	756700472	75261876594	75142626116	150
754500000	754500907	754500408	75036423502	75477964128	150
754500000	754500907	754500408	75036423502	75477964128	150
943500000	943500779	943500360	94787715541	94391312303	150
943500000	943500779	943500360	94787715541	94391312303	150
969400000	969400146	969400600	96459183490	96655800120	150
969400000	969400146	969400600	96459183490	96655800120	150
985400000	985400516	985400797	98410597364	98902850487	150
985400000	985400516	985400797	98410597364	98902850487	150
935400000	935400851	935400298	93346443844	93037048947	150
935400000	935400851	935400298	93346443844	93037048947	150
979400000	979400309	979400698	97645682722	97434863534	150
979400000	979400309	979400698	97645682722	97434863534	150
936400000	936400183	936400296	93489260059	93573814928	150
936400000	936400183	936400296	93489260059	93573814928	150
912500000	912500286	912500070	91048210458	91973950975	150
912500000	912500286	912500070	91048210458	91973950975	150
905400000	905400424	905400984	90381595367	90016438883	150
905400000	905400424	905400984	90381595367	90016438883	150
922400000	922400065	922400217	92308270977	92885581103	150
922400000	922400065	922400217	92308270977	92885581103	150
907400000	907400120	907400038	90931922413	90798903609	150
907400000	907400120	907400038	90931922413	90798903609	150
924400000	924400896	924400192	92559017917	92719451785	150
924400000	924400896	924400192	92559017917	92719451785	150
925500000	925500941	925500135	92683171308	92727158210	150
925500000	925500941	925500135	92683171308	92727158210	150
868400000	868400791	868400603	86964472094	86058348241	150
868400000	868400791	868400603	86964472094	86058348241	150
897410000	897410777	897410900	89607781023	89471992568	150

897410000	897410777	897410900	89607781023	89471992568	150
930500000	930500807	930500292	93809709305	93525948125	150
930500000	930500807	930500292	93809709305	93525948125	150
884800000	884800674	884800826	88370749827	88491880443	150
884800000	884800674	884800826	88370749827	88491880443	150
887700000	887700653	887700777	88699402749	88031690927	150
887700000	887700653	887700777	88699402749	88031690927	150
1102500000	1102500055	1102500893	110566086007	110951948125	150
1102500000	1102500055	1102500893	110566086007	110951948125	150
1094500000	1094500098	1094500730	109786755777	109656347068	150
1094500000	1094500098	1094500730	109786755777	109656347068	150
1096400000	1096400929	1096400837	109250194290	109009207351	150
1096400000	1096400929	1096400837	109250194290	109009207351	150
1073400000	1073400377	1073400611	107157634462	107734246602	150
1073400000	1073400377	1073400611	107157634462	107734246602	150
1057400000	1057400377	1057400442	105740074408	105749214721	150
1057400000	1057400377	1057400442	105740074408	105749214721	150
1004500000	1004500361	1004500862	100353875588	100547649796	150
1004500000	1004500361	1004500862	100353875588	100547649796	150
1008400000	1008400862	1008400935	100473169571	100871751958	150
1008400000	1008400862	1008400935	100473169571	100871751958	150
1052400000	1052400297	1052400422	105106286086	105635149490	150
1052400000	1052400297	1052400422	105106286086	105635149490	150
1020500000	1020500628	1020500108	102301692858	102952427766	150
1020500000	1020500628	1020500108	102301692858	102952427766	150
1193400000	1193400217	1193400819	119719092414	119552981254	150
1193400000	1193400217	1193400819	119719092414	119552981254	150
1193500000	1193500190	1193500774	119003126612	119490690472	150
1193500000	1193500190	1193500774	119003126612	119490690472	150
1205500000	1205500521	1205500850	120593612131	120639391252	150
1205500000	1205500521	1205500850	120593612131	120639391252	150
1235610000	1235610752	1235610233	123473065358	123015058445	150
1235610000	1235610752	1235610233	123473065358	123015058445	150
1236400000	1236400069	1236400225	123823937768	123516504478	150
1236400000	1236400069	1236400225	123823937768	123516504478	150
1214500000	1214500012	1214500975	121632132086	121467126188	150
1214500000	1214500012	1214500975	121632132086	121467126188	150
1215500000	1215500665	1215500956	121598079225	121808019585	150
1215500000	1215500665	1215500956	121598079225	121808019585	150
1192400000	1192400239	1192400831	119730855910	119553422299	150
1192400000	1192400239	1192400831	119730855910	119553422299	150
1184310000	1184310411	1184310670	118934717063	118135235803	150
1184310000	1184310411	1184310670	118934717063	118135235803	150
1184500000	1184500946	1184500643	118449670122	118980044319	150
1184500000	1184500946	1184500643	118449670122	118980044319	150
1124400000	1124400775	1124400114	112706542335	112303109703	150
1124400000	1124400775	1124400114	112706542335	112303109703	150

1141500000	1141500151	1141500304	114371986375	114990328085	150
1141500000	1141500151	1141500304	114371986375	114990328085	150
1165700000	1165700775	1165700524	116325814803	116706482502	150
1165700000	1165700775	1165700524	116325814803	116706482502	150
1132400000	1132400101	1132400238	113358325127	113224022865	150
1132400000	1132400101	1132400238	113358325127	113224022865	150
1352500000	1352500491	1352500413	135326597076	135904006859	150
1352500000	1352500491	1352500413	135326597076	135904006859	150
1349400000	1349400858	1349400345	134376774645	134043930067	150
1349400000	1349400858	1349400345	134376774645	134043930067	150
1328400000	1328400188	1328400164	132929503583	132694701164	150
1328400000	1328400188	1328400164	132929503583	132694701164	150
1365700000	1365700815	1365700544	136907113628	136499248541	150
1365700000	1365700815	1365700544	136907113628	136499248541	150
1310500000	1310500637	1310500039	131821417323	131760680661	150
1310500000	1310500637	1310500039	131821417323	131760680661	150
1333500000	1333500290	1333500205	133878343776	133346128557	150
1333500000	1333500290	1333500205	133878343776	133346128557	150
1354400000	1354400747	1354400430	135997444493	135843211752	150
1354400000	1354400747	1354400430	135997444493	135843211752	150
1324500000	1324500213	1324500078	132283001860	132429684969	150
1324500000	1324500213	1324500078	132283001860	132429684969	150
1287400000	1287400657	1287400759	128498832812	128229252110	150
1287400000	1287400657	1287400759	128498832812	128229252110	150
1303500000	1303500901	1303500909	130997733844	130628139773	150
1303500000	1303500901	1303500909	130997733844	130628139773	150
1264500000	1264500191	1264500459	126599382120	126989748215	150
1264500000	1264500191	1264500459	126599382120	126989748215	150
1281500000	1281500679	1281500710	128022645482	128560037614	150
1281500000	1281500679	1281500710	128022645482	128560037614	150
1265700000	1265700795	1265700534	126908494037	126358536636	150
1265700000	1265700795	1265700534	126908494037	126358536636	150
1284500000	1284500962	1284500652	128371117114	128303630064	150
1284500000	1284500962	1284500652	128371117114	128303630064	150
1255500000	1255500638	1255500364	125012464769	125522591498	150
1255500000	1255500638	1255500364	125012464769	125522591498	150
1273400000	1273400408	1273400631	127523122777	127954979665	150
1273400000	1273400408	1273400631	127523122777	127954979665	150
1258400000	1258400596	1258400448	125260385271	125303266010	150
1258400000	1258400596	1258400448	125260385271	125303266010	150
1477400000	1477400520	1477400681	147767719068	147340434617	150
1477400000	1477400520	1477400681	147767719068	147340434617	150
1483500000	1483500928	1483500705	148592537012	148077315843	150
1483500000	1483500928	1483500705	148592537012	148077315843	150
1442410000	1442410074	1442410360	144408885590	144378021903	150
1442410000	1442410074	1442410360	144408885590	144378021903	150
1594500000	1594500413	1594500779	159705742755	159713925314	150

1594500000	1594500413	1594500779	159705742755	159713925314	150
1590500000	1590500617	1590500847	159948389062	159338646398	150
1590500000	1590500617	1590500847	159948389062	159338646398	150
1512400000	1512400005	1512400079	151909610417	151215945487	150
1512400000	1512400005	1512400079	151909610417	151215945487	150
1515500000	1515500708	1515500991	151375512339	151888871895	150
1515500000	1515500708	1515500991	151375512339	151888871895	150
1552500000	1552500532	1552500432	155672115823	155305300449	150
1552500000	1552500532	1552500432	155672115823	155305300449	150
1526500000	1526500707	1526500110	152834654176	152779225887	150
1526500000	1526500707	1526500110	152834654176	152779225887	150
1553400000	1553400871	1553400463	155172723924	155269659759	150
1553400000	1553400871	1553400463	155172723924	155269659759	150
1494800000	1494800764	1494800886	149643821099	149335830250	150
1494800000	1494800764	1494800886	149643821099	149335830250	150
1521500000	1521500962	1521500146	152231578993	152759823944	150
1521500000	1521500962	1521500146	152231578993	152759823944	150
1708700000	1708700938	1708700965	170699378066	170792996181	150
1708700000	1708700938	1708700965	170699378066	170792996181	150
1724500000	1724500470	1724500117	172848771059	172749626522	150
1724500000	1724500470	1724500117	172848771059	172749626522	150
1702400000	1702400870	1702400000	170436064530	170972003292	150
1702400000	1702400870	1702400000	170436064530	170972003292	150
1694800000	1694800792	1694800907	169799008567	169250133260	150
1694800000	1694800792	1694800907	169799008567	169250133260	150
1697410000	1697410751	1697410881	169234536128	169706126340	150
1697410000	1697410751	1697410881	169234536128	169706126340	150
1722400000	1722400034	1722400198	172331983840	172618035984	150
1722400000	1722400034	1722400198	172331983840	172618035984	150
1734400000	1734400904	1734400273	173757658930	173910579053	150
1734400000	1734400904	1734400273	173757658930	173910579053	150
1693500000	1693500284	1693500823	169843060795	169068780508	150
1693500000	1693500284	1693500823	169843060795	169068780508	150
1675400000	1675400311	1675400670	167311104861	167281831630	150
1675400000	1675400311	1675400670	167311104861	167281831630	150
1657410000	1657410402	1657410484	165205340229	165598889262	150
1657410000	1657410402	1657410484	165205340229	165598889262	150
1665400000	1665400246	1665400570	166335797058	166360646770	150
1665400000	1665400246	1665400570	166335797058	166360646770	150
1620500000	1620500722	1620500167	162004050861	162627992889	150
1620500000	1620500722	1620500167	162004050861	162627992889	150
1633500000	1633500559	1633500234	163728985662	163984942125	150
1633500000	1633500559	1633500234	163728985662	163984942125	150
1649400000	1649400843	1649400375	164659675345	164058244096	150
1649400000	1649400843	1649400375	164659675345	164058244096	150
1626500000	1626500722	1626500120	162873032126	162904316035	150
1626500000	1626500722	1626500120	162873032126	162904316035	150

1824400000	1824400882	1824400183	182894590282	182299468322	150
1824400000	1824400882	1824400183	182894590282	182299468322	150
1809400000	1809400309	1809400999	180227100665	180142623005	150
1809400000	1809400309	1809400999	180227100665	180142623005	150
1842500000	1842500400	1842500363	184709208066	184006155595	150
1842500000	1842500400	1842500363	184709208066	184006155595	150
1815400000	1815400580	1815400082	181074824603	181055609989	150
1815400000	1815400580	1815400082	181074824603	181055609989	150
1808410000	1808410834	1808410002	180995957880	180227024255	150
1808410000	1808410834	1808410002	180995957880	180227024255	150
1745400000	1745400996	1745400381	174528691132	174167494855	150
1745400000	1745400996	1745400381	174528691132	174167494855	150
1777400000	1777400573	1777400710	177186323591	177961896768	150
1777400000	1777400573	1777400710	177186323591	177961896768	150
1795400000	1795400613	1795400878	179793288625	179261159007	150
1795400000	1795400613	1795400878	179793288625	179261159007	150
1774400000	1774400148	1774400668	177676687146	177594236831	150
1774400000	1774400148	1774400668	177676687146	177594236831	150
1758400000	1758400556	1758400496	175328259587	175773670358	150
1758400000	1758400556	1758400496	175328259587	175773670358	150
1934500000	1934500687	1934500234	193344225365	193669736152	150
1934500000	1934500687	1934500234	193344225365	193669736152	150
1965400000	1965400296	1965400600	196185333534	196834501106	150
1965400000	1965400296	1965400600	196185333534	196834501106	150
1947400000	1947400362	1947400432	194728118249	194383782981	150
1947400000	1947400362	1947400432	194728118249	194383782981	150
1974400000	1974400179	1974400688	197360306497	197701020005	150
1974400000	1974400179	1974400688	197360306497	197701020005	150
1988400000	1988400076	1988400812	198351248891	198645795185	150
1988400000	1988400076	1988400812	198351248891	198645795185	150
1914400000	1914400744	1914400095	191045956190	191435038504	150
1927400000	1927400183	1927400235	192533856305	192413099688	150
1927400000	1927400183	1927400235	192533856305	192413099688	150
1887400000	1887400659	1887400818	188777016695	188017008326	150
1887400000	1887400659	1887400818	188777016695	188017008326	150
1888400000	1888400059	1888400802	188686446245	188388016708	150
1888400000	1888400059	1888400802	188686446245	188388016708	150
1880500000	1880500492	1880500779	188824060289	188671910454	150
1880500000	1880500492	1880500779	188824060289	188671910454	150
1895400000	1895400630	1895400888	189612765865	189713251150	150
1895400000	1895400630	1895400888	189612765865	189713251150	150
1878400000	1878400876	1878400703	187413612327	187993140896	150
1878400000	1878400876	1878400703	187413612327	187993140896	150
1874400000	1874400164	1874400678	187192670370	187586854672	150
1874400000	1874400164	1874400678	187192670370	187586854672	150
1910500000	1910500612	1910500098	191865522078	191732203062	150
1910500000	1910500612	1910500098	191865522078	191732203062	150

1913700000	1913700346	1913700138	191531193368	191513516578	150
1913700000	1913700346	1913700138	191531193368	191513516578	150
1869400000	1869400130	1869400591	186382816807	186394995172	150
1869400000	1869400130	1869400591	186382816807	186394995172	150
1900500000	1900500567	1900500999	190376359578	190780717012	150
1900500000	1900500567	1900500999	190376359578	190780717012	150
2093600000	2093600875	2093600770	209696520962	209079812852	150
2093600000	2093600875	2093600770	209696520962	209079812852	150
2057410000	2057410461	2057410425	205092324854	205916107381	150
2057410000	2057410461	2057410425	205092324854	205916107381	150
2072400000	2072400252	2072400623	207675081585	207914085681	150
2072400000	2072400252	2072400623	207675081585	207914085681	150
2056400000	2056400403	2056400414	205808282997	205787087413	150
2056400000	2056400403	2056400414	205808282997	205787087413	150
2105310000	2105310821	2105310870	210425460128	210403135102	150
2105310000	2105310821	2105310870	210425460128	210403135102	150
2113500000	2113500038	2113500989	211433696221	211493425642	150
2113500000	2113500038	2113500989	211433696221	211493425642	150
2051500000	2051500324	2051500393	205464576815	205929095278	150
2051500000	2051500324	2051500393	205464576815	205929095278	150
2084310000	2084310393	2084310661	208155488981	208721274647	150
2084310000	2084310393	2084310661	208155488981	208721274647	150
2054500000	2054500793	2054500341	205402079746	205292511845	150
2054500000	2054500793	2054500341	205402079746	205292511845	150
2042500000	2042500552	2042500284	204728069779	204716796042	150
2042500000	2042500552	2042500284	204728069779	204716796042	150
2013400000	2013400022	2013400021	201209237296	201381890187	150
2013400000	2013400022	2013400021	201209237296	201381890187	150
2023400000	2023400182	2023400120	202920529619	202246491353	150
2023400000	2023400182	2023400120	202920529619	202246491353	150
1990500000	1990500692	1990500887	199469673078	199565581103	150
1990500000	1990500692	1990500887	199469673078	199565581103	150
2015400000	2015400445	2015400996	201826831278	201943981138	150
2015400000	2015400445	2015400996	201826831278	201943981138	150
2015500000	2015500646	2015500934	201155073615	201549810931	150
2015500000	2015500646	2015500934	201155073615	201549810931	150
2032400000	2032400087	2032400229	203973706820	203130772214	150
2032400000	2032400087	2032400229	203973706820	203130772214	150
2004500000	2004500363	2004500863	200367750137	200598693109	150
2004500000	2004500363	2004500863	200367750137	200598693109	150
2187410000	2187410668	2187410733	218883697272	218835147782	150
2187410000	2187410668	2187410733	218883697272	218835147782	150
2228400000	2228400172	2228400155	222132614809	222294343595	150
2228400000	2228400172	2228400155	222132614809	222294343595	150
2230500000	2230500815	2230500227	223144777224	223413913317	150
2230500000	2230500815	2230500227	223144777224	223413913317	150
2224400000	2224400792	2224400125	222051480952	222153079186	150

2224400000	2224400792	2224400125	222051480952	222153079186	150
2222400000	2222400947	2222400149	222107530515	222885919914	150
2222400000	2222400947	2222400149	222107530515	222885919914	150
2235400000	2235400788	2235400227	223047924344	223068247729	150
2235400000	2235400788	2235400227	223047924344	223068247729	150
2171600000	2171600217	2171600595	217010716624	217140711071	150
2171600000	2171600217	2171600595	217010716624	217140711071	150
2172400000	2172400269	2172400634	217056413547	217213189523	150
2172400000	2172400269	2172400634	217056413547	217213189523	150
2125400000	2125400592	2125400113	212523234612	212730525127	150
2125400000	2125400592	2125400113	212523234612	212730525127	150
2352210000	2352210532	2352210503	235814458445	235551443083	150
2352210000	2352210532	2352210503	235814458445	235551443083	150
2323610000	2323610016	2323610162	232209979006	232326889256	150
2323610000	2323610016	2323610162	232209979006	232326889256	150
2334500000	2334500582	2334500176	233724307778	233027123187	150
2334500000	2334500582	2334500176	233724307778	233027123187	150
2284310000	2284310382	2284310681	228907455721	228847925473	150
2284310000	2284310382	2284310681	228907455721	228847925473	150
2297400000	2297400729	2297400858	229284587492	229290576243	150
2297400000	2297400729	2297400858	229284587492	229290576243	150
2293500000	2293500210	2293500785	229508512839	229388288732	150
2293500000	2293500210	2293500785	229508512839	229388288732	150
2294400000	2294400249	2294400818	229599010410	229337374247	150
2294400000	2294400249	2294400818	229599010410	229337374247	150
2257400000	2257400297	2257400463	225755981561	225075869582	150
2257400000	2257400297	2257400463	225755981561	225075869582	150
2454500000	2454500864	2454500380	245712495217	245319057456	150
2454500000	2454500864	2454500380	245712495217	245319057456	150
2463400000	2463400284	2463400552	246425482722	246967828869	150
2463400000	2463400284	2463400552	246425482722	246967828869	150
2464500000	2464500229	2464500480	246994706150	246501569935	150
2464500000	2464500229	2464500480	246994706150	246501569935	150
2434500000	2434500602	2434500185	243684172719	243953823388	150
2434500000	2434500602	2434500185	243684172719	243953823388	150
2443400000	2443400688	2443400355	244778271882	244860173751	150
2459400000	2459400975	2459400454	245869159136	245156352872	150
2459400000	2459400975	2459400454	245869159136	245156352872	150
2413500000	2413500088	2413500019	241023616830	241516057648	150
2413500000	2413500088	2413500019	241023616830	241516057648	150
2404400000	2404400599	2404400946	240056299836	240847898452	150
2404400000	2404400599	2404400946	240056299836	240847898452	150
2394500000	2394500151	2394500760	239934987396	239543941672	150
2394500000	2394500151	2394500760	239934987396	239543941672	150
2394800000	2394800750	2394800877	239978730908	239382219443	150
2394800000	2394800750	2394800877	239978730908	239382219443	150
2411500000	2411500849	2411500038	241204731042	241551674504	150

2411500000	2411500849	2411500038	241204731042	241551674504	150
2424500000	2424500409	2424500089	242503453587	242925063772	150
2424500000	2424500409	2424500089	242503453587	242925063772	150
2388400000	2388400972	2388400754	238841707635	238228922709	150
2388400000	2388400972	2388400754	238841707635	238228922709	150
2367400000	2367400475	2367400573	236630500176	236836004430	150
2367400000	2367400475	2367400573	236630500176	236836004430	150
2367410000	2367410520	2367410556	236207452876	236097139379	150
2367410000	2367410520	2367410556	236207452876	236097139379	150
2374400000	2374400089	2374400629	237608595272	237906376698	150
2374400000	2374400089	2374400629	237608595272	237906376698	150
2571500000	2571500669	2571500643	257636244323	257114046022	150
2571500000	2571500669	2571500643	257636244323	257114046022	150
2583400000	2583400120	2583400762	258528044015	258864365919	150
2583400000	2583400120	2583400762	258528044015	258864365919	150
2583600000	2583600770	2583600720	258323503399	258386633706	150
2583600000	2583600770	2583600720	258323503399	258386633706	150
2606400000	2606400763	2606400968	260753968037	260591774349	150
2606400000	2606400763	2606400968	260753968037	260591774349	150
2563500000	2563500495	2563500519	256691537600	256482868456	150
2563500000	2563500495	2563500519	256691537600	256482868456	150
2534500000	2534500619	2534500195	253587979516	253275247050	150
2534500000	2534500619	2534500195	253587979516	253275247050	150
2525400000	2525400659	2525400155	252539776804	252633342134	150
2525400000	2525400659	2525400155	252539776804	252633342134	150
2505400000	2505400360	2505400947	250489582008	250866482471	150
2505400000	2505400360	2505400947	250489582008	250866482471	150
2535400000	2535400845	2535400259	253724777040	253137987145	150
2535400000	2535400845	2535400259	253724777040	253137987145	150
2699400000	2699400496	2699400871	269238625273	269006763222	150
2699400000	2699400496	2699400871	269238625273	269006763222	150
2693400000	2693400297	2693400869	269884453549	269593367339	150
2693400000	2693400297	2693400869	269884453549	269593367339	150
2677700000	2677700116	2677700661	267769469269	267912507352	150
2677700000	2677700116	2677700661	267769469269	267912507352	150
2729400000	2729400544	2729400188	272270928101	272008849682	150
2729400000	2729400544	2729400188	272270928101	272008849682	150
2713700000	2713700328	2713700119	271155800343	271560348250	150
2637400000	2637400160	2637400306	263323056999	263624063140	150
2637400000	2637400160	2637400306	263323056999	263624063140	150
2650500000	2650500000	2650500464	265346958529	265018019893	150
2650500000	2650500000	2650500464	265346958529	265018019893	150
2625500000	2625500890	2625500107	262304661978	262427184286	150
2625500000	2625500890	2625500107	262304661978	262427184286	150
2642500000	2642500670	2642500344	264840473641	264970324375	150
2642500000	2642500670	2642500344	264840473641	264970324375	150
2672400000	2672400838	2672400684	267946744000	267324872325	150

2672400000	2672400838	2672400684	267946744000	267324872325	150
2852500000	2852500587	2852500463	285719615973	285422471821	150
2852500000	2852500587	2852500463	285719615973	285422471821	150
2815500000	2815500759	2815500026	281198190518	281838397735	150
2815500000	2815500759	2815500026	281198190518	281838397735	150
2832400000	2832400093	2832400305	283057078843	283831851815	150
2832400000	2832400093	2832400305	283057078843	283831851815	150
2835400000	2835400900	2835400290	283709337779	283399123788	150
2835400000	2835400900	2835400290	283709337779	283399123788	150
2857400000	2857400398	2857400523	285497057925	285174829967	150
2857400000	2857400398	2857400523	285497057925	285174829967	150
2832500000	2832500515	2832500264	283599039972	283897114124	150
2832500000	2832500515	2832500264	283599039972	283897114124	150
2783400000	2783400155	2783400781	278587634807	278573237520	150
2783400000	2783400155	2783400781	278587634807	278573237520	150
2783500000	2783500975	2783500734	278508508702	278561699795	150
2783500000	2783500975	2783500734	278508508702	278561699795	150
2786400000	2786400884	2786400807	278243484978	278113366870	150
2786400000	2786400884	2786400807	278243484978	278113366870	150
2759400000	2759400029	2759400482	275927888463	275064917544	150
2759400000	2759400029	2759400482	275927888463	275064917544	150
2749400000	2749400861	2749400386	274350610510	274263222340	150
2749400000	2749400861	2749400386	274350610510	274263222340	150
2765400000	2765400265	2765400581	276610594203	276766045276	150
2765400000	2765400265	2765400581	276610594203	276766045276	150
2956400000	2956400552	2956400511	295305492696	295354257694	150
2956400000	2956400552	2956400511	295305492696	295354257694	150
2972500000	2972500782	2972500674	297811262736	297357360655	150
2972500000	2972500782	2972500674	297811262736	297357360655	150
2957410000	2957410453	2957410515	295391591750	295586159145	150
2957410000	2957410453	2957410515	295391591750	295586159145	150
2924500000	2924500509	2924500138	292508923770	292222140972	150
2924500000	2924500509	2924500138	292508923770	292222140972	150
2952500000	2952500605	2952500473	295592464547	295733184076	150
2952500000	2952500605	2952500473	295592464547	295733184076	150
2931500000	2931500213	2931500285	293036386773	293325018443	150
2931500000	2931500213	2931500285	293036386773	293325018443	150
2968400000	2968400813	2968400615	296727264029	296598432599	150
2968400000	2968400813	2968400615	296727264029	296598432599	150
2889400000	2889400369	2889400790	288303250076	288754663370	150
2889400000	2889400369	2889400790	288303250076	288754663370	150
3097410000	3097410659	3097410824	309158358642	309873390800	150
3097410000	3097410659	3097410824	309158358642	309873390800	150
3068400000	3068400612	3068400528	306891518353	306284309391	150
3068400000	3068400612	3068400528	306891518353	306284309391	150
3104500000	3104500383	3104500874	310463891771	310890914895	150
3104500000	3104500383	3104500874	310463891771	310890914895	150

3107400000	3107400002	3107400959	310759665420	310205084572	150
3107400000	3107400002	3107400959	310759665420	310205084572	150
3070500000	3070500220	3070500603	307714082148	307010290213	150
3070500000	3070500220	3070500603	307714082148	307010290213	150
3046400000	3046400205	3046400310	304679836555	304346299749	150
3046400000	3046400205	3046400310	304679836555	304346299749	150
3055500000	3055500611	3055500345	305217983027	305728131095	150
3055500000	3055500611	3055500345	305217983027	305728131095	150
3094400000	3094400217	3094400799	309797253487	309429041748	150
3094400000	3094400217	3094400799	309797253487	309429041748	150
3048400000	3048400385	3048400333	304215962924	304604596247	150
3048400000	3048400385	3048400333	304215962924	304604596247	150
2984400000	2984400199	2984400788	298498010191	298538705996	150
2984400000	2984400199	2984400788	298498010191	298538705996	150
3004400000	3004400534	3004400908	300459475842	300102511862	150
3004400000	3004400534	3004400908	300459475842	300102511862	150
3021610000	3021610801	3021610158	302164862521	302731343039	150
3038400000	3038400317	3038400234	303945108874	303096692403	150
3038400000	3038400317	3038400234	303945108874	303096692403	150
2991500000	2991500016	2991500874	299644016075	299383375591	150
2991500000	2991500016	2991500874	299644016075	299383375591	150
3024500000	3024500157	3024500051	302909451722	302760701046	150
3024500000	3024500157	3024500051	302909451722	302760701046	150
2993500000	2993500343	2993500853	299742160326	299420654584	150
2993500000	2993500343	2993500853	299742160326	299420654584	150
3009400000	3009400181	3009400922	300507134285	300961979654	150
3009400000	3009400181	3009400922	300507134285	300961979654	150
2997400000	2997400846	2997400926	299927356145	299503359749	150
2997400000	2997400846	2997400926	299927356145	299503359749	150
2994500000	2994500475	2994500820	299730081416	299933722357	150
2994500000	2994500475	2994500820	299730081416	299933722357	150
3202400000	3202400786	3202400953	320014103516	320361564217	150
3202400000	3202400786	3202400953	320014103516	320361564217	150
3218400000	3218400051	3218400056	321358985079	321022186539	150
3218400000	3218400051	3218400056	321358985079	321022186539	150
3221500000	3221500989	3221500118	322924805798	322329548493	150
3221500000	3221500989	3221500118	322924805798	322329548493	150
3192500000	3192500854	3192500792	319792475584	319804806502	150
3192500000	3192500854	3192500792	319792475584	319804806502	150
3208400000	3208400895	3208400957	320443594344	320408951047	150
3208400000	3208400895	3208400957	320443594344	320408951047	150
3194410000	3194410106	3194410822	319436165272	319395459768	150
3194410000	3194410106	3194410822	319436165272	319395459768	150
3197400000	3197400714	3197400850	319924888015	319960986249	150
3197400000	3197400714	3197400850	319924888015	319960986249	150
3216400000	3216400809	3216400029	321704094096	321567985770	150
3216400000	3216400809	3216400029	321704094096	321567985770	150

3166400000	3166400587	3166400533	316395872707	316034859594	150
3166400000	3166400587	3166400533	316395872707	316034859594	150
3131500000	3131500066	3131500208	313208199933	313094895389	150
3131500000	3131500066	3131500208	313208199933	313094895389	150
3138400000	3138400337	3138400244	313775351848	313765846247	150
3138400000	3138400337	3138400244	313775351848	313765846247	150
3154400000	3154400719	3154400412	315170730840	315006179523	150
3154400000	3154400719	3154400412	315170730840	315006179523	150
3148400000	3148400401	3148400343	314313273741	314625200564	150
3148400000	3148400401	3148400343	314313273741	314625200564	150
3127400000	3127400068	3127400159	312785184296	312563209861	150
3127400000	3127400068	3127400159	312785184296	312563209861	150
3316400000	3316400822	3316400039	331820410163	331892926753	150
3316400000	3316400822	3316400039	331820410163	331892926753	150
3317400000	3317400183	3317400081	331185916769	331125255699	150
3317400000	3317400183	3317400081	331185916769	331125255699	150
3350500000	3350500951	3350500435	335466377945	335669213444	150
3350500000	3350500951	3350500435	335466377945	335669213444	150
3307400000	3307400031	3307400981	330636944216	330120153724	150
3307400000	3307400031	3307400981	330636944216	330120153724	150
3326400000	3326400986	3326400138	332237023604	332371956693	150
3326400000	3326400986	3326400138	332237023604	332371956693	150
3354700000	3354700463	3354700458	335045977321	335846467066	150
3354700000	3354700463	3354700458	335045977321	335846467066	150
3336400000	3336400092	3336400236	333393284427	333230975508	150
3336400000	3336400092	3336400236	333393284427	333230975508	150
3329400000	3329400487	3329400149	332952846090	332869254648	150
3329400000	3329400487	3329400149	332952846090	332869254648	150
3300500000	3300500462	3300500942	330672465126	330139629338	150
3300500000	3300500462	3300500942	330672465126	330139629338	150
3282400000	3282400942	3282400743	328452081869	328417815767	150
3282400000	3282400942	3282400743	328452081869	328417815767	150
3292400000	3292400260	3292400843	329526206344	329527043053	150
3292400000	3292400260	3292400843	329526206344	329527043053	150
3287410000	3287410687	3287410744	328550965498	328714901588	150
3287410000	3287410687	3287410744	328550965498	328714901588	150
3287700000	3287700539	3287700720	328079204198	328147145822	150
3287700000	3287700539	3287700720	328079204198	328147145822	150
3238400000	3238400355	3238400254	323777539142	323084626524	150
3238400000	3238400355	3238400254	323777539142	323084626524	150
3254700000	3254700444	3254700448	325311560178	325344411586	150
3254700000	3254700444	3254700448	325311560178	325344411586	150
3231500000	3231500084	3231500218	323267414889	323158668474	150
3231500000	3231500084	3231500218	323267414889	323158668474	150
3293400000	3293400237	3293400830	329051165801	329055385508	150
3293400000	3293400237	3293400830	329051165801	329055385508	150
3293500000	3293500212	3293500786	329344706733	329676401303	150

3293500000	3293500212	3293500786	329344706733	329676401303	150
3234500000	3234500566	3234500168	323664451221	323560234910	150
3234500000	3234500566	3234500168	323664451221	323560234910	150
3458610000	3458610358	3458610412	345629329957	345300189433	150
3458610000	3458610358	3458610412	345629329957	345300189433	150
3468400000	3468400719	3468400566	346219252347	346724021806	150
3468400000	3468400719	3468400566	346219252347	346724021806	150
3405400000	3405400344	3405400938	340830020106	340953521310	150
3405400000	3405400344	3405400938	340830020106	340953521310	150
3382500000	3382500713	3382500715	338175095011	338809874213	150
3382500000	3382500713	3382500715	338175095011	338809874213	150
3383400000	3383400087	3383400743	338531238511	338561974778	150
3383400000	3383400087	3383400743	338531238511	338561974778	150
3387510000	3387510489	3387510811	338733732940	338141494728	150
3387510000	3387510489	3387510811	338733732940	338141494728	150
3410500000	3410500659	3410500051	341030931621	341858532087	150
3410500000	3410500659	3410500051	341030931621	341858532087	150
3580500000	3580500510	3580500751	358328765830	358338004470	150
3580500000	3580500510	3580500751	358328765830	358338004470	150
3584400000	3584400273	3584400749	358319681130	358622818734	150
3574500000	3574500426	3574500584	357308740840	357919048987	150
3574500000	3574500426	3574500584	357308740840	357919048987	150
3565400000	3565400233	3565400562	356873829104	356035170498	150
3565400000	3565400233	3565400562	356873829104	356035170498	150
3538400000	3538400406	3538400284	353471081354	353246902606	150
3538400000	3538400406	3538400284	353471081354	353246902606	150
3522400000	3522400000	3522400180	352320683783	352520701154	150
3522400000	3522400000	3522400180	352320683783	352520701154	150
3508410000	3508410895	3508410974	350112767090	350921878717	150
3508410000	3508410895	3508410974	350112767090	350921878717	150
3525500000	3525500876	3525500098	352790362927	352357515785	150
3525500000	3525500876	3525500098	352790362927	352357515785	150
3545400000	3545400965	3545400363	354755847512	354764185712	150
3545400000	3545400965	3545400363	354755847512	354764185712	150
3504400000	3504400613	3504400957	350245743947	350447598163	150
3504400000	3504400613	3504400957	350245743947	350447598163	150
3713400000	3713400133	3713400092	371960741252	371438374139	150
3713400000	3713400133	3713400092	371960741252	371438374139	150
3725400000	3725400701	3725400177	372438102315	372932671109	150
3725400000	3725400701	3725400177	372438102315	372932671109	150
3725710000	3725710617	3725710109	372987768339	372187910486	150
3725710000	3725710617	3725710109	372987768339	372187910486	150
3684500000	3684500039	3684500692	368308512321	368242646015	150
3684500000	3684500039	3684500692	368308512321	368242646015	150
3704400000	3704400644	3704400977	370438162432	370080933465	150
3704400000	3704400644	3704400977	370438162432	370080933465	150
3714400000	3714400718	3714400077	371445212087	371639563153	150

3714400000	3714400718	3714400077	371445212087	371639563153	150
3671500000	3671500567	3671500654	367396717710	367545101611	150
3671500000	3671500567	3671500654	367396717710	367545101611	150
3652400000	3652400000	3652400484	365285901237	365173775044	150
3652400000	3652400000	3652400484	365285901237	365173775044	150
3618400000	3618400115	3618400096	361536200989	361252709348	150
3618400000	3618400115	3618400096	361536200989	361252709348	150
3653400000	3653400892	3653400475	365439462642	365713056385	150
3653400000	3653400892	3653400475	365439462642	365713056385	150
3613400000	3613400119	3613400082	361856360769	361139843740	150
3613400000	3613400119	3613400082	361856360769	361139843740	150
3802400000	3802400890	3802400012	380631414118	380347974647	150
3802400000	3802400890	3802400012	380631414118	380347974647	150
3846400000	3846400369	3846400393	384033808430	384531491223	150
3846400000	3846400369	3846400393	384033808430	384531491223	150
3854500000	3854500933	3854500421	385610462596	385167548376	150
3854500000	3854500933	3854500421	385610462596	385167548376	150
3792500000	3792500960	3792500852	379334810069	379930664573	150
3792500000	3792500960	3792500852	379334810069	379930664573	150
3740500000	3740500941	3740500375	374721956665	374173425112	150
3740500000	3740500941	3740500375	374721956665	374173425112	150
3794400000	3794400337	3794400869	379956693265	379843379523	150
3794400000	3794400337	3794400869	379956693265	379843379523	150
3950500000	3950500095	3950500494	395559260604	395248489881	150
3950500000	3950500095	3950500494	395559260604	395248489881	150
3935400000	3935400856	3935400301	393286559794	393374389303	150
3935400000	3935400856	3935400301	393286559794	393374389303	150
3959400000	3959400068	3959400503	395966432900	395650143741	150
3959400000	3959400068	3959400503	395966432900	395650143741	150
3984500000	3984500086	3984500722	398247473640	398825680498	150
3984500000	3984500086	3984500722	398247473640	398825680498	150
3982400000	3982400053	3982400813	398616328415	398439989630	150
3982400000	3982400053	3982400813	398616328415	398439989630	150
3955700000	3955700742	3955700506	395051624717	395622299215	150
3955700000	3955700742	3955700506	395051624717	395622299215	150
3926400000	3926400026	3926400197	392070710245	392807005874	150
3926400000	3926400026	3926400197	392070710245	392807005874	150
3938400000	3938400471	3938400323	393725621514	393573219502	150
3938400000	3938400471	3938400323	393725621514	393573219502	150
3904500000	3904500960	3904500947	390226844564	390663858460	150
3904500000	3904500960	3904500947	390226844564	390663858460	150
3897700000	3897700785	3897700879	389001183430	389495135519	150
3897700000	3897700785	3897700879	389001183430	389495135519	150
3884500000	3884500072	3884500712	388746159317	388257949357	150
3884500000	3884500072	3884500712	388746159317	388257949357	150
3901500000	3901500763	3901500989	390205740601	390821247019	150
3901500000	3901500763	3901500989	390205740601	390821247019	150

3891500000	3891500999	3891500865	389986475689	389815132902	150
3891500000	3891500999	3891500865	389986475689	389815132902	150
3894500000	3894500462	3894500811	389948826594	389510781611	150
3894500000	3894500462	3894500811	389948826594	389510781611	150
4083500000	4083500859	4083500668	408035616681	408326411626	150
4083500000	4083500859	4083500668	408035616681	408326411626	150
4042400000	4042400130	4042400326	404696817836	404474300165	150
4042400000	4042400130	4042400326	404696817836	404474300165	150
4047400000	4047400227	4047400346	404887044349	404310552783	150
4047400000	4047400227	4047400346	404887044349	404310552783	150
4093400000	4093400207	4093400812	409922397559	409139760989	150
4093400000	4093400207	4093400812	409922397559	409139760989	150
4069400000	4069400085	4069400514	406418287411	406353546433	150
4069400000	4069400085	4069400514	406418287411	406353546433	150
4094310000	4094310530	4094310762	409590427467	409605862458	150
4094310000	4094310530	4094310762	409590427467	409605862458	150
4054700000	4054700405	4054700429	405950166894	405149753734	150
4054700000	4054700405	4054700429	405950166894	405149753734	150
3987410000	3987410640	3987410813	398753598375	398914862582	150
3987410000	3987410640	3987410813	398753598375	398914862582	150
3987700000	3987700676	3987700790	398466349376	398562002092	150
4210500000	4210500625	4210500032	421136537354	421795992993	150
4210500000	4210500625	4210500032	421136537354	421795992993	150
4165400000	4165400172	4165400523	416110860926	416024136350	150
4165400000	4165400172	4165400523	416110860926	416024136350	150
4164400000	4164400879	4164400512	416562167715	416288875255	150
4164400000	4164400879	4164400512	416562167715	416288875255	150
4198400000	4198400119	4198400835	419024830151	419746350326	150
4198400000	4198400119	4198400835	419024830151	419746350326	150
4209510000	4209510206	4209510995	420899655764	420505786109	150
4209510000	4209510206	4209510995	420899655764	420505786109	150
4219400000	4219400315	4219400042	421731322308	421329164653	150
4219400000	4219400315	4219400042	421731322308	421329164653	150
4173500000	4173500706	4173500581	417590457347	417755174741	150
4173500000	4173500706	4173500581	417590457347	417755174741	150
4103400000	4103400410	4103400934	410586823383	410660758913	150
4103400000	4103400410	4103400934	410586823383	410660758913	150
4322400000	4322400969	4322400161	432639942592	432822457668	150
4322400000	4322400969	4322400161	432639942592	432822457668	150
4136400000	4136400059	4136400218	413590748192	413145620080	150
4136400000	4136400059	4136400218	413590748192	413145620080	150
4123400000	4123400202	3123400131	412349029271	412638339980	150
4123400000	4123400202	3123400131	412349029271	412638339980	150
4152410000	4152410191	4152410437	415069633052	415822381807	150
4152410000	4152410191	4152410437	415069633052	415822381807	150
4124610000	4124610945	4124610137	412073337529	412790656058	150
4124610000	4124610945	4124610137	412073337529	412790656058	150

4156400000	4156400423	4156400427	415490540302	415005010127	150
4156400000	4156400423	4156400427	415490540302	415005010127	150
4309400000	4309400236	4309400953	430118175627	430179321364	150
4309400000	4309400236	4309400953	430118175627	430179321364	150
4312400000	4312400975	3312400062	431440527296	431615292809	150
4312400000	4312400975	3312400062	431440527296	431615292809	150
4294800000	4294800739	4294800869	429438159934	429101529156	150
4294800000	4294800739	4294800869	429438159934	429101529156	150
4344400000	4344400002	4344400334	434465332676	434477913047	150
4344400000	4344400002	4344400334	434465332676	434477913047	150
4301500000	4301500761	4301500930	430688198723	430665159763	150
4301500000	4301500761	4301500930	430688198723	430665159763	150
4323700000	4323700424	4323700178	432391689469	432481278067	150
4323700000	4323700424	4323700178	432391689469	432481278067	150
4279410000	4279410103	4279410628	427122529175	427218079447	150
4279410000	4279410103	4279410628	427122529175	427218079447	150
4257500000	4257500330	4257500368	425472762296	425663319382	150
4257500000	4257500330	4257500368	425472762296	425663319382	150
4259400000	4259400946	4259400437	425125612268	425293732518	150
4259400000	4259400946	4259400437	425125612268	425293732518	150
4261500000	4261500429	4261500515	426885285588	426626513830	150
4261500000	4261500429	4261500515	426885285588	426626513830	150
4232500000	4232500408	4232500205	423305336734	423519321846	150
4232500000	4232500408	4232500205	423305336734	423519321846	150
4255500000	4255500642	4255500367	425363539574	425399070028	150
4255500000	4255500642	4255500367	425363539574	425399070028	150
4253400000	4253400824	4253400436	425812407415	425948944667	150
4253400000	4253400824	4253400436	425812407415	425948944667	150
4426500000	4426500695	4426500103	442915694525	442679871406	150
4426500000	4426500695	4426500103	442915694525	442679871406	150
4458400000	4458400640	4458400470	445137111230	445767991396	150
4458400000	4458400640	4458400470	445137111230	445767991396	150
4444500000	4444500693	4444500285	444449565249	444707111493	150
4444500000	4444500693	4444500285	444449565249	444707111493	150
4431500000	4431500124	4431500238	443752738957	443707704715	150
4431500000	4431500124	4431500238	443752738957	443707704715	150
4440500000	4440500894	4440500346	444199283385	444255236185	150
4440500000	4440500894	4440500346	444199283385	444255236185	150
4456700000	4456700902	4456700446	445795527934	445260233313	150
4456700000	4456700902	4456700446	445795527934	445260233313	150
4438400000	4438400392	4438400275	443944596920	443941884862	150
4438400000	4438400392	4438400275	443944596920	443941884862	150
4457400000	4457400333	4457400485	445450726136	445841132802	150
4457400000	4457400333	4457400485	445450726136	445841132802	150
4393400000	4393400257	4393400841	439831877768	439819520469	150
4393400000	4393400257	4393400841	439831877768	439819520469	150
4391500000	4391500897	4391500816	439990166648	439845769532	150

4391500000	4391500897	4391500816	439990166648	439845769532	150
4564400000	4564400943	4564400552	456863667930	456768247524	150
4564400000	4564400943	4564400552	456863667930	456768247524	150
4558400000	4558400656	4558400480	455215586422	455891204247	150
4558400000	4558400656	4558400480	455215586422	455891204247	150
4567400000	4567400513	4567400595	456899677453	456282487614	150
4567400000	4567400513	4567400595	456899677453	456282487614	150
4568500000	4568500510	4568500516	456757233707	456724821435	150
4568500000	4568500510	4568500516	456757233707	456724821435	150
4577400000	4577400542	4577400694	457250088076	457048256155	150
4577400000	4577400542	4577400694	457250088076	457048256155	150
4565710000	4565710006	4565710485	456098075400	456323818097	150
4565710000	4565710006	4565710485	456098075400	456323818097	150
4543400000	4543400710	4543400367	454015880331	454985041086	150
4543400000	4543400710	4543400367	454015880331	454985041086	150
4587400000	4587400717	4587400792	458850780681	458328267829	150
4587400000	4587400717	4587400792	458850780681	458328267829	150
4484310000	4484310421	4484310702	448395816501	448611087281	150
4484310000	4484310421	4484310702	448395816501	448611087281	150
4476400000	4476400750	4476400670	447105088699	447608030565	150
4476400000	4476400750	4476400670	447105088699	447608030565	150
4469500000	4469500677	4469500528	446755210942	446890777736	150
4469500000	4469500677	4469500528	446755210942	446890777736	150
4494500000	4494500401	4494500772	449438333935	449819952862	150
4494500000	4494500401	4494500772	449438333935	449819952862	150
4473400000	4473400445	4473400654	447386925987	447001716200	150
4473400000	4473400445	4473400654	447386925987	447001716200	150
4502400000	4502400836	4502400984	450757833691	450202266251	150
4502400000	4502400836	4502400984	450757833691	450202266251	150
4683400000	4683400139	4683400773	468074878438	468720758326	150
4683400000	4683400139	4683400773	468074878438	468720758326	150
4710500000	4710500584	4710500081	471639540894	471449979801	150
4710500000	4710500584	4710500081	471639540894	471449979801	150
4715400000	4715400568	4715400073	471286478428	471395489719	150
4715400000	4715400568	4715400073	471286478428	471395489719	150
4594800000	4594800780	4594800900	459432633544	459479147620	150
4594800000	4594800780	4594800900	459432633544	459479147620	150
4600500000	4600500511	4600500973	460974107237	460766772852	150
4600500000	4600500511	4600500973	460974107237	460766772852	150
4615500000	4615500728	4615500006	461903358322	461096306116	150
4615500000	4615500728	4615500006	461903358322	461096306116	150
4634400000	4634400892	4634400266	463081571879	463942669607	150
4634400000	4634400892	4634400266	463081571879	463942669607	150
4609400000	4609400282	4609400982	460104405386	460000626355	150
4609400000	4609400282	4609400982	460104405386	460000626355	150
4595400000	4595400584	4595400861	459019822195	459040728310	150
4595400000	4595400584	4595400861	459019822195	459040728310	150

4607400000	4607400082	4607400012	460506837326	460106500401	150
4607400000	4607400082	4607400012	460506837326	460106500401	150
4807400000	4807400113	4807400032	480911398499	480775448341	150
4807400000	4807400113	4807400032	480911398499	480775448341	150
4815400000	4815400587	4815400085	481983536966	481992795433	150
4815400000	4815400587	4815400085	481983536966	481992795433	150
4817400000	4817400028	4817400130	481115654904	481775397878	150
4817400000	4817400028	4817400130	481115654904	481775397878	150
4834500000	4834500676	4834500227	483729878842	483612829924	150
4834500000	4834500676	4834500227	483729878842	483612829924	150
4829400000	4829400615	4829400200	482794371887	482214612513	150
4829400000	4829400615	4829400200	482794371887	482214612513	150
4784800000	4784800666	4784800820	478958413778	478234788718	150
4784800000	4784800666	4784800820	478958413778	478234788718	150
4767400000	4767400547	4767400615	476111041462	476810254632	150
4767400000	4767400547	4767400615	476111041462	476810254632	150
4719400000	4719400392	4719400092	471557406626	471881698090	150
4719400000	4719400392	4719400092	471557406626	471881698090	150
4720500000	4720500741	4720500179	472929789780	472789002351	150
4720500000	4720500741	4720500179	472929789780	472789002351	150
4744500000	4744500744	4744500314	474884616292	474320775247	150
4744500000	4744500744	4744500314	474884616292	474320775247	150
4927400000	4927400188	4927400238	492171122153	492986483013	150
4927400000	4927400188	4927400238	492171122153	492986483013	150
4923500000	4923500223	4923500168	492374642699	492037809501	150
4923500000	4923500223	4923500168	492374642699	492037809501	150
4929400000	4929400634	4929400209	492341823950	492547346799	150
4929400000	4929400634	4929400209	492341823950	492547346799	150
4939400000	4939400803	4939400308	493608576668	493219984085	150
4939400000	4939400803	4939400308	493608576668	493219984085	150
4915500000	4915500777	4915500039	491521560311	491354570570	150
4915500000	4915500777	4915500039	491521560311	491354570570	150
4908400000	4908400002	4908400027	490431505639	490738482453	150
4908400000	4908400002	4908400027	490431505639	490738482453	150
4934400000	4934400937	4934400294	493144571127	493413561473	150
4934400000	4934400937	4934400294	493144571127	493413561473	150
4922400000	4922400072	4922400221	492998822596	492248715785	150
4922400000	4922400072	4922400221	492998822596	492248715785	150
4904400000	4904400678	4904400998	490248643543	490234972481	150
4904400000	4904400678	4904400998	490248643543	490234972481	150
4882600000	4882600823	4882600758	488411990222	488500677210	150
4882600000	4882600823	4882600758	488411990222	488500677210	150
4902400000	4902400909	4902400023	490706680971	490728855431	150
4902400000	4902400909	4902400023	490706680971	490728855431	150
4845400000	4845400017	4845400394	484993554195	484654993724	150
4845400000	4845400017	4845400394	484993554195	484654993724	150
4903400000	4903400010	4903400013	490987481551	490704335282	150

4903400000	4903400010	4903400013	490987481551	490704335282	150
4844400000	4844400092	4844400384	484744479231	484985300998	150
4844400000	4844400092	4844400384	484744479231	484985300998	150
4852400000	4852400037	4852400505	485899537638	485377985346	150
4852400000	4852400037	4852400505	485899537638	485377985346	150
4873400000	4873400503	4873400694	487067678436	487360544021	150
4873400000	4873400503	4873400694	487067678436	487360544021	150
5059400000	5059400912	5059400419	505129005371	505069200358	150
5059400000	5059400912	5059400419	505129005371	505069200358	150
5062400000	5062400075	5062400526	506122651714	506894312131	150
5062400000	5062400075	5062400526	506122651714	506894312131	150
5025400000	5025400626	5025400105	502109724099	502758370433	150
5025400000	5025400626	5025400105	502109724099	502758370433	150
5043500000	5043500635	5043500277	504010127478	504677095806	150
5043500000	5043500635	5043500277	504010127478	504677095806	150
5008700000	5008700825	5008700901	500773626721	500321468068	150
5008700000	5008700825	5008700901	500773626721	500321468068	150
5014500000	5014500982	5014500959	501147918958	501394506795	150
5014500000	5014500982	5014500959	501147918958	501394506795	150
4971500000	4971500627	4971500684	497342715077	497905713579	150
4971500000	4971500627	4971500684	497342715077	497905713579	150
4964400000	4964400027	4964400591	496227019645	496358086747	150
4964400000	4964400027	4964400591	496227019645	496358086747	150
5194310000	5194310551	5194310773	519703973379	519561276829	150
5194310000	5194310551	5194310773	519703973379	519561276829	150
5194500000	5194500124	5194500744	519654762711	519295347697	150
5194500000	5194500124	5194500744	519654762711	519295347697	150
5182400000	5182400927	5182400735	518224953847	518451135888	150
5182400000	5182400927	5182400735	518224953847	518451135888	150
5197410000	5197410680	5197410836	519594016619	519087494516	150
5197410000	5197410680	5197410836	519594016619	519087494516	150
5199400000	5199400422	5199400823	519405905115	519009340101	150
5199400000	5199400422	5199400823	519969050752	519009340101	150
5199400000	5199400422	5199400823	519316043952	519998126545	150
5157400000	5157400283	5157400456	515808235761	515765938292	150
5157400000	5157400283	5157400456	515808235761	515765938292	150
5205310000	5205310848	5205310883	520116225185	520440688931	150
5205310000	5205310848	5205310883	520116225185	520440688931	150
5160500000	5160500129	5160500516	516173712574	516318235711	150
5160500000	5160500129	5160500516	516173712574	516318235711	150
5193600000	5193600900	5193600783	519022724787	519849735692	150
5193600000	5193600900	5193600783	519022724787	519849735692	150
5152210000	5152210500	5152210486	515584749238	515354500437	150
5152210000	5152210500	5152210486	515584749238	515354500437	150
5133400000	5133400563	5133400231	513802511625	513585070515	150
5133400000	5133400563	5133400231	513802511625	513585070515	150
5136610000	5136610472	5136610214	513762167612	513136311574	150

5136610000	5136610472	5136610214	513762167612	513136311574	150
5147400000	5147400246	5147400356	514772988024	514329653795	150
5147400000	5147400246	5147400356	514772988024	514329653795	150
5094800000	5094800709	5094800851	509051352541	509768720368	150
5094800000	5094800709	5094800851	509051352541	509768720368	150
5102500000	5102500065	5102500897	510218205928	510686817680	150
5102500000	5102500065	5102500897	510218205928	510686817680	150
5122400000	5122400933	5122400142	512055006549	512380708797	150
5122400000	5122400933	5122400142	512055006549	512380708797	150
5314500000	5314500038	5314500988	531501834033	531546850190	150
5314500000	5314500038	5314500988	531501834033	531546850190	150
5325500000	5325500846	5325500080	532125935466	532275217352	150
5325500000	5325500846	5325500080	532125935466	532275217352	150
5287510000	5287510476	5287510803	528985404572	528362322630	150
5287510000	5287510476	5287510803	528985404572	528362322630	150
5273500000	5273500726	5273500592	527777388673	527592250345	150
5273500000	5273500726	5273500592	527777388673	527592250345	150
5305400000	5305400329	5305400930	530304372840	530375421658	150
5305400000	5305400329	5305400930	530304372840	530375421658	150
5211500000	5211500822	5211500021	521395700347	521386432344	150
5211500000	5211500822	5211500021	521395700347	521386432344	150
5419400000	5419400346	5419400063	541936261458	541208999039	150
5419400000	5419400346	5419400063	541936261458	541208999039	150
5436610000	5436610518	5436610242	543733642691	543164529151	150
5436610000	5436610518	5436610242	543733642691	543164529151	150
5407400000	5407400050	5407400994	540756472145	540901606296	150
5407400000	5407400050	5407400994	540756472145	540901606296	150
5406400000	5406400735	5406400951	540549104820	540417494001	150
5406400000	5406400735	5406400951	540549104820	540417494001	150
5413400000	5413400090	5413400064	541738473314	541217520573	150
5413400000	5413400090	5413400064	541738473314	541217520573	150
5426400000	5426400003	5426400150	542682961441	542030147014	150
5426400000	5426400003	5426400150	542682961441	542030147014	150
5457500000	5457500367	5457500389	545357890975	545329700188	150
5457500000	5457500367	5457500389	545357890975	545329700188	150
5339400000	5339400702	5339400250	533161022874	533277070953	150
5339400000	5339400702	5339400250	533161022874	533277070953	150
5348400000	5348400442	5348400365	534282765042	534004188255	150
5348400000	5348400442	5348400365	534282765042	534004188255	150
5351500000	5351500393	5351500426	535054650479	535467808818	150
5351500000	5351500393	5351500426	535054650479	535467808818	150
5354500000	5354500853	5354500373	535911130869	535669181926	150
5354500000	5354500853	5354500373	535911130869	535669181926	150
5334400000	5334400844	5334400237	533508158863	533070314063	150
5334400000	5334400844	5334400237	533508158863	533070314063	150
5392600000	5392600828	5392600809	539230615541	539844975044	150
5392600000	5392600828	5392600809	539230615541	539844975044	150

5573400000	5573400459	5573400665	557355454986	557576590036	150
5573400000	5573400459	5573400665	557355454986	557576590036	150
5573500000	5573500778	5573500621	557477782528	557565197955	150
5573500000	5573500778	5573500621	557477782528	557565197955	150
5544400000	5544400041	5544400355	554369806311	554394282905	150
5544400000	5544400041	5544400355	554369806311	554394282905	150
5574400000	5574400124	5574400652	557610166600	557323655490	150
5574400000	5574400124	5574400652	557610166600	557323655490	150
5546400000	5546400323	5546400364	554657943800	554136460360	150
5546400000	5546400323	5546400364	554657943800	554136460360	150
5568400000	5568400741	5568400578	556003229400	556795979711	150
5568400000	5568400741	5568400578	556003229400	556795979711	150
5534400000	5534400876	5534400257	553420408899	553616265192	150
5534400000	5534400876	5534400257	553420408899	553616265192	150
5556400000	5556400492	5556400471	555442833744	555603729584	150
5556400000	5556400492	5556400471	555442833744	555603729584	150
5523700000	5523700461	5523700198	552115739205	552345986023	150
5572400000	5572400828	5572400677	557628196087	557367375885	150
5572400000	5572400828	5572400677	557628196087	557367375885	150
5505500000	5505500572	5505500884	550793410597	550851533493	150
5505500000	5505500572	5505500884	550793410597	550851533493	150
5512500000	5512500219	5512500034	551801070035	551288906646	150
5512500000	5512500219	5512500034	551801070035	551288906646	150
5471500000	5471500654	5471500636	547721828568	547943350415	150
5471500000	5471500654	5471500636	547721828568	547943350415	150
5474400000	5474400108	5474400642	547080222365	547959139116	150
5474400000	5474400108	5474400642	547080222365	547959139116	150
5492600000	5492600847	5492600819	549752860360	549167792213	150
5492600000	5492600847	5492600819	549752860360	549167792213	150
5519400000	5519400360	5519400073	551800436686	551273052029	150
5519400000	5519400360	5519400073	551800436686	551273052029	150
5504500000	5504500457	5504500912	550776828005	550344472255	150
5504500000	5504500457	5504500912	550776828005	550344472255	150
5693500000	5693500290	5693500827	569323281140	569923951272	150
5693500000	5693500290	5693500827	569323281140	569923951272	150
5684800000	5684800654	5684800811	568726599945	568599937194	150
5684800000	5684800654	5684800811	568726599945	568599937194	150
5662500000	5662500571	5662500546	566454894779	566432357381	150
5627400000	5627400148	5627400209	562986630738	562333636312	150
5627400000	5627400148	5627400209	562986630738	562333636312	150
5588400000	5588400011	5588400776	558171719220	558560826740	150
5588400000	5588400011	5588400776	558171719220	558560826740	150
5615400000	5615400551	5615400064	561607290941	561013740119	150
5615400000	5615400551	5615400064	561607290941	561013740119	150
5631500000	5631500166	5631500259	563906089009	563401019222	150
5631500000	5631500166	5631500259	563906089009	563401019222	150
5644500000	5644500733	5644500305	564644220119	564233454667	150

5644500000	5644500733	5644500305	564644220119	564233454667	150
5644700000	5644700329	5644700393	564683460327	564689427939	150
5644700000	5644700329	5644700393	564683460327	564689427939	150
5626400000	5626400032	5626400169	562927900967	562269437853	150
5626400000	5626400032	5626400169	562927900967	562269437853	150
5635410000	5635410471	5635410277	563699096639	563821798884	150
5635410000	5635410471	5635410277	563699096639	563821798884	150
5799400000	5799400514	5799400884	579345941140	579049014087	150
5799400000	5799400514	5799400884	579345941140	579049014087	150
5784600000	5784600674	5784600737	578356013780	578965169416	150
5784600000	5784600674	5784600737	578356013780	578965169416	150
5813400000	5813400153	5813400104	581216442201	581058825050	150
5813400000	5813400153	5813400104	581216442201	581058825050	150
5794500000	5794500450	5794500803	579631246586	579759145168	150
5794500000	5794500450	5794500803	579631246586	579759145168	150
5784400000	5784400174	5784400771	578939655627	578492788805	150
5784400000	5784400174	5784400771	578939655627	578492788805	150
5784500000	5784500059	5784500704	578621823020	578434496232	150
5784500000	5784500059	5784500704	578621823020	578434496232	150
5736400000	5736400160	5736400280	573707064267	573006379956	150
5736400000	5736400160	5736400280	573707064267	573006379956	150
5725500000	5725500914	5725500120	572681571372	572860964785	150
5725500000	5725500914	5725500120	572681571372	572860964785	150
5728400000	5728400267	5728400206	572862207927	572314828269	150
5728400000	5728400267	5728400206	572862207927	572314828269	150
5751500000	5751500471	5751500467	575628085158	575318396202	150
5751500000	5751500471	5751500467	575628085158	575318396202	150
5761500000	5761500523	5761500566	576362339048	576547913018	150
5761500000	5761500523	5761500566	576362339048	576547913018	150
5932400000	5932400115	5932400317	593860875839	593445568680	150
5932400000	5932400115	5932400317	593860875839	593445568680	150
5894800000	5894800827	5894800934	589251466283	589005353666	150
5894800000	5894800827	5894800934	589251466283	589005353666	150
5897410000	5897410786	5897410905	589976021720	589635693379	150
5897410000	5897410786	5897410905	589976021720	589635693379	150
5856400000	5856400539	5856400503	585657913459	585161127233	150
5856400000	5856400539	5856400503	585657913459	585161127233	150
5884400000	5884400187	5884400781	588105032995	588030040930	150
5884400000	5884400187	5884400781	588105032995	588030040930	150
5837400000	5837400199	5837400327	583044870528	583582774529	150
5837400000	5837400199	5837400327	583044870528	583582774529	150
5857500000	5857500428	5857500430	585272950175	585520062529	150
5857500000	5857500428	5857500430	585272950175	585520062529	150
5848400000	5848400532	5848400413	584268055438	584144886332	150
5848400000	5848400532	5848400413	584268055438	584144886332	150
6040500000	6040500832	6040500308	604961014958	604544385781	150
6040500000	6040500832	6040500308	604961014958	604544385781	150

6026400000	6026400942	6026400111	602433243801	602744669869	150
6026400000	6026400942	6026400111	602433243801	602744669869	150
6024500000	6024500166	6024500054	602974961534	602340314589	150
6024500000	6024500166	6024500054	602974961534	602340314589	150
6034400000	6034400920	6034400208	603121400104	603237721871	150
6034400000	6034400920	6034400208	603121400104	603237721871	150
6017400000	6017400143	6017400054	601594329569	601082920186	150
6017400000	6017400143	6017400054	601594329569	601082920186	150
5995400000	5995400653	5995400901	599332523059	599894080914	150
5995400000	5995400653	5995400901	599332523059	599894080914	150
5999400000	5999400402	5999400904	599320943835	599363825457	150
5999400000	5999400402	5999400904	599320943835	599363825457	150
5954400000	5954400847	5954400493	595049391769	595357875490	150
5954400000	5954400847	5954400493	595049391769	595357875490	150
5994400000	5994400372	5994400891	599708233723	599269338400	150
5994400000	5994400372	5994400891	599708233723	599269338400	150
6010500000	6010500593	6010500014	601377850564	601215747095	150
6010500000	6010500593	6010500014	601377850564	601215747095	150
6149400000	6149400833	6149400330	614670433265	614573355533	150
6149400000	6149400833	6149400330	614670433265	614573355533	150
6183400000	6183400056	6183400726	618243420802	618836278378	150
6183400000	6183400056	6183400726	618243420802	618836278378	150
6159400000	6159400932	6159400430	615902214450	615023854587	150
6159400000	6159400932	6159400430	615902214450	615023854587	150
6143500000	6143500656	6143500288	614698685846	614746826898	150
6143500000	6143500656	6143500288	614698685846	614746826898	150
6192600000	6192600785	6192600790	619520203019	619858847492	150
6192600000	6192600785	6192600790	619520203019	619858847492	150
6168400000	6168400655	6168400540	616348351609	616389823305	150
6168400000	6168400655	6168400540	616348351609	616389823305	150
6162500000	6162500650	6162500497	616901122634	616176718752	150
6162500000	6162500650	6162500497	616901122634	616176718752	150
6169400000	6169400103	6169400526	616508592653	616597816979	150
6169400000	6169400103	6169400526	616508592653	616597816979	150
6169500000	6169500633	6169500500	616195729963	616438624597	150
6169500000	6169500633	6169500500	616195729963	616438624597	150
6179400000	6179400188	6179400625	617185141136	617835389782	150
6179400000	6179400188	6179400625	617185141136	617835389782	150
6142500000	6142500580	6142500298	614323590371	614256079358	150
6142500000	6142500580	6142500298	614323590371	614256079358	150
6111500000	6111500805	6111500012	611371073850	611180264885	150
6111500000	6111500805	6111500012	611371073850	611180264885	150
6128400000	6128400207	6128400149	612034546766	612324364193	150
6128400000	6128400207	6128400149	612034546766	612324364193	150
6114400000	6114400714	6114400020	611713772524	611386683916	150
6114400000	6114400714	6114400020	611713772524	611386683916	150
6075400000	6075400321	6075400615	607231241106	607355675499	150

6075400000	6075400321	6075400615	607231241106	607355675499	150
6119400000	6119400301	6119400034	611490712883	611002932034	150
6119400000	6119400301	6119400034	611490712883	611002932034	150
6092600000	6092600865	6092600780	609572109416	609507231472	150
6092600000	6092600865	6092600780	609572109416	609507231472	150
6304400000	6304400589	6304400940	630317356719	630126711280	150
6304400000	6304400589	6304400940	630317356719	630126711280	150
6320500000	6320500680	6320500142	632552647088	632516710071	150
6320500000	6320500680	6320500142	632552647088	632516710071	150
6314400000	6314400750	6314400040	631806042376	631821078044	150
6314400000	6314400750	6314400040	631806042376	631821078044	150
6314500000	6314500040	6314500989	631488627528	631701733948	150
6314500000	6314500040	6314500989	631488627528	631701733948	150
6296400000	6296400964	6296400864	629090506376	629814802727	150
6296400000	6296400964	6296400864	629090506376	629814802727	150
6291500000	6291500998	6291500808	629580970921	629076318556	150
6291500000	6291500998	6291500808	629580970921	629076318556	150
6245400000	6245400916	6245400336	624984347090	624900626765	150
6245400000	6245400916	6245400336	624984347090	624900626765	150
6256400000	6256400443	6256400440	625022269183	625662428201	150
6256400000	6256400443	6256400440	625022269183	625662428201	150
6208410000	6208410854	6208410947	620723222357	620540373624	150
6208410000	6208410854	6208410947	620723222357	620540373624	150
6204500000	6204500406	6204500886	620333561936	620822265003	150
6204500000	6204500406	6204500886	620333561936	620822265003	150
6244500000	6244500659	6244500268	624896665161	624671228288	150
6244500000	6244500659	6244500268	624896665161	624671228288	150
6227400000	6227400089	6227400172	622958796564	622453869535	150
6227400000	6227400089	6227400172	622958796564	622453869535	150
6423610000	6423610043	6423610176	642552222398	642535576284	150
6423610000	6423610043	6423610176	642552222398	642535576284	150
6425500000	6425500865	6425500091	642158148880	642235413485	150
6425500000	6425500865	6425500091	642158148880	642235413485	150
6392400000	6392400284	6392400856	639530574828	639315719498	150
6392400000	6392400284	6392400856	639530574828	639315719498	150
6387410000	6387410708	6387410757	638641737597	638969968392	150
6387410000	6387410708	6387410757	638641737597	638969968392	150
6330500000	6330500835	6330500241	633329260817	633702813810	150
6330500000	6330500835	6330500241	633329260817	633702813810	150
6349610000	6349610303	6349610295	634286401998	634896714848	150
6349610000	6349610303	6349610295	634286401998	634896714848	150
6373500000	6373500746	6373500603	637541381255	637832973145	150
6373500000	6373500746	6373500603	637541381255	637832973145	150
6554500000	6554500887	6554500394	655176094696	655673802138	150
6554500000	6554500887	6554500394	655176094696	655673802138	150
6548400000	6548400482	6548400384	654765994837	654777002264	150
6548400000	6548400482	6548400384	654765994837	654777002264	150

6557400000	6557400352	6557400497	655702700513	655373680842	150
6557400000	6557400352	6557400497	655702700513	655373680842	150
6513700000	6513700300	6513700103	651179917502	651232448332	150
6513700000	6513700300	6513700103	651179917502	651232448332	150
6558610000	6558610377	6558610425	655067639797	655504715293	150
6558610000	6558610377	6558610425	655067639797	655504715293	150
6484800000	6484800773	6484800793	648776820366	648229258147	150
6484800000	6484800773	6484800793	648776820366	648229258147	150
6563400000	6563400306	6563400566	656685738764	656420743068	150
6563400000	6563400306	6563400566	656685738764	656420743068	150
6456710000	6456710830	6456710398	645677576473	645349722657	150
6456710000	6456710830	6456710398	645677576473	645349722657	150
6481500000	6481500726	6481500735	648256334567	648081575542	150
6481500000	6481500726	6481500735	648256334567	648081575542	150
6486510000	6486510400	6486510824	648681270234	648337975898	150
6486510000	6486510400	6486510824	648681270234	648337975898	150
6445400000	6445400953	6445400356	644598994606	644962268655	150
6445400000	6445400953	6445400356	644598994606	644962268655	150
6487400000	6487400702	6487400784	648668261270	648070143001	150
6487400000	6487400702	6487400784	648668261270	648070143001	150
6449610000	6449610319	6449610305	644910728249	644023767519	150
6449610000	6449610319	6449610305	644910728249	644023767519	150
6649610000	6649610354	6649610325	664941482122	664971220571	150
6649610000	6649610354	6649610325	664941482122	664971220571	150
6666400000	6666400612	6666400590	666223441406	666223322465	150
6666400000	6666400612	6666400590	666223441406	666223322465	150
6682400000	6682400010	6682400786	668955554515	668908942445	150
6682400000	6682400010	6682400786	668955554515	668908942445	150
6684400000	6684400158	6684400762	668315768746	668087270813	150
6684400000	6684400158	6684400762	668315768746	668087270813	150
6678400000	6678400848	6678400689	667822204997	667205902043	150
6678400000	6678400848	6678400689	667822204997	667205902043	150
6629400000	6629400536	6629400182	662945595216	662173975354	150
6629400000	6629400536	6629400182	662945595216	662173975354	150
6632400000	6632400195	6632400292	663453998857	663197517940	150
6632400000	6632400195	6632400292	663453998857	663197517940	150
6648400000	6648400499	6648400394	664618452280	664065811405	150
6648400000	6648400499	6648400394	664618452280	664065811405	150
6654400000	6654400801	6654400465	665985180799	665051161159	150
6654400000	6654400801	6654400465	665985180799	665051161159	150
6689400000	6689400344	6689400774	668687130065	668980033510	150
6689400000	6689400344	6689400774	668687130065	668980033510	150
6584500000	6584500027	6584500685	658537344898	658711594324	150
6584500000	6584500027	6584500685	658537344898	658711594324	150
6614400000	6614400706	6614400070	661906833423	661367025988	150
6614400000	6614400706	6614400070	661906833423	661367025988	150
6614500000	6614500093	6614500016	661771482931	661948036946	150

6614500000	6614500093	6614500016	661771482931	661948036946	150
6601500000	6601500721	6601500962	660762253304	660017739568	150
6601500000	6601500721	6601500962	660762253304	660017739568	150
6612500000	6612500240	6612500045	661718803216	661828986056	150
6612500000	6612500240	6612500045	661718803216	661828986056	150
6793500000	6793500311	6793500838	679397002125	679673166247	150
6793500000	6793500311	6793500838	679397002125	679673166247	150
6805500000	6805500621	6805500915	680023023594	680205011271	150
6805500000	6805500621	6805500915	680023023594	680205011271	150
6754400000	6754400816	6754400474	675060890233	675680374274	150
6754400000	6754400816	6754400474	675060890233	675680374274	150
6783600000	6783600822	6783600744	678778337887	678578135528	150
6783600000	6783600822	6783600744	678778337887	678578135528	150
6772500000	6772500756	6772500658	677194589158	677119486386	150
6772500000	6772500756	6772500658	677194589158	677119486386	150
6782500000	6782500792	6782500757	678382482626	678021681348	150
6782500000	6782500792	6782500757	678382482626	678021681348	150
6764500000	6764500291	6764500511	676148340131	676240945603	150
6764500000	6764500291	6764500511	676148340131	676240945603	150
6733400000	6733400659	6733400290	673838459459	673449741990	150
6733400000	6733400659	6733400290	673838459459	673449741990	150
6743400000	6743400743	6743400389	674344426046	674805457369	150
6743400000	6743400743	6743400389	674344426046	674805457369	150
6723500000	6723500190	6723500150	672801510240	672027118491	150
6723500000	6723500190	6723500150	672801510240	672027118491	150
6692400000	6692400336	6692400886	669297702602	669079376175	150
6692400000	6692400336	6692400886	669297702602	669079376175	150
6716400000	6716400896	6716400081	671213294447	671029745503	150
6716400000	6716400896	6716400081	671213294447	671029745503	150
6707400000	6707400102	6707400024	670463223591	670872601344	150
6707400000	6707400102	6707400024	670463223591	670872601344	150
6913400000	6913400171	6913400114	691134819791	691902153873	150
6913400000	6913400171	6913400114	691134819791	691902153873	150
6876400000	6876400813	6876400716	687950659300	687355860675	150
6876400000	6876400813	6876400716	687950659300	687355860675	150
6886400000	6886400905	6886400822	688670383668	688406324708	150
6886400000	6886400905	6886400822	688670383668	688406324708	150
6861500000	6861500544	6861500577	686700062355	686417299892	150
6861500000	6861500544	6861500577	686700062355	686417299892	150
6844500000	6844500765	6844500326	684843317888	684572149301	150
6844500000	6844500765	6844500326	684843317888	684572149301	150
6862400000	6862400224	6862400607	686177408108	686705902691	150
6862400000	6862400224	6862400607	686177408108	686705902691	150
6853400000	6853400935	6853400496	685159019329	685599725878	150
6853400000	6853400935	6853400496	685159019329	685599725878	150
6853500000	6853500374	6853500456	685795489511	685714753373	150
6853500000	6853500374	6853500456	685795489511	685714753373	150

7015400000	7015400455	7015400002	701163320016	701711770453	150
7015400000	7015400455	7015400002	701163320016	701711770453	150
7015500000	7015500653	7015500940	701702921282	701279269693	150
7015500000	7015500653	7015500940	701702921282	701279269693	150
7052210000	7052210487	7052210478	705994454980	705643081156	150
7052210000	7052210487	7052210478	705994454980	705643081156	150
7052500000	7052500445	7052500389	705214445330	705697970464	150
7052500000	7052500445	7052500389	705214445330	705697970464	150
7024400000	7024400767	7024400110	702781496696	702080233195	150
7024400000	7024400767	7024400110	702781496696	702080233195	150
7019400000	7019400288	7019400025	701512122349	701666288770	150
7019400000	7019400288	7019400025	701512122349	701666288770	150
7054500000	7054500802	7054500346	705850090444	705361533882	150
7054500000	7054500802	7054500346	705850090444	705361533882	150
6987400000	6987400684	6987400833	698290758333	698757499256	150
6987400000	6987400684	6987400833	698290758333	698757499256	150
6958400000	6958400599	6958400521	695543197225	695477346965	150
6958400000	6958400599	6958400521	695543197225	695477346965	150
6991400000	6991400917	6991400926	699000002169	699373315013	150
6991400000	6991400917	6991400926	699000002169	699373315013	150
7166700000	7166700023	7166700519	716888710431	716491432663	150
7166700000	7166700023	7166700519	716888710431	716491432663	150
7167400000	7167400455	7167400558	716270449021	716632588063	150
7167400000	7167400455	7167400558	716270449021	716632588063	150
7125400000	7125400600	7125400118	712230614303	712733914942	150
7125400000	7125400600	7125400118	712230614303	712733914942	150
7162400000	7162400100	7162400538	716242781767	716519498705	150
7162400000	7162400100	7162400538	716242781767	716519498705	150
7121610000	7121610830	7121610172	712423689072	712134231629	150
7121610000	7121610830	7121610172	712423689072	712134231629	150
7123500000	7123500086	7123500092	712072553929	712059636738	150
7123500000	7123500086	7123500092	712072553929	712059636738	150
7115400000	7115400471	7115400012	711952696978	711826915666	150
7115500000	7115500667	7115500952	711409099027	711016600228	150
7115500000	7115500667	7115500952	711409099027	711016600228	150
7094500000	7094500107	7094500736	709747788582	709467041420	150
7094500000	7094500107	7094500736	709747788582	709467041420	150
7085400000	7085400383	7085400716	708178841345	708686662530	150
7085400000	7085400383	7085400716	708178841345	708686662530	150
7298400000	7298400044	7298400847	729647002077	729110633229	150
7298400000	7298400044	7298400847	729647002077	729110633229	150
7292500000	7292500877	7292500806	729742478473	729396593797	150
7292500000	7292500877	7292500806	729742478473	729396593797	150
7287400000	7287400667	7287400765	728965914474	728822303043	150
7287400000	7287400667	7287400765	728965914474	728822303043	150
7299400000	7299400442	7299400836	729895037877	729869240561	150
7299400000	7299400442	7299400836	729895037877	729869240561	150

7246400000	7246400250	7246400336	724318415956	724536322467	150
7246400000	7246400250	7246400336	724318415956	724536322467	150
7207400000	7207400022	7207400975	720739805997	720948141797	150
7207400000	7207400022	7207400975	720739805997	720948141797	150
7202400000	7202400793	7202400957	720640292328	720007645384	150
7202400000	7202400793	7202400957	720640292328	720007645384	150
7182500000	7182500823	7182500699	718739939438	718012730714	150
7182500000	7182500823	7182500699	718739939438	718012730714	150
7208400000	7208400901	7208400961	720757985904	720895038415	150
7208400000	7208400901	7208400961	720757985904	720895038415	150
7222610000	7222610264	7222610170	722604556364	722006825422	150
7222610000	7222610264	7222610170	722604556364	722006825422	150
7225500000	7225500834	7225500072	722020185953	722281747257	150
7225500000	7225500834	7225500072	722020185953	722281747257	150
7386510000	7386510384	7386510815	738929972430	738576611023	150
7386510000	7386510384	7386510815	738929972430	738576611023	150
7421800000	7421800676	7421800122	742049825616	742632000381	150
7421800000	7421800676	7421800122	742049825616	742632000381	150
7422500000	7422500400	7422500127	742525850357	742899422729	150
7422500000	7422500400	7422500127	742525850357	742899422729	150
7397400000	7397400757	7397400873	739660635377	739996537836	150
7397400000	7397400757	7397400873	739660635377	739996537836	150
7342400000	7342400185	7342400359	734970805201	734930064750	150
7342400000	7342400185	7342400359	734970805201	734930064750	150
7332400000	7332400144	7332400264	733468476405	733632806300	150
7332400000	7332400144	7332400264	733468476405	733632806300	150
7332500000	7332500432	7332500218	733563961690	733376020387	150
7332500000	7332500432	7332500218	733563961690	733376020387	150
7338400000	7338400381	7338400268	733147836257	733466229016	150
7338400000	7338400381	7338400268	733147836257	733466229016	150
7323400000	7323400239	7323400154	732452350537	732028163532	150
7323400000	7323400239	7323400154	732452350537	732028163532	150
7352400000	7352400356	7352400458	735561224077	735107178825	150
7352400000	7352400356	7352400458	735561224077	735107178825	150
7355500000	7355500663	7355500380	735967429056	735867730282	150
7355500000	7355500663	7355500380	735967429056	735867730282	150
7514400000	7514400692	7514400061	751910150888	751817221077	150
7514400000	7514400692	7514400061	751910150888	751817221077	150
7514500000	7514500076	7514500007	751025940901	751430861302	150
7514500000	7514500076	7514500007	751025940901	751430861302	150
7450500000	7450500975	7450500449	745369130745	745491334970	150
7450500000	7450500975	7450500449	745369130745	745491334970	150
7483400000	7483400111	7483400757	748057684308	748083083236	150
7483400000	7483400111	7483400757	748057684308	748083083236	150
7447400000	7447400290	7447400388	744830198734	744129624400	150
7447400000	7447400290	7447400388	744830198734	744129624400	150
7475400000	7475400288	7475400656	747840690626	747249888242	150

7475400000	7475400288	7475400656	747840690626	747249888242	150
7432400000	7432400159	7432400274	743416995553	743116494617	150
7432400000	7432400159	7432400274	743416995553	743116494617	150
7472400000	7472400815	7472400669	747042063591	747801937528	150
7472400000	7472400815	7472400669	747042063591	747801937528	150
7443500000	7443500703	7443500318	744570202411	744309568822	150
7443500000	7443500703	7443500318	744570202411	744309568822	150
7488400000	7488400999	7488400769	748775987379	748404922633	150
7488400000	7488400999	7488400769	748775987379	748404922633	150
7625400000	7625400687	7625400170	762941141270	762755420746	150
7625400000	7625400687	7625400170	762941141270	762755420746	150
7626500000	7626500731	7626500126	762326108482	762046739872	150
7626500000	7626500731	7626500126	762326108482	762046739872	150
7664500000	7664500275	7664500503	766372982955	766131066140	150
7664500000	7664500275	7664500503	766372982955	766131066140	150
7628400000	7628400252	7628400198	762428804441	762571835217	150
7628400000	7628400252	7628400198	762428804441	762571835217	150
7656400000	7656400510	7656400484	765262271939	765742685612	150
7656400000	7656400510	7656400484	765262271939	765742685612	150
7636400000	7636400144	7636400272	763795914114	763286304335	150
7636400000	7636400144	7636400272	763795914114	763286304335	150
7635400000	7635400874	7635400274	763230179640	763268233753	150
7635400000	7635400874	7635400274	763230179640	763268233753	150
7598400000	7598400100	7598400877	759850939778	759190551507	150
7598400000	7598400100	7598400877	759850939778	759190551507	150
7604500000	7604500915	7604500923	760745364548	760606277894	150
7604500000	7604500915	7604500923	760745364548	760606277894	150
7569400000	7569400090	7569400567	756868800674	756709447741	150
7569400000	7569400090	7569400567	756868800674	756709447741	150
7578400000	7578400832	7578400680	757501772041	757980169787	150
7578400000	7578400832	7578400680	757501772041	757980169787	150
7596400000	7596400016	7596400897	759138321246	759470183651	150
7596400000	7596400016	7596400897	759138321246	759470183651	150
7579400000	7579400258	7579400665	757940043872	757731265319	150
7579400000	7579400258	7579400665	757940043872	757731265319	150
7567410000	7567410562	7567410581	756520413849	756256695029	150
7567410000	7567410562	7567410581	756520413849	756256695029	150
7586510000	7586510424	7586510835	758921517139	758119710520	150
7586510000	7586510424	7586510835	758921517139	758119710520	150
7612400000	7612400035	7612400094	761649425834	761756871787	150
7612400000	7612400035	7612400094	761649425834	761756871787	150
7603500000	7603500964	7603500945	760186387836	760929097678	150
7603500000	7603500964	7603500945	760186387836	760929097678	150
7584800000	7584800642	7584800804	758300834814	758948980766	150
7584800000	7584800642	7584800804	758300834814	758948980766	150
7754500000	7754500921	7754500415	775942568883	775330938638	150
7754500000	7754500921	7754500415	775942568883	775330938638	150

7792400000	7792400353	7792400897	779197933078	779262691075	150
7792400000	7792400353	7792400897	779197933078	779262691075	150
7741500000	7741500276	7741500368	774516301505	774598955388	150
7741500000	7741500276	7741500368	774516301505	774598955388	150
7763500000	7763500536	7763500544	776011722688	776438526521	150
7763500000	7763500536	7763500544	776011722688	776438526521	150
7691400000	7691400875	7691400897	769242876103	769197100183	150
7691400000	7691400875	7691400897	769242876103	769197100183	150
7673500000	7673500799	7673500632	767188555308	767632705890	150
7673500000	7673500799	7673500632	767188555308	767632705890	150
7715500000	7715500750	7715500020	771610585306	771507979185	150
7715500000	7715500750	7715500020	771610585306	771507979185	150
7875400000	7875400351	7875400696	787106593064	787313549843	150
7875400000	7875400351	7875400696	787106593064	787313549843	150
7960500000	7960500212	7960500597	796858610944	796715245438	150
7960500000	7960500212	7960500597	796858610944	796715245438	150
7827610000	7827610527	7827610171	782438976267	782368166640	150
7827610000	7827610527	7827610171	782438976267	782368166640	150
7815500000	7815500767	7815500032	781545208882	781466288816	150
7815500000	7815500767	7815500032	781545208882	781466288816	150
7884500000	7884500078	7884500716	788409558272	788498131189	150
7884500000	7884500078	7884500716	788409558272	788498131189	150
7834400000	7834400927	7834400289	783762053141	783459589379	150
7834400000	7834400927	7834400289	783762053141	783459589379	150
7874600000	7874600260	7874600650	787224045052	787838598096	150
7874600000	7874600260	7874600650	787224045052	787838598096	150
7826500000	7826500762	7826500146	782259764942	782526276684	150
7826500000	7826500762	7826500146	782259764942	782526276684	150
7881500000	7881500894	7881500772	788036478473	788871182930	150
7881500000	7881500894	7881500772	788036478473	788871182930	150
7814500000	7814500129	7814500036	781163343154	781779599267	150
7814500000	7814500129	7814500036	781163343154	781779599267	150
7909400000	7909400334	7909400015	790418203872	790015411150	150
7909400000	7909400334	7909400015	790418203872	790015411150	150
7867400000	7867400434	7867400627	786046095993	786749988448	150
7867400000	7867400434	7867400627	786046095993	786749988448	150
7803500000	7803500998	7803500965	780378175669	780986408952	150
7803500000	7803500998	7803500965	780378175669	780986408952	150
7804400000	7804400667	7804400991	780728745484	780061924960	150
7804400000	7804400667	7804400991	780728745484	780061924960	150
7871500000	7871500611	7871500677	787292889642	787609254496	150
7871500000	7871500611	7871500677	787292889642	787609254496	150
8022400000	8022400920	8022400135	802352287488	802368793402	150
8022400000	8022400920	8022400135	802352287488	802368793402	150
8022500000	8022500321	8022500088	802446019612	802004605048	150
8022500000	8022500321	8022500088	802446019612	802004605048	150
7925400000	7925400742	7925400202	792587373244	792321947161	150

7925400000	7925400742	7925400202	792587373244	792321947161	150
7997410000	7997410805	7997410917	799067588159	799294354064	150
7997410000	7997410805	7997410917	799067588159	799294354064	150
7953500000	7953500391	7953500467	795297428136	795450821772	150
7953500000	7953500391	7953500467	795297428136	795450821772	150
8039400000	8039400657	8039400223	803955957274	803226308462	150
8039400000	8039400657	8039400223	803955957274	803226308462	150
8001500000	8001500718	8001500904	800013830185	800230685795	150
8001500000	8001500718	8001500904	800013830185	800230685795	150
7973500000	7973500848	7973500661	797329734156	797061624469	150
7973500000	7973500848	7973500661	797329734156	797061624469	150
7926500000	7926500776	7926500156	792358507223	792383032441	150
7926500000	7926500776	7926500156	792358507223	792383032441	150
7974400000	7974400189	7974400694	797081634858	797840999595	150
7974400000	7974400189	7974400694	797081634858	797840999595	150
8055500000	8055500617	8055500350	805498130077	805994432332	150
8055500000	8055500617	8055500350	805498130077	805994432332	150
8155400000	8155400081	8155400427	815722108576	815847907995	150
8155400000	8155400081	8155400427	815722108576	815847907995	150
8151500000	8151500356	8151500409	815653877252	815727105452	150
8151500000	8151500356	8151500409	815653877252	815727105452	150
8134400000	8134400938	8134400220	813906994220	813332601498	150
8134400000	8134400938	8134400220	813906994220	813332601498	150
8152500000	8152500466	8152500400	815512731632	815635807678	150
8152500000	8152500466	8152500400	815512731632	815635807678	150
8125500000	8125500818	8125500063	812293332956	812453317603	150
8125500000	8125500818	8125500063	812293332956	812453317603	150
8083400000	8083400043	8083400718	808733940289	808113289680	150
8083400000	8083400043	8083400718	808733940289	808113289680	150
8142400000	8142400151	8142400340	814131792235	814501292325	150
8142400000	8142400151	8142400340	814131792235	814501292325	150
8074500000	8074500340	8074500539	807072571842	807480056706	150
8074500000	8074500340	8074500539	807072571842	807480056706	150
8144500000	8144500644	8144500260	814994851817	814283477828	150
8144500000	8144500644	8144500260	814994851817	814283477828	150
8062500000	8062500631	8062500489	806517256462	806112795422	150
8062500000	8062500631	8062500489	806517256462	806112795422	150
8136610000	8136610477	8136610217	813752517342	813376915328	150
8136610000	8136610477	8136610217	813752517342	813376915328	150
8108700000	8108700845	8108700914	810803116580	810103260223	150
8108700000	8108700845	8108700914	810803116580	810103260223	150
8110610000	8110610425	8110610084	811512275339	811611747353	150
8110610000	8110610425	8110610084	811512275339	811611747353	150
8082400000	8082400916	8082400728	808292546458	808346112707	150
8082400000	8082400916	8082400728	808292546458	808346112707	150
8082500000	8082500808	8082500690	808826949164	808916959946	150
8082500000	8082500808	8082500690	808826949164	808916959946	150

8214400000	8214400735	8214400032	821752875037	821385991416	150
8214400000	8214400735	8214400032	821752875037	821385991416	150
8255400000	8255400099	8255400437	825265518701	825880137583	150
8255400000	8255400099	8255400437	825265518701	825880137583	150
8205500000	8205500530	8205500857	820610459699	820631104291	150
8205500000	8205500530	8205500857	820610459699	820631104291	150
8222500000	8222500359	8222500108	822834357650	822472041154	150
8222500000	8222500359	8222500108	822834357650	822472041154	150
8236610000	8236610494	8236610227	823182358497	823634232754	150
8236610000	8236610494	8236610227	823182358497	823634232754	150
8224400000	8224400801	8224400131	822320934279	822117495911	150
8224400000	8224400801	8224400131	822320934279	822117495911	150
8284500000	8284500976	8284500659	828324191034	828422319555	150
8284500000	8284500976	8284500659	828324191034	828422319555	150
8174400000	8174400067	8174400615	817093505848	817181892237	150
8174400000	8174400067	8174400615	817093505848	817181892237	150
8223400000	8223400225	8223400145	822329981806	822417431449	150
8223400000	8223400225	8223400145	822329981806	822417431449	150
8269500000	8269500649	8269500512	826526637900	826013277106	150
8269500000	8269500649	8269500512	826526637900	826013277106	150
8295400000	8295400539	8295400835	829818943569	829986481938	150
8295400000	8295400539	8295400835	829818943569	829986481938	150
8324610000	8324610882	8324610160	832271449251	832332254389	150
8324610000	8324610882	8324610160	832271449251	832332254389	150
8333400000	8333400599	8333400252	833939354214	833887311327	150
8333400000	8333400599	8333400252	833939354214	833887311327	150
8319400000	8319400337	8319400056	831707269815	831746791966	150
8319400000	8319400337	8319400056	831707269815	831746791966	150
8402500000	8402500127	8402500930	840017497577	840753321873	150
8402500000	8402500127	8402500930	840017497577	840753321873	150
8335400000	8335400820	8335400245	833614423586	833266809749	150
8335400000	8335400820	8335400245	833614423586	833266809749	150
8322500000	8322500381	8322500118	832136431253	832120754872	150
8322500000	8322500381	8322500118	832136431253	832120754872	150
8397410000	8397410715	8397410858	839819606887	839699848762	150
8397410000	8397410715	8397410858	839819606887	839699848762	150
8384400000	8384400249	7384400734	838822067796	838438476150	150
8384400000	8384400249	7384400734	838822067796	838438476150	150
8413500000	8413500098	8413500025	841431698573	841507657977	150
8413500000	8413500098	8413500025	841431698573	841507657977	150
8303400000	8303400447	8303400958	830448849490	830121677302	150
8303400000	8303400447	8303400958	830448849490	830121677302	150
8303500000	8303500915	8303500916	830295740829	830599719343	150
8303500000	8303500915	8303500916	830295740829	830599719343	150
8433400000	8433400616	8433400262	843707241421	843754727266	150
8433400000	8433400616	8433400262	843707241421	843754727266	150
8532400000	8532400179	8532400284	853162050566	853823898698	150

8532400000	8532400179	8532400284	853162050566	853823898698	150
8430500000	8430500743	8430500251	843836722183	843940759016	150
8430500000	8430500743	8430500251	843836722183	843940759016	150
8536610000	8536610537	8536610255	853202981584	853937639254	150
8536610000	8536610537	8536610255	853202981584	853937639254	150
8425400000	8425400653	8425400151	842611428042	842320056340	150
8425400000	8425400653	8425400151	842611428042	842320056340	150
8521500000	8521500976	8521500153	852937902842	852107988795	150
8521500000	8521500976	8521500153	852937902842	852107988795	150
8653500000	8653500341	8653500438	865473886055	865282028944	150
8653500000	8653500341	8653500438	865473886055	865282028944	150
8574500000	8574500437	8574500589	857583332264	857604509203	150
8574500000	8574500437	8574500589	857583332264	857604509203	150
8611500000	8611500893	8611500064	861624197224	861092325179	150
8611500000	8611500893	8611500064	861624197224	861092325179	150
8561500000	8561500490	8561500549	856163791403	856678223518	150
8561500000	8561500490	8561500549	856163791403	856678223518	150
8594500000	8594500426	8594500786	859634684544	859100356284	150
8594500000	8594500426	8594500786	859634684544	859100356284	150
8587700000	8587700612	8587700755	858569028644	858858618331	150
8587700000	8587700612	8587700755	858569028644	858858618331	150
8643500000	8643500740	8643500338	864940070231	864632260813	150
8643500000	8643500740	8643500338	864940070231	864632260813	150
8684310000	8684310463	8684310726	868853172901	868365395453	150
8684310000	8684310463	8684310726	868853172901	868365395453	150
8775400000	8775400337	8775400687	877682095378	877872953559	150
8775400000	8775400337	8775400687	877682095378	877872953559	150
8682500000	8682500777	8682500749	868245983924	868673057359	150
8682500000	8682500777	8682500749	868245983924	868673057359	150
8722400000	8722400047	8722400205	872114908132	872716158537	150
8722400000	8722400047	8722400205	872114908132	872716158537	150
8693400000	8693400308	8693400875	869082715706	869911138221	150
8693400000	8693400308	8693400875	869082715706	869911138221	150
8748400000	8748400520	8748400406	874098275421	874771478326	150
8748400000	8748400520	8748400406	874098275421	874771478326	150
8784310000	8784310480	8784310736	878229703649	878381495559	150
8784310000	8784310480	8784310736	878229703649	878381495559	150
8712400000	8712400052	8712400105	871570284326	871772049812	150
8712400000	8712400052	8712400105	871570284326	871772049812	150
8684800000	8684800657	8684800814	868388156967	868635588692	150
8684800000	8684800657	8684800814	868388156967	868635588692	150
8755400000	8755400111	8755400487	875537406439	875812529830	150
8755400000	8755400111	8755400487	875537406439	875812529830	150
8741500000	8741500278	8741500369	874954819231	874968882894	150
8741500000	8741500278	8741500369	874954819231	874968882894	150
8673400000	8673400477	8673400678	867552955990	867196183022	150
8673400000	8673400477	8673400678	867552955990	867196183022	150

8787410000	8787410781	8787410798	878645054904	878959800570	150
8787410000	8787410781	8787410798	878645054904	878959800570	150
8832500000	8832500524	8832500270	883780999207	883568455130	150
8832500000	8832500524	8832500270	883780999207	883568455130	150
8883600000	8883600847	8883600756	888782320700	888828340282	150
8883600000	8883600847	8883600756	888782320700	888828340282	150
8812400000	8812400069	8812400115	881526299736	881611872536	150
8812400000	8812400069	8812400115	881526299736	881611872536	150
8912500000	8912500303	8912500078	891446180301	891098574031	150
8912500000	8912500303	8912500078	891446180301	891098574031	150
8802500000	8802500202	8802500969	880918439772	880780439732	150
8802500000	8802500202	8802500969	880918439772	880780439732	150
8846400000	8846400378	8846400399	884823792031	884437471388	150
8846400000	8846400378	8846400399	884823792031	884437471388	150
8862500000	8862500610	8862500569	886282426258	886354090797	150
8862500000	8862500610	8862500569	886282426258	886354090797	150
8833500000	8833500605	8833500260	883861483866	883368720880	150
8833500000	8833500605	8833500260	883861483866	883368720880	150
8821800000	8821800746	8821800168	882787108396	882166127359	150
8821800000	8821800746	8821800168	882787108396	882166127359	150
9044400000	9044400960	9044400309	904884894291	904174781990	150
9044400000	9044400960	9044400309	904884894291	904174781990	150
9005400000	9005400395	9005400904	900449933049	900115876367	150
9005400000	9005400395	9005400904	900449933049	900115876367	150
8977410000	8977410646	8977410719	897418319709	897691561054	150
8977410000	8977410646	8977410719	897418319709	897691561054	150
8947500000	8947500293	8947500342	894251710020	894450150507	150
8947500000	8947500293	8947500342	894251710020	894450150507	150
8979400000	8979400321	8979400706	897097380187	897380733202	150
8979400000	8979400321	8979400706	897097380187	897380733202	150
9037400000	9037400212	9037400253	903849634050	903817644588	150
9037400000	9037400212	9037400253	903849634050	903817644588	150
9025500000	9025500802	9025500054	902692980600	902456157013	150
9025500000	9025500802	9025500054	902692980600	902456157013	150
8972400000	8972400903	8972400719	897077547557	897146589279	150
8972400000	8972400903	8972400719	897077547557	897146589279	150
8974500000	8974500923	8974500630	897738976226	897946846776	150
8974500000	8974500923	8974500630	897738976226	897946846776	150
9045400000	9045400886	9045400318	904658851408	904475878368	150
9045400000	9045400886	9045400318	904658851408	904475878368	150
9020500000	9020500642	9020500116	902457452255	902017726286	150
9020500000	9020500642	9020500116	902457452255	902017726286	150
9006400000	9006400676	9006400915	900635083681	900351661606	150
9006400000	9006400676	9006400915	900635083681	900351661606	150
8948400000	8948400555	8948400426	894354388369	894689296824	150
8948400000	8948400555	8948400426	894354388369	894689296824	150
9008410000	9008410827	9008410929	900364409682	900046525697	150

9008410000	9008410827	9008410929	900364409682	900046525697	150
8967400000	8967400451	8967400638	896341764849	896435855752	150
8967400000	8967400451	8967400638	896341764849	896435855752	150
9055400000	9055400063	9055400419	905163769283	905875050032	150
9055400000	9055400063	9055400419	905163769283	905875050032	150
9055500000	9055500619	9055500351	905406271939	905243211657	150
9055500000	9055500619	9055500351	905406271939	905243211657	150
9150500000	9150500927	9150500420	915104558647	915879722063	150
9150500000	9150500927	9150500420	915104558647	915879722063	150
9124500000	9124500189	9124500066	912163004845	912057151445	150
9124500000	9124500189	9124500066	912163004845	912057151445	150
9101500000	9101500738	9101500915	910762960925	910092569829	150
9101500000	9101500738	9101500915	910762960925	910092569829	150
9105400000	9105400412	9105400914	910736921553	910297648802	150
9105400000	9105400412	9105400914	910736921553	910297648802	150
9167410000	9167410499	9167410542	916061617243	916203297701	150
9167410000	9167410499	9167410542	916061617243	916203297701	150
9132400000	9132400114	9132400246	913042442262	913016801651	150
9132400000	9132400114	9132400246	913042442262	913016801651	150
9124810000	9124810467	9124810189	912934902640	912148345307	150
9124810000	9124810467	9124810189	912934902640	912148345307	150
9077400000	9077400468	9077400649	907257397929	907072954392	150
9077400000	9077400468	9077400649	907257397929	907072954392	150
9166400000	9166400599	9166400540	916969759586	916283844291	150
9166400000	9166400599	9166400540	916969759586	916283844291	150
9094500000	9094500111	9094500738	909086023089	909882411217	150
9094500000	9094500111	9094500738	909086023089	909882411217	150
9272400000	9272400300	9272400651	927413630166	927180130532	150
9272400000	9272400300	9272400651	927413630166	927180130532	150
9274500000	9274500381	9274500560	927041656949	927881891128	150
9274500000	9274500381	9274500560	927041656949	927881891128	150
9205400000	9205400428	9205400924	920486961438	920457709815	150
9205400000	9205400428	9205400924	920486961438	920457709815	150
9178400000	9178400866	9178400642	917563360895	917258016478	150
9178400000	9178400866	9178400642	917563360895	917258016478	150
9269400000	9269400123	9269400539	926823661525	926994542630	150
9269400000	9269400123	9269400539	926823661525	926994542630	150
9176400000	9176400697	9176400646	917120316612	917359943683	150
9176400000	9176400697	9176400646	917120316612	917359943683	150
9235610000	9235610764	9235610241	923213395146	923292372269	150
9235610000	9235610764	9235610241	923213395146	923292372269	150
9264500000	9264500205	9264500467	926039057598	926535758859	150
9264500000	9264500205	9264500467	926039057598	926535758859	150
9283400000	9283400078	9283400739	928295761531	928239679403	150
9283400000	9283400078	9283400739	928295761531	928239679403	150
9213400000	9213400065	9213400048	921351993488	921314042000	150
9213400000	9213400065	9213400048	921351993488	921314042000	150

9415500000	9415500704	9415500987	941732284268	941759626105	150
9415500000	9415500704	9415500987	941732284268	941759626105	150
9310610000	9310610461	9310610105	931790931274	931442364076	150
9310610000	9310610461	9310610105	931790931274	931442364076	150
9379400000	9379400226	9379400648	937277029102	937865512374	150
9379400000	9379400226	9379400648	937277029102	937865512374	150
9365400000	9365400213	9365400548	936470475818	936666510059	150
9365400000	9365400213	9365400548	936470475818	936666510059	150
9308400000	9308400922	9308400973	930792425804	930304146722	150
9308400000	9308400922	9308400973	930792425804	930304146722	150
9381500000	9381500714	9381500728	938638994140	938212393480	150
9381500000	9381500714	9381500728	938638994140	938212393480	150
9325500000	9325500853	9325500084	932684898531	932031982498	150
9325500000	9325500853	9325500084	932684898531	932031982498	150
9355400000	9355400119	9355400448	935311950487	935365046383	150
9355400000	9355400119	9355400448	935311950487	935365046383	150
9387600000	9387600952	9387600678	938280807231	938694847714	150
9387600000	9387600952	9387600678	938280807231	938694847714	150
9305500000	9305500549	9305500868	930254429428	930707026822	150
9305500000	9305500549	9305500868	930254429428	930707026822	150
9356400000	9356400467	9356400454	935949850976	935611668157	150
9356400000	9356400467	9356400454	935949850976	935611668157	150
9429400000	9429400511	9429400165	942835036030	942631584128	150
9429400000	9429400511	9429400165	942835036030	942631584128	150
9454500000	9454500873	9454500387	945767260490	945818920918	150
9454500000	9454500873	9454500387	945767260490	945818920918	150
9504400000	9504400623	9504400963	950710939240	950695446357	150
9504400000	9504400623	9504400963	950710939240	950695446357	150
9521600000	9521600739	9521600135	952077668051	952640379226	150
9521600000	9521600739	9521600135	952077668051	952640379226	150
9521800000	9521800696	9521800135	952089674222	952720767964	150
9521800000	9521800696	9521800135	952089674222	952720767964	150
9523400000	9523400272	9523400176	952189231854	952342731896	150
9523400000	9523400272	9523400176	952189231854	952342731896	150
9465710000	9465710996	9465710480	946490174177	946266547755	150
9465710000	9465710996	9465710480	946490174177	946266547755	150
9523500000	9523500160	9523500133	952061174137	952504764332	150
9523500000	9523500160	9523500133	952061174137	952504764332	150
9497410000	9497410731	9497410869	949838678095	949421351001	150
9452400000	9452400375	9452400470	945984252262	945108798193	150
9452400000	9452400375	9452400470	945984252262	945108798193	150
9543500000	9543500725	9543500329	954318181607	954134489921	150
9543500000	9543500725	9543500329	954318181607	954134489921	150
9499400000	9499400477	9499400858	949156554769	949912230251	150
9499400000	9499400477	9499400858	949156554769	949912230251	150
9425500000	9425500870	9425500094	942294253038	942260896601	150
9425500000	9425500870	9425500094	942294253038	942260896601	150

9467410000	9467410549	9467410573	946469976761	946677267436	150
9467410000	9467410549	9467410573	946469976761	946677267436	150
9453500000	9453500305	9453500419	945521546415	945085464691	150
9453500000	9453500305	9453500419	945521546415	945085464691	150
9441500000	9441500224	9441500342	944435465214	944178781240	150
9441500000	9441500224	9441500342	944435465214	944178781240	150
9542400000	9542400223	9542400381	954700294430	954534676781	150
9542400000	9542400223	9542400381	954700294430	954534676781	150
9498400000	9498400084	9498400869	949100415821	949580435781	150
9498400000	9498400084	9498400869	949100415821	949580435781	150
9644400000	9644400064	9644400369	964726956067	964756321118	150
9644400000	9644400064	9644400369	964726956067	964756321118	150
9615500000	9615500736	9615500011	961398678266	961281081437	150
9615500000	9615500736	9615500011	961398678266	961281081437	150
9617400000	9617400006	9617400115	961161681413	961413007769	150
9617400000	9617400006	9617400115	961161681413	961413007769	150
9605500000	9605500596	9605500897	960160559504	960099286078	150
9605500000	9605500596	9605500897	960160559504	960099286078	150
9677410000	9677410603	9677410690	967387081566	967430039074	150
9677410000	9677410603	9677410690	967387081566	967430039074	150
9637400000	9637400172	9637400313	963096856157	963647327430	150
9637400000	9637400172	9637400313	963096856157	963647327430	150
9584310000	9584310446	9584310717	958668595824	958754871802	150
9584310000	9584310446	9584310717	958668595824	958754871802	150
9557500000	9557500391	9557500405	955224118684	955485277204	150
9557500000	9557500391	9557500405	955224118684	955485277204	150
9586400000	9586400867	9586400793	958910836219	958195193219	150
9586400000	9586400867	9586400793	958910836219	958195193219	150
9657400000	9657400376	9657400510	965917365031	965360938718	150
9657400000	9657400376	9657400510	965917365031	965360938718	150
9657410000	9657410416	9657410492	965633561377	965337832548	150
9657410000	9657410416	9657410492	965633561377	965337832548	150
9564400000	9564400951	9564400557	956834573552	956210125607	150
9564400000	9564400951	9564400557	956834573552	956210125607	150
9608410000	9608410814	9608410990	960505119612	960049725759	150
9608410000	9608410814	9608410990	960505119612	960049725759	150
9798400000	9798400141	9798400899	979251855052	979470993490	150
9798400000	9798400141	9798400899	979251855052	979470993490	150
9798510000	9798510130	9798510950	979427575305	979104426085	150
9798510000	9798510130	9798510950	979427575305	979104426085	150
9771500000	9771500596	9771500669	977859805522	977479082187	150
9771500000	9771500596	9771500669	977859805522	977479082187	150
9691500000	9691500970	9691500851	969491158940	969505905521	150
9691500000	9691500970	9691500851	969491158940	969505905521	150
9708700000	9708700954	9708700973	970280303672	970818797231	150
9708700000	9708700954	9708700973	970280303672	970818797231	150
9725400000	9725400710	9725400183	972602423554	972178545673	150

9725400000	9725400710	9725400183	972602423554	972178545673	150
9785400000	9785400499	9785400786	978405104903	978083430326	150
9785400000	9785400499	9785400786	978405104903	978083430326	150
9773500000	9773500817	9773500644	977298378142	977598017513	150
9773500000	9773500817	9773500644	977298378142	977598017513	150
9777410000	9777410617	9777410700	977915208630	977496262834	150
9777410000	9777410617	9777410700	977915208630	977496262834	150
9684500000	9684500048	9684500698	968976539360	968126020073	150
9684500000	9684500048	9684500698	968976539360	968126020073	150
9768500000	9768500498	9768500544	976363361843	976623536386	150
9768500000	9768500498	9768500544	976363361843	976623536386	150
9714500000	9714500114	9714500028	971236463852	971144271774	150
9714500000	9714500114	9714500028	971236463852	971144271774	150
9833400000	9833400681	9833400303	983724360302	983792075114	150
9833400000	9833400681	9833400303	983724360302	983792075114	150
9822500000	9822500344	9822500170	982007612948	982309073398	150
9822500000	9822500344	9822500170	982007612948	982309073398	150
9882400000	9882400047	9882400809	988065010470	988762444263	150
9882400000	9882400047	9882400809	988065010470	988762444263	150
9840500000	9840500967	9840500391	984413960135	984512326068	150
9840500000	9840500967	9840500391	984413960135	984512326068	150
9873500000	9873500835	9873500653	987410442579	987903239048	150
9873500000	9873500835	9873500653	987410442579	987903239048	150
9861700000	9861700969	9861700206	986032129387	986659358650	150
9861700000	9861700971	9861700481	986263001493	986659358650	150
9861700000	9861700973	9861700498	986316961201	986659358650	150
9861700000	9861700974	9861700021	986126138898	986659358650	150
9861700000	9861700975	9861700468	986561983310	986659358650	150
9903500000	9903500017	9903500976	990650187794	990143408979	150
9903500000	9903500017	9903500976	990650187794	990143408979	150
9861700000	9861700976	9861700421	986240162923	986659358650	150
9861700000	9861700977	9861700987	986754010790	986659358650	150
9861700000	9861700977	9861700987	986754010790	986659358650	150
9861700000	9861700978	9861700001	986904201597	986659358650	150
9854500000	9854500131	9854500427	985223905993	985785362210	150
9854500000	9854500131	9854500427	985223905993	985785362210	150
9883500000	9883500152	9883500751	988233627203	988311050945	150
9883500000	9883500152	9883500751	988233627203	988311050945	150
9841500000	9841500299	9841500380	984786316368	984537203569	150
9841500000	9841500299	9841500380	984786316368	984537203569	150
9812610000	9812610198	9812610132	981656299855	981779345391	150
9812610000	9812610198	9812610132	981656299855	981779345391	150
9921500000	9921500044	9921500193	992806860461	992515300426	150
9921500000	9921500044	9921500193	992806860461	992515300426	150
9898400000	9898400157	9898400909	989152535481	989658017537	150
9898400000	9898400157	9898400909	989152535481	989658017537	150
9902500000	9902500222	9902500979	990973130204	990526022929	150

9902500000	9902500222	9902500979	990973130204	990526022929	150
9965400000	9965400309	9965400608	996116668999	996468910396	150
9965400000	9965400309	9965400608	996116668999	996468910396	150
9943500000	9943500795	9943500369	994800385436	994100090885	150
9943500000	9943500795	9943500369	994800385436	994100090885	150
9980500000	9980500522	9980500796	998505698468	998366661446	150
9980500000	9980500522	9980500796	998505698468	998366661446	150
6914603845	6914603341	9739400293	691535453202	691553130193	150
6914603845	6914603341	9739400293	691535453202	691553130193	150
9970500000	9970500416	9970500698	997338979108	997748722006	150
9970500000	9970500416	9970500698	997338979108	997748722006	150
6961959135	6961959764	4993400900	696792376549	696837664633	150
6961959135	6961959764	4993400900	696792376549	696837664633	150
1812610000	1812610554	4102400944	181184342323	181249886560	150
1812610000	1812610554	4102400944	181184342323	181249886560	150
1795631490	1795631814	5794800923	179083690194	179560829575	150
1795631490	1795631814	5794800923	179083690194	179560829575	150
6242446723	6242446206	5444700373	624710771665	624908657532	150
6242446723	6242446206	5444700373	624710771665	624908657532	150
9861700000	9861700825	9861700646	986189972205	986659358650	150
5038454027	5038454732	8442400370	503890369887	503499506895	150
5038454027	5038454732	8442400370	503890369887	503499506895	150
5591641389	5591641435	3500302483	559834138441	559884854831	150
5591641389	5591641435	3500302483	559834138441	559884854831	150
660321636	660321727	131800191	66896971699	66015941385	150
3587947405	3587947653	3877400722	358721203262	358228783264	150
3587947405	3587947653	3877400722	358721203262	358228783264	150
7990492248	7990492159	1663400571	799731220767	799223368440	150
7990492248	7990492159	1663400571	799731220767	799223368440	150
7837516746	7837516211	2992910000	783591912245	783583057991	150
7837516746	7837516211	2992910000	783591912245	783583057991	150
4456441102	4456441353	5638400296	445975028635	445078513865	150
4456441102	4456441353	5638400296	445975028635	445078513865	150
6822584129	6822584668	6279959514	682761201596	682760364938	150
6822584129	6822584668	6279959514	682761201596	682760364938	150
9714400000	9714400622	3468500504	971256864449	971107872559	150
9714400000	9714400622	3468500504	971256864449	971107872559	150
3661423246	3661423200	9327400185	366874905592	366542962097	150
1909400000	1909400640	39444400393	190217967449	190248496253	150
1909400000	1909400640	39444400393	190217967449	190248496253	150
8916317444	8916317878	6742400398	891684780625	891451524871	150
8916317444	8916317878	6742400398	891684780625	891451524871	150
3108433950	3108433190	7270500627	310935726297	310633568035	150
3108433950	3108433190	7270500627	310935726297	310633568035	150
1682572973	1682572511	9493910000	168751430305	168063025007	150
1682572973	1682572511	9493910000	168751430305	168063025007	150
9306853254	9306853222	4493910000	930920312865	930648918728	150

9306853254	9306853222	4493910000	930920312865	930648918728	150
5962931605	5962931878	593910000	596847079089	596629773505	150
5962931605	5962931878	593910000	596847079089	596629773505	150
3074406251	3074406456	7493910000	307161660871	307234298131	150
3074406251	3074406456	7493910000	307161660871	307234298131	150
5938040345	5938040211	4562500535	593734801704	593520159559	150
5938040345	5938040211	4562500535	593734801704	593520159559	150
1938265261	1938265404	6983400804	193300194929	193731244219	150
1938265261	1938265404	6983400804	193300194929	193731244219	150
3468500000	3468500163	3593910000	346101481822	346378746982	150
3468500000	3468500163	3593910000	346101481822	346378746982	150
7307920069	7307920821	3890500879	730948264669	730838700043	150
7307920069	7307920821	3890500879	730948264669	730838700043	150
860681043	860681293	803400999	86699755480	86492221200	150
860681043	860681293	803400999	86699755480	86492221200	150
9861700000	9861700300	9861700365	986243727426	986659358650	150
5917880508	5917880706	7427400193	591405531353	591606881551	150
5917880508	5917880706	7427400193	591405531353	591606881551	150
787379678	787379792	7494310805	78280065458	78389596660	150
787379678	787379792	7494310805	78280065458	78389596660	150
6405346065	6405346512	4308700929	640118314771	640416801282	150
6405346065	6405346512	4308700929	640118314771	640416801282	150
5323005453	5323005789	377400670	532350008465	532193405589	150
5323005453	5323005789	377400670	532350008465	532193405589	150
3327542204	3327542984	8044500250	332837608844	332601864785	150
3327542204	3327542984	8044500250	332837608844	332601864785	150
4756728920	4756728791	2493910000	475318151638	475776285012	150
4756728920	4756728791	2493910000	475318151638	475776285012	150
2677100000	2677100042	2215400017	267536275223	267500065840	150
2677100000	2677100042	2215400017	267536275223	267500065840	150
8923557979	8923557766	4693910000	892640134008	892778541055	150
8923557979	8923557766	4693910000	892640134008	892778541055	150
539510000	539510314	2434400244	53810016068	53120121538	150
539510000	539510314	2434400244	53810016068	53120121538	150
5687410000	5687410653	5687410785	568936954082	568991908514	150
5687410000	5687410653	5687410785	568936954082	568991908514	150
6288218585	6288218240	7212500007	628720724115	628244581056	150
6288218585	6288218240	7212500007	628720724115	628244581056	150
9396562666	9396562750	2214400026	939859128807	939143713224	150
9396562666	9396562750	2214400026	939859128807	939143713224	150
6692304266	6692304386	3668500527	669848958682	669336217616	150
7109498414	7109498040	9714400083	710708512579	710455431457	150
7109498414	7109498040	9714400083	710708512579	710455431457	150
9396989969	9396989292	5153400427	939766055352	939240442322	150
9396989969	9396989292	5153400427	939766055352	939240442322	150
175310000	175310685	175310758	17212532823	17880780706	150
146134642	146134072	4944700421	14661288145	14333635672	150

146134642	146134072	4944700421	14661288145	14333635672	150
8185050432	8185050574	9982600773	818399978920	818298927442	150
9861700000	9861700109	9861700104	986082711915	986659358650	150
2328639796	2328639412	2256710375	232430747321	232074129994	150
2328639796	2328639412	2256710375	232430747321	232074129994	150
886360793	886360137	9188400741	88529108743	88903798566	150
886360793	886360137	9188400741	88529108743	88903798566	150
2554016299	2554016426	7843910000	255219130682	255090003122	150
2554016299	2554016426	7843910000	255219130682	255090003122	150
301671542	301671486	5963500562	30445055596	30486830387	150
301671542	301671486	5963500562	30445055596	30486830387	150
8529758910	8529758003	4635610275	852375970316	852228076817	150
8529758910	8529758003	4635610275	852375970316	852228076817	150
4353505815	4353505602	1877700680	435694472841	435411498194	150
4353505815	4353505602	1877700680	435694472841	435411498194	150
1187079622	1187079326	9444500290	118830528751	118713280137	150
1187079622	1187079326	9444500290	118830528751	118713280137	150
7629452704	7629452322	7080500706	762118389400	762410009366	150
7629452704	7629452322	7080500706	762118389400	762410009366	150
2132177414	2132177167	4927610178	213435209292	213875837034	150
2132177414	2132177167	4927610178	213435209292	213875837034	150
175310000	175310071	5363910000	17175390197	17880780706	150
752065354	752065250	5433500219	75574410757	75798649080	150
752065354	752065250	5433500219	75574410757	75798649080	150
1086130205	1086130908	3095400810	108714242876	108115909788	150
1086130205	1086130908	3095400810	108714242876	108115909788	150
7468884616	7468884302	2344500274	746825500993	746934422178	150
7468884616	7468884302	2344500274	746825500993	746934422178	150
4705400000	4705400103	4705400969	470492587144	470124364062	150
4705400000	4705400103	4705400969	470492587144	470124364062	150
7865020696	7865020000	3169500497	786519711942	786130191608	150
7865020696	7865020000	3169500497	786519711942	786130191608	150
9481447987	9481447323	7510610123	948718741044	948879949811	150
9481447987	9481447323	7510610123	948718741044	948879949811	150
9498972037	9498972598	806400986	949114752072	949550471137	150
9498972037	9498972598	806400986	949114752072	949550471137	150
3568229578	3568229037	3747400414	356681498785	356030152833	150
3568229578	3568229037	3747400414	356681498785	356030152833	150
34735206	34735924	1253500391	3397010011	3085515183	150
34735206	34735924	1253500391	3397010011	3085515183	150
7260179122	7260179300	7027400153	726909239437	726887001958	150
7260179122	7260179300	7027400153	726909239437	726887001958	150
6626374750	6626374198	1915400092	662739720852	662086965460	150
6626374750	6626374198	1915400092	662739720852	662086965460	150
7912046471	7912046454	9258400456	791369516732	791093771955	150
7912046471	7912046454	9258400456	791369516732	791093771955	150
1834329175	1834329125	9711500075	183306942186	183301636244	150

1834329175	1834329125	9711500075	183306942186	183301636244	150
8778880435	8778880128	2622500142	877564682453	877128168975	150
8778880435	8778880128	2622500142	877564682453	877128168975	150
3855800000	3855800386	3855800549	385095633505	385373621253	150
3855800000	3855800386	3855800549	385095633505	385373621253	150
3577777726	3577777172	9643400382	357962787028	357972532597	150
3577777726	3577777172	9643400382	357962787028	357972532597	150
3049930228	3049930884	2429400158	304736117951	304225997241	150
3049930228	3049930884	2429400158	304736117951	304225997241	150
7469819029	7469819026	8687400806	746205464425	746835397981	150
7469819029	7469819026	8687400806	746205464425	746835397981	150
7184449698	7184449376	1415400038	718667461416	718915048437	150
7184449698	7184449376	1415400038	718667461416	718915048437	150
8117793302	8117793164	7953400507	811285890649	811868377621	150
8117793302	8117793164	7953400507	811285890649	811868377621	150
6368406081	6368406125	9539400273	636664312382	636201774783	150
6368406081	6368406125	9539400273	636664312382	636201774783	150
7612183434	7612183297	6587510834	761078939139	761056173993	150
7612183434	7612183297	6587510834	761078939139	761056173993	150
9008114406	9008114667	2203400942	900888214841	900327519343	150
9008114406	9008114667	2203400942	900888214841	900327519343	150
3211105863	3211105007	7911500092	321461559964	321015281600	150
3211105863	3211105007	7911500092	321461559964	321015281600	150
950143014	950143750	7662400588	95940153230	95454648392	150
950143014	950143750	7662400588	95940153230	95454648392	150
3311506353	3311506466	9825400193	331043489434	331495820729	150
3311506353	3311506466	9825400193	331043489434	331495820729	150
2291500000	2291500802	2291500804	229672641014	229993835681	150
2291500000	2291500802	2291500804	229672641014	229993835681	150
7769088994	7769088510	5324500082	776147003285	776765246356	150
7769088994	7769088510	5324500082	776147003285	776765246356	150
5288643217	5288643411	78400623	528079783280	528246562268	150
5288643217	5288643411	78400623	528079783280	528246562268	150
6107927501	6107927587	1005500829	610510347058	610777217008	150
6469943206	6469943392	5012400034	646746883372	646869024370	150
6469943206	6469943392	5012400034	646746883372	646869024370	150
8243142612	8243142961	900020000	824984301383	824921310420	150
8243142612	8243142961	900020000	824984301383	824921310420	150
4628244270	4628244926	5797400911	462720957015	462675756659	150
4628244270	4628244926	5797400911	462720957015	462675756659	150
9558510000	9558510307	9558510533	955060873024	955892554017	150
9558510000	9558510307	9558510533	955060873024	955892554017	150
1992824519	1992824324	6170500616	199003076608	199544354945	150
1992824519	1992824324	6170500616	199003076608	199544354945	150
1684031363	1684031693	9341500332	168949871245	168024886940	150
1684031363	1684031693	9341500332	168949871245	168024886940	150
2394063707	2394063919	3515400050	239935704057	239417736403	150

2394063707	2394063919	3515400050	239935704057	239417736403	150
4216452858	4216452306	2389400740	421391821725	421828864542	150
4216452858	4216452306	2389400740	421391821725	421828864542	150
38594777176	3859477797	583500714	385339452327	385001336170	150
38594777176	3859477797	583500714	385339452327	385001336170	150
4998120265	4998120816	3891400913	499936505186	499838083213	150
4998120265	4998120816	3891400913	499936505186	499838083213	150
3772973916	3772973529	1240500323	377188514525	377721703382	150
3772973916	3772973529	1240500323	377188514525	377721703382	150
4957341734	4957341009	691500842	495303646997	495508047884	150
4957341734	4957341009	691500842	495303646997	495508047884	150
1187510000	1187510004	1187510789	118313687534	118677706787	150
1187510000	1187510004	1187510789	118313687534	118677706787	150
534842740	534842452	1826500140	53766260686	53909647066	150
534842740	534842452	1826500140	53766260686	53909647066	150
5820974667	5820974610	3508700947	582632683982	582621911303	150
5824683407	5824683495	9674500600	582067268387	582327030496	150
5824683407	5824683495	9674500600	582067268387	582327030496	150
1849485482	1849485797	8181600701	184888974147	184692976278	150
1849485482	1849485797	8181600701	184888974147	184692976278	150
7431115929	7431115079	3194400809	743062049292	743283923483	150
7431115929	7431115079	3194400809	743062049292	743283923483	150
1157766387	1157766674	9853910000	115866460490	115426242547	150
2929911695	2929911934	8905500929	292806590941	292432808286	150
2929911695	2929911934	8905500929	292806590941	292432808286	150
1737703506	1737703788	494500768	173343301602	173723839632	150
1737703506	1737703788	494500768	173343301602	173723839632	150
4080000202	4080000135	4678794679	408230301160	408669590903	150
4080000202	4080000135	4678794679	408230301160	408669590903	150
9028287753	9028287846	8032500189	902177145535	902210126281	150
9028287753	9028287846	8032500189	902177145535	902210126281	150
2270553440	2270553039	823400197	227359724112	227998018007	150
2270553440	2270553039	823400197	227359724112	227998018007	150
8316144173	8316144355	363400540	831277954572	831885859047	150
8316144173	8316144355	363400540	831277954572	831885859047	150
4081909931	4081909807	8624610190	408993901743	408463952912	150
4081909931	4081909807	8624610190	408993901743	408463952912	150
3225915227	3225915694	8053910000	322619794862	322840733418	150
3225915227	3225915694	8053910000	322619794862	322840733418	150
1640594010	1640594833	8816400093	164199720647	164471016667	150
1640594010	1640594833	8816400093	164199720647	164471016667	150
860955431	860955749	3774039950	86668813796	86763278254	150
860955431	860955749	3774039950	86668813796	86763278254	150
3449423855	3449423111	5232400252	344941177801	344907873571	150
3449423855	3449423111	5232400252	344941177801	344907873571	150
4134323945	4134323806	7683600735	413806522934	413777609893	150
4134323945	4134323806	7683600735	413806522934	413777609893	150

295108546	295108634	5912400122	29097223447	29565103689	150
295108546	295108634	5912400122	29097223447	29565103689	150
2996296758	2996296681	4225400125	299223663896	299634333377	150
2996296758	2996296681	4225400125	299223663896	299634333377	150
9160911166	9160911757	6556700458	916216032167	916187471454	150
9160911166	9160911757	6556700458	916216032167	916187471454	150
8334998323	8334998522	9061500500	833074833233	833902625239	150
8334998323	8334998522	9061500500	833074833233	833902625239	150
4586601540	4586601214	8782400798	458838856723	458192073640	150
4586601540	4586601214	8782400798	458838856723	458192073640	150
5389070009	5389070346	4368400557	538690373466	538979856319	150
5389070009	5389070346	4368400557	538690373466	538979856319	150
4817274682	4817274329	3655400472	481564579098	481102134922	150
4817274682	4817274329	3655400472	481564579098	481102134922	150
4307296393	4307296613	7962400618	430958526317	430650163575	150
4307296393	4307296613	7962400618	430958526317	430650163575	150
9948554350	9948554902	7594400853	994002288859	994804404097	150
9948554350	9948554902	7594400853	994002288859	994804404097	150
2568887174	2568887896	3462400564	256601494856	256232999449	150
2568887174	2568887896	3462400564	256601494856	256232999449	150
5458611620	5458611019	8613500045	545172457577	545254074574	150
5458611620	5458611019	8613500045	545172457577	545254074574	150
476180784	476180557	5663500532	47575606993	47129771796	150
476180784	476180557	5663500532	47575606993	47129771796	150
6188243181	6188243448	3788400794	618390531337	618083636284	150
6188243181	6188243448	3788400794	618390531337	618083636284	150
2024892767	2024892959	8863500555	202003654871	202075440469	150
2024892767	2024892959	8863500555	202003654871	202075440469	150
5548190456	5548190302	9977510777	554426943187	554683513598	150
5548190456	5548190302	9977510777	554426943187	554683513598	150
4695262050	4695262060	821800158	469049479540	469998931240	150
4695262050	4695262060	821800158	469049479540	469998931240	150
6155796438	6155796525	955400499	615300663472	615346742882	150
6155796438	6155796525	955400499	615300663472	615346742882	150
2277522194	2277522990	725500115	227638808320	227205390401	150
2277522194	2277522990	725500115	227638808320	227205390401	150
4056520460	4056520229	983400798	405097524448	405344630670	150
4056520460	4056520229	983400798	405097524448	405344630670	150
5779713638	5779713183	2484800789	577447003914	577937851141	150
5779713638	5779713183	2484800789	577447003914	577937851141	150
9522238445	9522238545	4023610135	952307070811	952501519787	150
9522238445	9522238545	4023610135	952307070811	952501519787	150
3340405063	3340405633	4892133075	334630101421	334084478618	150
3340405063	3340405633	4892133075	334630101421	334084478618	150
5915862624	5915862797	1909400009	591898883058	591425380694	150
5915862624	5915862797	1909400009	591898883058	591425380694	150
6361334332	6361334386	1974500623	636738058879	636181353094	150

6361334332	6361334386	1974500623	636738058879	636181353094	150
8160033997	8160033859	2454400441	816753348176	816278283243	150
8160033997	8160033859	2454400441	816753348176	816278283243	150
3602874391	3602874513	423610170	360115962424	360951621954	150
3602874391	3602874513	423610170	360115962424	360951621954	150
6541228863	6541228067	7196400854	654463886625	654142729407	150
6541228863	6541228067	7196400854	654463886625	654142729407	150
3007400000	3007400826	3007400948	300148169392	300011732403	150
3007400000	3007400826	3007400948	300148169392	300011732403	150
2377433853	2377433601	5088400727	237344038081	237156818580	150
2377433853	2377433601	5088400727	237344038081	237156818580	150
734659440	734659291	3108400947	73358338234	73087085990	150
734659440	734659291	3108400947	73358338234	73087085990	150
7304414570	7304414512	3035400208	730826716547	730465703745	150
7304414570	7304414512	3035400208	730826716547	730465703745	150
609064725	609064713	1397410851	60325180841	60519790632	150
609064725	609064713	1397410851	60325180841	60519790632	150
5343745048	5343745392	8921800179	534152639367	534581157477	150
5343745048	5343745392	8921800179	534152639367	534581157477	150
3511951149	3511951396	9470500649	351099619388	351139490414	150
3511951149	3511951396	9470500649	351099619388	351139490414	150
4890019334	4890019358	2223610153	489418122207	489370358628	150
4890019334	4890019358	2223610153	489418122207	489370358628	150
4783465768	4783465104	1503500929	478242043880	478596409797	150
4783465768	4783465104	1503500929	478242043880	478596409797	150
3656724977	3656724654	624500106	365348737685	365004817362	150
3656724977	3656724654	624500106	365348737685	365004817362	150
3045254010	3045254726	6175400625	304388723329	304003029022	150
3045254010	3045254726	6175400625	304388723329	304003029022	150
4023500000	4023500124	4023500079	402094951064	402657636477	150
4023500000	4023500124	4023500079	402094951064	402657636477	150
3834923739	3834923960	6998510967	383617262598	383494875468	150
3834923739	3834923960	6998510967	383617262598	383494875468	150
7374500000	7374500809	7374500569	737854422895	737931281264	150
7374500000	7374500809	7374500569	737854422895	737931281264	150
8113621759	8113621330	2263500491	811391486025	811094039529	150
8113621759	8113621330	2263500491	811391486025	811094039529	150
6867891671	6867891095	8192400838	686124572728	686439484293	150
6867891671	6867891095	8192400838	686124572728	686439484293	150
6272479059	6272479661	5171500606	627465996260	627562860710	150
6272479059	6272479661	5171500606	627465996260	627562860710	150
7057055560	7057055351	1919400109	705581680281	705898899649	150
7057055560	7057055351	1919400109	705581680281	705898899649	150
8072952763	8072952290	8185400727	807350786469	807663215797	150
8072952763	8072952290	8185400727	807350786469	807663215797	150
3160804132	3160804557	6549610315	316525558897	316796310849	150
3160804132	3160804557	6549610315	316525558897	316796310849	150

9288558063	9288558075	8172500599	928461721392	928672569524	150
9288558063	9288558075	8172500599	928461721392	928672569524	150
7048425168	7048425263	8079400617	704591277846	704125422211	150
7048425168	7048425263	8079400617	704591277846	704125422211	150
9261751370	9261751154	9432500230	926638232379	926202733678	150
9261751370	9261751154	9432500230	926638232379	926202733678	150
5830271028	5830271492	7252210498	583038900324	583268698138	150
5830271028	5830271492	7252210498	583038900324	583268698138	150
3979830186	3979830050	7642400389	397730761287	397837224539	150
3979830186	3979830050	7642400389	397730761287	397837224539	150
7108955975	7108955357	1203500899	710697311476	710333811677	150
7108955975	7108955357	1203500899	710697311476	710333811677	150
9378302415	9378302715	6271500617	937411429282	937718198121	150
9378302415	9378302715	6271500617	937411429282	937718198121	150
8287700000	8287700945	8287700725	828143723651	828973833233	150
8287700000	8287700945	8287700725	828143723651	828973833233	150
1959283798	1959283449	1818400114	195317937008	195339600233	150
1959283798	1959283449	1818400114	195317937008	195339600233	150
321192206	321192468	7855700500	32810849263	32919520029	150
321192206	321192468	7855700500	32810849263	32919520029	150
425978838	425978348	7603400986	42571037935	42053289804	150
425978838	425978348	7603400986	42571037935	42053289804	150
9940702688	9940702557	6005500834	994449478010	994497744138	150
9940702688	9940702557	6005500834	994449478010	994497744138	150
906431738	906431491	3195400820	90780273119	90598012491	150
906431738	906431491	3195400820	90780273119	90598012491	150
5462156427	5462156388	4582500735	546804103712	546463934560	150
5462156427	5462156388	4582500735	546804103712	546463934560	150
3980884202	3980884712	790500866	398391099710	398080326002	150
3980884202	3980884712	790500866	398391099710	398080326002	150
7939546319	7939546950	8117400066	793080929546	793606163236	150
7939546319	7939546950	8117400066	793080929546	793606163236	150
323237107	323237428	3493400850	32923134809	32896888694	150
323237107	323237428	3493400850	32923134809	32896888694	150
5643554489	5643554729	8493910000	564855520266	564836318513	150
5643554489	5643554729	8493910000	564855520266	564836318513	150
3991492439	3991492672	4618400097	399085084621	399879329482	150
3991492439	3991492672	4618400097	399085084621	399879329482	150
4145416964	4145416110	3937400335	414323053237	414343361049	150
4145416964	4145416110	3937400335	414323053237	414343361049	150
8411677760	8411677937	9818400122	841679902599	841358039550	150
8411677760	8411677937	9818400122	841679902599	841358039550	150
3441217956	3441217030	4067400545	344208817279	344250913583	150
3441217956	3441217030	4067400545	344208817279	344250913583	150
6436510000	6436510831	1092400821	643846497700	643764124071	150
6436510000	6436510831	1092400821	643846497700	643764124071	150
1103890146	1103890760	4594310812	110509978979	110673785749	150

1103890146	1103890760	4594310812	110509978979	110673785749	150
2729936476	2729936228	3913500068	272864450324	272181184877	150
2729936476	2729936228	3913500068	272864450324	272181184877	150
5803499606	5803499744	3813500058	580235006881	580738131853	150
5803499606	5803499744	3813500058	580235006881	580738131853	150
1598098759	1598098363	664500496	159298025716	159022218780	150
1965352289	1965352674	6280500725	196089818141	196735064257	150
1965352289	1965352674	6280500725	196089818141	196735064257	150
2995688491	2995688526	6575400665	299350074484	299759145760	150
2995688491	2995688526	6575400665	299350074484	299759145760	150
5030150273	5030150682	1943400404	503637778144	503392390446	150
5030150273	5030150682	1943400404	503637778144	503392390446	150
6967251933	6967251268	8023700153	696583390583	696229022691	150
6967251933	6967251268	8023700153	696583390583	696229022691	150
4791610000	4791610701	4636610261	479482375493	479988826729	150
4791610000	4791610701	4636610261	479482375493	479988826729	150
9607389308	9607389152	2562400573	960852354223	960549017447	150
9607389308	9607389152	2562400573	960852354223	960549017447	150
5637694705	5637694208	704500926	563369796972	563986259100	150
5637694705	5637694208	704500926	563369796972	563986259100	150
812253912	812253409	2377410654	81440826987	81747528689	150
812253912	812253409	2377410654	81440826987	81747528689	150
3291516692	3291516431	4425400147	329468902229	329443932258	150
3291516692	3291516431	4425400147	329468902229	329443932258	150
2414408952	2414408784	6273400636	241839059892	241276535896	150
2414408952	2414408784	6273400636	241839059892	241276535896	150
8595852788	8595852278	5983600763	859170789262	859366566828	150
8595852788	8595852278	5983600763	859170789262	859366566828	150
119239619	119239188	4234400226	11263627709	11846540342	150
119239619	119239188	4234400226	11263627709	11846540342	150
6772400000	6772400166	6772400698	677011198052	677322329035	150
6772400000	6772400166	6772400698	677011198052	677322329035	150
4812984699	4812984501	1105500840	481145796261	481029463103	150
4812984699	4812984501	1105500840	481145796261	481029463103	150
4855828035	4855828522	7239400242	485673030244	485827511024	150
4855828035	4855828522	7239400242	485673030244	485827511024	150
5992956164	5992956702	742410391	599814544956	599767967318	150
5992956164	5992956702	742410391	599814544956	599767967318	150
1236332230	1236332343	4305500863	123897854807	123560578503	150
1236332230	1236332343	4305500863	123897854807	123560578503	150
5854531287	5854531600	3065400512	585782039294	585236677020	150
5854531287	5854531600	3065400512	585782039294	585236677020	150
67515789	67515439	624610182	6032979555	6130720008	150
67515789	67515439	624610182	6032979555	6130720008	150
2368195815	2368195250	9912610142	236135499243	236103433670	150
2368195815	2368195250	9912610142	236135499243	236103433670	150
3034558502	3034558370	5081500695	303632527867	303756580458	150

3034558502	3034558370	5081500695	303632527867	303756580458	150
3149830333	3149830935	1694810043	314373741321	314638737495	150
3149830333	3149830935	1694810043	314373741321	314638737495	150
3201030945	3201030461	4513400073	320670343340	320299146464	150
3201030945	3201030461	4513400073	320670343340	320299146464	150
8424314367	8424314476	5621800142	842462239961	842443105002	150
8424314367	8424314476	5621800142	842462239961	842443105002	150
9896400000	9896400737	9896400932	989857924396	989645314013	150
9896400000	9896400737	9896400932	989857924396	989645314013	150
8283391987	8283391355	2602400992	828387247417	828850882280	150
8283391987	8283391355	2602400992	828387247417	828850882280	150
5212909773	5212909198	43400314	521123444070	521644157941	150
5212909773	5212909198	43400314	521123444070	521644157941	150
672105232	672105687	6864500519	67779482993	67709393853	150
672105232	672105687	6864500519	67779482993	67709393853	150
5778142309	5778142573	1028400134	577654552105	577281044886	150
5778142309	5778142573	1028400134	577654552105	577281044886	150
777797263	777797331	9184400716	77271019451	77897553728	150
777797263	777797331	9184400716	77271019451	77897553728	150
7082181799	7082181553	4881600765	708178330710	708041209347	150
7082181799	7082181553	4881600765	708178330710	708041209347	150
9075572637	9075572702	3524400155	907677195329	907921534077	150
9075572637	9075572702	3524400155	907677195329	907921534077	150
1069025489	1069025130	4453810511	106556950269	106838151166	150
1069025489	1069025130	4453810511	106556950269	106838151166	150
2068810960	2068810146	8505400953	206549676517	206297564642	150
2068810960	2068810146	8505400953	206549676517	206297564642	150
7172189345	7172189403	3018400036	717935906326	717755575350	150
7172189345	7172189403	3018400036	717935906326	717755575350	150
6016761163	6016761926	7484500677	601281161815	601598042604	150
6016761163	6016761926	7484500677	601281161815	601598042604	150
7655899501	7655899688	9871600672	765919488474	765369419172	150
7655899501	7655899688	9871600672	765919488474	765369419172	150
8136462003	8136462751	8684500697	813244840468	813762526703	150
8136462003	8136462751	8684500697	813244840468	813762526703	150
1657433884	1657433773	4622400191	165557334508	165807802815	150
1657433884	1657433773	4622400191	165557334508	165807802815	150
9979694066	9979694803	1577410673	997127921800	997216917170	150
9979694066	9979694803	1577410673	997127921800	997216917170	150
602571905	602571907	2774500603	60462405679	60301476985	150
602571905	602571907	2774500603	60462405679	60301476985	150
7854967941	7854967890	4321500129	785421057447	785816100543	150
7854967941	7854967890	4321500129	785421057447	785816100543	150
2317506479	2317506332	6118400049	231137648862	231295845430	150
2317506479	2317506332	6118400049	231137648862	231295845430	150
7331557469	7331557777	4087700702	733857920231	733740399612	150
7331557469	7331557777	4087700702	733857920231	733740399612	150

7718365231	7718365720	9872400710	771447504501	771738835023	150
7718365231	7718365720	9872400710	771447504501	771738835023	150
593361599	593361935	7294500755	59740958017	59466424690	150
593361599	593361935	7294500755	59740958017	59466424690	150
1956406870	1956406247	1805500910	195598400901	195364942867	150
1956406870	1956406247	1805500910	195598400901	195364942867	150
2629398992	2629398841	6146400324	262990905004	262723048409	150
2629398992	2629398841	6146400324	262990905004	262723048409	150
1173644506	1173644433	1121810167	117659352814	117509459843	150
1173644506	1173644433	1121810167	117659352814	117509459843	150
9995430890	9995430394	6391500818	999250278688	999883564573	150
9995430890	9995430394	6391500818	999250278688	999883564573	150
7400823730	7400823039	3399400842	740755308894	740212352999	150
7400823730	7400823039	3399400842	740755308894	740212352999	150
2432497356	2432497595	6892500865	243307583962	243168998798	150
2432497356	2432497595	6892500865	243307583962	243168998798	150
3756677278	3756677755	1724400173	375918485618	375399060794	150
3756677278	3756677755	1724400173	375918485618	375399060794	150
1247652036	1247652593	2484600704	124975578488	124877077676	150
1247652036	1247652593	2484600704	124975578488	124877077676	150
8260506275	8260506705	8416400054	826873473245	826253559387	150
8260506275	8260506705	8416400054	826873473245	826253559387	150
9448961109	9448961861	6934310263	944014666419	944497835422	150
9448961109	9448961861	6934310263	944014666419	944497835422	150
8468196400	8468196552	4549400368	846335637540	846660300333	150
8468196400	8468196552	4549400368	846335637540	846660300333	150
4484887830	4484887769	2365710464	448017503300	448781162376	150
4484887830	4484887769	2365710464	448017503300	448781162376	150
3445055240	3445055948	1315500967	344838230125	344819430072	150
3445055240	3445055948	1315500967	344838230125	344819430072	150
7521304689	7521304922	6724500122	752671303214	752558391909	150
7521304689	7521304922	6724500122	752671303214	752558391909	150
5975686716	5975686472	9774500610	597001200582	597198556945	150
5975686716	5975686472	9774500610	597001200582	597198556945	150
8773956956	8773956049	9686510847	877752867846	877236272990	150
8773956956	8773956049	9686510847	877752867846	877236272990	150
5672983497	5672983059	9049400323	567153506748	567913726801	150
5672983497	5672983059	9049400323	567153506748	567913726801	150
4675585833	4675585356	4838400315	467653048974	467333038136	150
4675585833	4675585356	4838400315	467653048974	467333038136	150
6980206940	6980206215	6753400487	698778002354	698372566256	150
6980206940	6980206215	6753400487	698778002354	698372566256	150
6185558823	6185558069	2053400414	618233790513	618466004264	150
6185558823	6185558069	2053400414	618233790513	618466004264	150
557852882	557852000	4413700091	55972092252	55040082502	150
557852882	557852000	4413700091	55972092252	55040082502	150
4829465554	4829465260	7867410610	482923900417	482910840809	150

4829465554	4829465260	7867410610	482923900417	482910840809	150
4590486798	4590486965	3537400297	459518082781	459149949706	150
4590486798	4590486965	3537400297	459518082781	459149949706	150
3527692440	3527692549	6428400179	352668366983	352806224474	150
1760536051	1760536824	2584500681	176565846693	176276494209	150
1760536051	1760536824	2584500681	176565846693	176276494209	150
5364202076	5364202335	1157500355	536980088391	536697884800	150
5364202076	5364202335	1157500355	536980088391	536697884800	150
4192438184	4192438149	9461500540	419206129665	419059040483	150
4192438184	4192438149	9461500540	419206129665	419059040483	150
1439885878	1439885484	7756700479	143067837347	143696060369	150
1439885878	1439885484	7756700479	143067837347	143696060369	150
919954323	919954473	3000500912	91417203493	91101884009	150
919954323	919954473	3000500912	91417203493	91101884009	150
3775154815	3775154517	2956700494	377228868816	377099013912	150
3775154815	3775154517	2956700494	377228868816	377099013912	150
7382297518	7382297239	7684600729	738527366359	738433103855	150
7382297518	7382297239	7684600729	738527366359	738433103855	150
7736923478	7736923496	5452210516	773438783391	773757372177	150
7736923478	7736923496	5452210516	773438783391	773757372177	150
3969282512	3969282127	1036400205	396079004872	396052329888	150
3969282512	3969282127	1036400205	396079004872	396052329888	150
9082725958	9082725965	481600722	908651984792	908991470567	150
9082725958	9082725965	481600722	908651984792	908991470567	150
3915450005	3915450993	7697400903	391720502890	391211550320	150
3915450005	3915450993	7697400903	391720502890	391211550320	150
9866410437	9866410905	5427610130	986183376756	986189570109	150
9866410437	9866410905	5427610130	986183376756	986189570109	150
5470179654	5470179973	5639400279	547791279578	547696810374	150
5470179654	5470179973	5639400279	547791279578	547696810374	150
2866033142	2866033283	4921500188	286161498767	286757355343	150
2866033142	2866033283	4921500188	286161498767	286757355343	150
3959393054	3959393401	1032500182	395126480234	395057500678	150
3959393054	3959393401	1032500182	395126480234	395057500678	150
6365426204	6365426267	6703500954	636574003980	636381694768	150
6365426204	6365426267	6703500954	636574003980	636381694768	150
391221560	391221870	3959710427	39280168256	39725536097	150
391221560	391221870	3959710427	39280168256	39725536097	150
9662137832	9662137226	3994800942	966770609616	966983366804	150
9662137832	9662137226	3994800942	966770609616	966983366804	150
8858437578	8858437445	6509910000	885466898675	885204356106	150
8858437578	8858437445	6509910000	885466898675	885204356106	150
6237420854	6237420599	758610439	623726516644	623155840614	150
6237420854	6237420599	758610439	623726516644	623155840614	150
9714461043	9714461405	9512400086	971406416338	971016402069	150
9714461043	9714461405	9512400086	971406416338	971016402069	150
1199630589	1199630826	5608400998	119616457475	119619199203	150

1199630589	1199630826	5608400998	119616457475	119619199203	150
1790458490	1790458923	942500372	179951683729	179656563800	150
1790458490	1790458923	942500372	179951683729	179656563800	150
1614621879	1614621941	3493500806	161359971829	161794135386	150
1614621879	1614621941	3493500806	161359971829	161794135386	150
1891788798	1891788849	453500410	189188868136	189347051312	150
1891788798	1891788849	453500410	189188868136	189347051312	150
8801303730	8801303253	3627610147	880751515306	880238091472	150
8801303730	8801303253	3627610147	880751515306	880238091472	150
3497060505	3497060174	3357500377	349664492314	349183492394	150
3497060505	3497060174	3357500377	349664492314	349183492394	150
622720369	622720691	602500943	62364097968	62812573555	150
622720369	622720691	602500943	62364097968	62812573555	150
2540237846	2540237770	1465710472	254070500049	254452276455	150
2540237846	2540237770	1465710472	254070500049	254452276455	150
3395409960	3395409837	8793500840	339378452514	339441362071	150
3395409960	3395409837	8793500840	339378452514	339441362071	150
5663329285	5663329058	3735400280	566334916398	566817017035	150
5663329285	5663329058	3735400280	566334916398	566817017035	150
9576571626	9576571878	4906400000	957321402797	957922974274	150
9576571626	9576571878	4906400000	957321402797	957922974274	150
416747747	416747667	3394400829	41560168706	41938545542	150
416747747	416747667	3394400829	41560168706	41938545542	150
4760182475	4760182090	7487700744	476731094654	476399360551	150
4760182475	4760182090	7487700744	476731094654	476399360551	150
8143137257	8143137105	5164500453	814201349388	814229080813	150
9537361969	9537361137	2654500400	953439342669	953954610452	150
9537361969	9537361137	2654500400	953439342669	953954610452	150
2893207297	2893207156	6589400764	289020237276	289928298139	150
2893207297	2893207156	6589400764	289020237276	289928298139	150
170901252	170901141	8448400376	17606541034	17038624839	150
170901252	170901141	8448400376	17606541034	17038624839	150
4203769051	4203769253	5385400744	420693921860	420591324890	150
4203769051	4203769253	5385400744	420693921860	420591324890	150
9639831109	9639831576	727610154	963602326936	963778246214	150
9639831109	9639831576	727610154	963602326936	963778246214	150
2643148735	2643148650	3357400474	264561499913	264840692084	150
2643148735	2643148650	3357400474	264561499913	264840692084	150
1376372024	1376372433	9642500351	137057577922	137723638917	150
1376372024	1376372433	9642500351	137057577922	137723638917	150
6831361794	6831361157	4386400766	683777828915	683772812339	150
6831361794	6831361157	4386400766	683777828915	683772812339	150
9295781872	9295781699	4762500555	929653300299	929209360953	150
9295781872	9295781699	4762500555	929653300299	929209360953	150
8268049761	8268049110	3996400937	826072035509	826319065605	150
8268049761	8268049110	3996400937	826072035509	826319065605	150
1612186561	1612186486	7202500909	161999604440	161599364142	150

1612186561	1612186486	7202500909	161999604440	161599364142	150
3221201784	3221201162	7370500637	322211145839	322472635651	150
3221201784	3221201162	7370500637	322211145839	322472635651	150
8596701315	8596701947	5074500536	859928121828	859510355247	150
8596701315	8596701947	5074500536	859928121828	859510355247	150
6746708053	6746708084	456710392	674861851587	674448212178	150
6746708053	6746708084	456710392	674861851587	674448212178	150
7098757588	7098757981	6702500957	709192576012	709718706995	150
7098757588	7098757981	6702500957	709192576012	709718706995	150
3292915577	3292915398	8581600740	329769281187	329226709189	150
3292915577	3292915398	8581600740	329769281187	329226709189	150
1260822933	1260822513	9112400048	126577968161	126417831688	150
1260822933	1260822513	9112400048	126577968161	126417831688	150
601986155	601986128	4112500994	60761534214	60168569206	150
601986155	601986128	4112500994	60761534214	60168569206	150
2475415985	2475415057	6474500577	247265593390	247088011657	150
2475415985	2475415057	6474500577	247265593390	247088011657	150
1689917178	1689917618	2061500493	168083891708	168151182947	150
1689917178	1689917618	2061500493	168083891708	168151182947	150
381298561	381298516	6084500638	38113502081	38109601177	150
381298561	381298516	6084500638	38113502081	38109601177	150
317789376	317789977	8747400419	31016192225	31665789038	150
317789376	317789977	8747400419	31016192225	31665789038	150
5831402813	5831402601	9243500301	583137809338	583294092105	150
5831402813	5831402601	9243500301	583137809338	583294092105	150
8769152768	8769152934	6077410628	876953556824	876556289365	150
8769152768	8769152934	6077410628	876953556824	876556289365	150
3601788007	3601788563	2064400500	360806157781	360981900843	150
3601788007	3601788563	2064400500	360806157781	360981900843	150
8293378644	8293378678	7294310785	829528063562	829358671312	150
8293378644	8293378678	7294310785	829528063562	829358671312	150
6593118392	6593118719	6983500758	659493079317	659285152805	150
6593118392	6593118719	6983500758	659493079317	659285152805	150
9702689515	9702689249	6493500809	970416047349	970367867725	150
9702689515	9702689249	6493500809	970416047349	970367867725	150
9223327335	9223327465	4220500130	922817738200	922827173394	150
9223327335	9223327465	4220500130	922817738200	922827173394	150
7882719585	7882719297	6404500905	788640338978	788155921745	150
7882719585	7882719297	6404500905	788640338978	788155921745	150
9251570964	9251570641	4487510822	925650192290	925179875052	150
9251570964	9251570641	4487510822	925650192290	925179875052	150
5313967552	5313967786	2325400134	531488993538	531785607519	150
5313967552	5313967786	2325400134	531488993538	531785607519	150
3692409321	3692409237	9622500150	369452814660	369969535573	150
3692409321	3692409237	9622500150	369452814660	369969535573	150
8589408230	8589408908	9574400656	858026613491	858187834008	150
8589408230	8589408908	9574400656	858026613491	858187834008	150

5055944711	5055944323	7375400646	505279196994	505841072354	150
5055944711	5055944323	7375400646	505279196994	505841072354	150
8688253954	8688253099	8533910000	868161577013	868870434246	150
5660425701	5660425807	1775400680	566661398517	566288292450	150
5660425701	5660425807	1775400680	566661398517	566288292450	150
5044960703	5044960461	1114500965	504426599873	504210590532	150
5044960703	5044960461	1114500965	504426599873	504210590532	150
4794924014	4794924259	2615400061	479852740313	479352786755	150
4794924014	4794924259	2615400061	479852740313	479352786755	150
7334619922	7334619824	8730500280	733338570712	733558520783	150
7334619922	7334619824	8730500280	733338570712	733558520783	150
3619758003	3619758045	3393500796	361031595413	361229806776	150
3619758003	3619758045	3393500796	361031595413	361229806776	150
4006902381	4006902658	7892400907	400054595920	400898634479	150
4006902381	4006902658	7892400907	400054595920	400898634479	150
6066582917	6066582123	9554400458	606947758093	606010205014	150
6066582917	6066582123	9554400458	606947758093	606010205014	150
8052082484	8052082241	126400115	805346020812	805891573563	150
8052082484	8052082241	126400115	805346020812	805891573563	150
6956607408	6956607380	1524610173	695032498640	695911885392	150
6956607408	6956607380	1524610173	695032498640	695911885392	150
3736266034	3736266163	1812610124	373144773304	373650572393	150
3736266034	3736266163	1812610124	373144773304	373650572393	150
6711602498	6711602512	6435610258	671888592923	671587381520	150
6711602498	6711602512	6435610258	671888592923	671587381520	150
6968303816	6968303276	4781500760	696621326933	696890433538	150
6968303816	6968303276	4781500760	696621326933	696890433538	150
1199666866	1199666823	2206400928	119615492744	119823813740	150
1199666866	1199666823	2206400928	119615492744	119823813740	150
9677708679	9677708181	8315500974	967880281247	967890296507	150
9677708679	9677708181	8315500974	967880281247	967890296507	150
9397324728	9397324520	4156710367	939082169022	939899467465	150
9397324728	9397324520	4156710367	939082169022	939899467465	150
7169839198	7169839357	1498400861	716803139497	716306965490	150
7169839198	7169839357	1498400861	716803139497	716306965490	150
1754418408	1754418356	9058400437	175922643320	175620822265	150
1754418408	1754418356	9058400437	175922643320	175620822265	150
415671926	415671487	9237400273	41708420511	41139463395	150
415671926	415671487	9237400273	41708420511	41139463395	150
299813946	299813561	1455500384	29091066058	29456049652	150
2169083837	2169083637	3472810712	216151490383	216452877364	150
2169083837	2169083637	3472810712	216151490383	216452877364	150
1202091420	1202091419	9692400889	120445205268	120553320896	150
1202091420	1202091419	9692400889	120445205268	120553320896	150
5277404642	5277404928	1579400660	527428501797	527625927783	150
5277404642	5277404928	1579400660	527428501797	527625927783	150
5839009975	5839009520	1615500003	583041566819	583623642789	150

5839009975	5839009520	1615500003	583041566819	583623642789	150
3870353522	3870353740	9410610115	387470846599	387554733693	150
3870353522	3870353740	9410610115	387470846599	387554733693	150
905973005	905973363	7977700695	90064852612	90321261862	150
905973005	905973363	7977700695	90064852612	90321261862	150
6476482706	6476482963	6297700823	647702661431	647357121076	150
6476482706	6476482963	6297700823	647702661431	647357121076	150
2592667964	2592667503	5978400717	259722257954	259350160931	150
2592667964	2592667503	5978400717	259722257954	259350160931	150
6279771702	6279771430	1264400519	627294958195	627597721064	150
6279771702	6279771430	1264400519	627294958195	627597721064	150
2521993413	2521993512	6752500457	252799013291	252851649213	150
2521993413	2521993512	6752500457	252799013291	252851649213	150
9784093578	9784093031	5870500684	978184162625	978403797908	150
9784093578	9784093031	5870500684	978184162625	978403797908	150
3937531808	3937531987	3553810520	393616528004	393282269558	150
3937531808	3937531987	3553810520	393616528004	393282269558	150
6805525905	6805525480	2315400028	680754726199	680211518670	150
6805525905	6805525480	2315400028	680754726199	680211518670	150
6486494972	6486494800	5576400682	648910215797	648546033932	150
6486494972	6486494800	5576400682	648910215797	648546033932	150
1028493044	1028493406	1584600713	102735668389	102948995583	150
1028493044	1028493406	1584600713	102735668389	102948995583	150
1920052532	1920052528	8598510929	192572805109	192071532167	150
1920052532	1920052528	8598510929	192572805109	192071532167	150
9898647916	9898647350	7704500932	989791876326	989957254121	150
9898647916	9898647350	7704500932	989791876326	989957254121	150
4021478198	4021478631	5003400925	402873283162	402387169087	150
4021478198	4021478631	5003400925	402873283162	402387169087	150
6951266969	6951266478	7353400449	695169659914	695965670879	150
6951266969	6951266478	7353400449	695169659914	695965670879	150
2212457735	2212457247	5698400885	221812107061	221723479180	150
2212457735	2212457247	5698400885	221812107061	221723479180	150
9556271913	9556271842	5952400516	955444962361	955500289855	150
9556271913	9556271842	5952400516	955444962361	955500289855	150
1943464926	1943464993	6224810196	194641918505	194321514434	150
1943464926	1943464993	6224810196	194641918505	194321514434	150
6665638470	6665638925	402400970	666644229936	666475575574	150
6665638470	6665638925	402400970	666644229936	666475575574	150
7652265810	7652265489	5356700438	765141817634	765754168254	150
7652265810	7652265489	5356700438	765141817634	765754168254	150
7073394845	7073394251	1222610164	707475237424	707936773513	150
9861700000	9861700926	9861700583	986155834926	986659358650	150
9861700000	9861700926	9861700583	986155834926	986659358650	150
2903670466	2903670723	8402810014	290649497701	290509187364	150
2319702431	2319702732	8612610111	231453837792	231793489350	150
2319702431	2319702732	8612610111	231453837792	231793489350	150

4746813363	4746813096	1292600795	474902505399	474247032201	150
4746813363	4746813096	1292600795	474902505399	474247032201	150
9773546721	9773546272	2564500489	977999978287	977046820479	150
9773546721	9773546272	2564500489	977999978287	977046820479	150
7752222700	7752222824	313500007	775476911970	775324775867	150
7752222700	7752222824	313500007	775476911970	775324775867	150
2035716185	2035716505	8472500630	203007637887	203761261866	150
2035716185	2035716505	8472500630	203007637887	203761261866	150
6302195502	6302195847	5272500607	630148308195	630354381898	150
7629911440	7629911694	1942400412	762353757307	762317164272	150
7629911440	7629911694	1942400412	762353757307	762317164272	150
5424107592	5424107738	5905400989	542350256908	542743586225	150
5424107592	5424107738	5905400989	542350256908	542743586225	150
4574249280	4574249394	3508400987	457961177152	457981106466	150
4574249280	4574249394	3508400987	457961177152	457981106466	150
7162901192	7162901999	1402810007	716320371536	716035307496	150
7162901192	7162901999	1402810007	716320371536	716035307496	150
6318505589	6318505577	3695400870	631224197020	631707705700	150
6318505589	6318505577	3695400870	631224197020	631707705700	150
458613328	458613985	3393600801	45717427940	45593826137	150
458613328	458613985	3393600801	45717427940	45593826137	150
4206111782	4206111434	2446400350	420543002423	420588376986	150
4206111782	4206111434	2446400350	420543002423	420588376986	150
7839683285	7839683290	9304500898	783291015544	783133373527	150
7839683285	7839683290	9304500898	783291015544	783133373527	150
6749767489	6749767452	6415400043	674704743371	674589996781	150
6749767489	6749767452	6415400043	674704743371	674589996781	150
7901068091	7901068517	226400125	790849958144	790982694509	150
7901068091	7901068517	226400125	790849958144	790982694509	150
3065319771	3065319716	9086400740	306423085012	306719798848	150
3065319771	3065319716	9086400740	306423085012	306719798848	150
3134886624	3134886632	3511610109	313073307256	313826560811	150
3134886624	3134886632	3511610109	313073307256	313826560811	150
1243328032	1243328808	1865400590	124753352158	124518494081	150
1243328032	1243328808	1865400590	124753352158	124518494081	150
9320121627	9320121316	2805400977	932896177954	932732451874	150
9320121627	9320121316	2805400977	932896177954	932732451874	150
2157465171	2157465766	1262445943	215687705613	215141178878	150
2157465171	2157465766	1262445943	215687705613	215141178878	150
2861354957	2861354458	1863400591	286233890744	286098590719	150
2861354957	2861354458	1863400591	286233890744	286098590719	150
6941786504	6941786108	9923986872	694994876446	694079531263	150
6941786504	6941786108	9923986872	694994876446	694079531263	150
7604599577	7604599702	1452500423	760701503868	760944137073	150
7604599577	7604599702	1452500423	760701503868	760944137073	150
6024795930	6024795566	7073500574	602365985555	602938971932	150
6024795930	6024795566	7073500574	602365985555	602938971932	150

7572705461	7572705325	4066700506	757188584377	757073934024	150
7572705461	7572705325	4066700506	757188584377	757073934024	150
4386414823	4386414240	9884800835	438046844204	438333008445	150
4386414823	4386414240	9884800835	438046844204	438333008445	150
797008837	797008405	4302400964	79047156727	79495132207	150
797008837	797008405	4302400964	79047156727	79495132207	150
2361653378	2361653208	284600683	236390550789	236047852221	150
2361653378	2361653208	284600683	236390550789	236047852221	150
5556162457	5556162858	143400324	555260304305	555981778067	150
5556162457	5556162858	143400324	555260304305	555981778067	150
8270828496	8270828740	4781600756	827990448100	827492372994	150
8270828496	8270828740	4781600756	827990448100	827492372994	150
556740005	556740008	755400479	55331767851	55761571435	150
556740005	556740008	755400479	55331767851	55761571435	150
7523705964	7523705479	24400104	752562728428	752814485622	150
7523705964	7523705479	24400104	752562728428	752814485622	150
9830514990	9830514671	3826400187	983307962629	983868137473	150
9830514990	9830514671	3826400187	983307962629	983868137473	150
2937372781	2937372059	3784500702	293679879449	293341734915	150
8224431960	8224431059	9711610134	822908392195	822022798443	150
8224431960	8224431059	9711610134	822908392195	822022798443	150
8947540845	8947540691	2981600773	894842552386	894165990958	150
8947540845	8947540691	2981600773	894842552386	894165990958	150
8040110254	8040110539	2555400461	804837457368	804122917077	150
8040110254	8040110539	2555400461	804837457368	804122917077	150
1925871790	1925871807	8592500837	192664918999	192535994774	150
1925871790	1925871807	8592500837	192664918999	192535994774	150
9543343810	9543343333	1721800148	954307915459	954891184541	150
9543343810	9543343333	1721800148	954307915459	954891184541	150
508848069	508848534	3722510157	50459376335	50032431129	150
508848069	508848534	3722510157	50459376335	50032431129	150
9221967951	9221967047	2683500725	922245598966	922246707645	150
9221967951	9221967047	2683500725	922245598966	922246707645	150
5742448164	5742448962	7014400011	574170960527	574455430720	150
5742448164	5742448962	7014400011	574170960527	574455430720	150
4672578169	4672578173	964400587	467605999823	467313164826	150
4672578169	4672578173	964400587	467605999823	467313164826	150
5035827896	5035827473	7021610162	503783144459	503999053091	150
5035827896	5035827473	7021610162	503783144459	503999053091	150
3671305679	3671305917	2884500711	367696343644	367763223389	150
3671305679	3671305917	2884500711	367696343644	367763223389	150
9901932231	9901932267	7064500445	990887790917	990735414964	150
9901932231	9901932267	7064500445	990887790917	990735414964	150
4127292557	4127292904	6632500248	412409079302	412977048303	150
4127292557	4127292904	6632500248	412409079302	412977048303	150
8417938804	8417938542	6163400526	841158304416	841673966974	150
8417938804	8417938542	6163400526	841158304416	841673966974	150

607440288	607440007	1587410772	60960928385	60980944728	150
607440288	607440007	1587410772	60960928385	60980944728	150
8814278626	8814278502	5610610131	881423700942	881476178659	150
8814278626	8814278502	5610610131	881423700942	881476178659	150
1494277598	1494277272	1035710136	149170820484	149553204046	150
1494277598	1494277272	1035710136	149170820484	149553204046	150
8736470309	8736470226	9697700865	873278071638	873255075287	150
8736470309	8736470226	9697700865	873278071638	873255075287	150
5669446941	5669446616	1482500723	566910343225	566354881303	150
5669446941	5669446616	1482500723	566910343225	566354881303	150
6527755904	6527755784	1286400752	652649392604	652736826932	150
6527755904	6527755784	1286400752	652649392604	652736826932	150
2598231748	2598231699	4496400883	259349024020	259164990832	150
2598231748	2598231699	4496400883	259349024020	259164990832	150
2010996471	2010996698	7584083778	201628642348	201435058509	150
2010996471	2010996698	7584083778	201628642348	201435058509	150
5200159456	5209831098	6646400376	520691561957	520747365966	150
5200159456	5209831098	6646400376	520691561957	520747365966	150
2872502750	2878906108	4364400532	287947724940	287891850706	150
2872502750	2878906108	4364400532	287947724940	287891850706	150
7997217557	7997217567	6190500813	799853027821	799845648702	150
7997217557	7997217567	6190500813	799853027821	799845648702	150
7854065303	7854065876	7634500210	785302525664	785096789091	150
7854065303	7854065876	7634500210	785302525664	785096789091	150
9494450496	9494450677	4236500183	949671952896	949488622980	150
7080877032	7080877045	1593910000	708315783739	708145528488	150
7080877032	7080877045	1593910000	708315783739	708145528488	150
8963380503	8963380942	3340500335	896386053855	896978460326	150
8963380503	8963380942	3340500335	896386053855	896978460326	150
1363559548	1363559270	3859710417	136241033116	136890083169	150
1363559548	1363559270	3859710417	136241033116	136890083169	150
5703221598	5707418346	2252400443	570064581741	570843559085	150
6915935746	6910249043	9808410010	691664164324	691949808585	150
4256414179	4256414260	9682600743	425242026979	425326919692	150
4256414179	4256414260	9682600743	425242026979	425326919692	150
325460071	329748833	4497700841	32572800718	32771044863	150
325460071	329748833	4497700841	32572800718	32771044863	150
3479591232	3479591903	9097700806	347872785045	347238491665	150
3479591232	3479591903	9097700806	347872785045	347238491665	150
3273284424	3273284911	8917400144	327898143588	327763330808	150
3273284424	3273284911	8917400144	327898143588	327763330808	150
3398833332	3391623085	9611610125	339302280086	339459557612	150
3398833332	3391623085	9611610125	339302280086	339459557612	150
9995218408	9998223430	3893400890	999474007298	999543663822	150
9995218408	9998223430	3893400890	999474007298	999543663822	150
6488079178	6484875283	8195400825	648727495236	648344043581	150
6488079178	6484875283	8195400825	648727495236	648344043581	150

1341233794	1346114487	3021810159	134604878052	134278217616	150
1341233794	1346114487	3021810159	134604878052	134278217616	150
9021870302	9024199059	9924500145	902256037546	902782234196	150
9021870302	9024199059	9924500145	902256037546	902782234196	150
2016937143	2016308220	6306400942	201731646600	201109492424	150
2016937143	2016308220	6306400942	201731646600	201109492424	150
1740704394	1740561796	4605400959	174657077104	174731404943	150
1740704394	1740561796	4605400959	174657077104	174731404943	150
3739115239	3733947271	8466400571	373917795111	373932579014	150
3739115239	3733947271	8466400571	373917795111	373932579014	150
6440379371	6444547943	5393500798	644974826730	644219328140	150
6440379371	6444547943	5393500798	644974826730	644219328140	150
5437874690	5431067470	2591500834	543393342531	543057234249	150
5437874690	5431067470	2591500834	543393342531	543057234249	150
6437228802	6439184395	9744700407	643563964174	643012116688	150
6437228802	6439184395	9744700407	643563964174	643012116688	150
9461085259	9460933029	4507400003	946542823688	946788157123	150
9461085259	9460933029	4507400003	946542823688	946788157123	150
6378052680	6374103353	6189400724	637161855086	637972691032	150
6378052680	6374103353	6189400724	637161855086	637972691032	150
2560142883	2561028218	7104500878	256374007984	256767144884	150
2560142883	2561028218	7104500878	256374007984	256767144884	150
5372787505	5373882458	6009510977	537051447691	537579903721	150
5372787505	5373882458	6009510977	537051447691	537579903721	150
1883440304	1889777912	6390500832	188256294131	188282548307	150
1883440304	1889777912	6390500832	188256294131	188282548307	150
611080491	616357255	520500156	61884360015	61381642801	150
611080491	616357255	520500156	61884360015	61381642801	150
3651733632	3650051501	640500362	365697696675	365683754495	150
3651733632	3650051501	640500362	365697696675	365683754495	150
4323638805	4326639956	1896400923	432930659680	432550363333	150
4323638805	4326639956	1896400923	432930659680	432550363333	150
681158977	685620748	994400886	68975556806	68632067335	150
681158977	685620748	994400886	68975556806	68632067335	150
2220579736	2222923850	7733500249	222093266447	222501587742	150
2220579736	2222923850	7733500249	222093266447	222501587742	150
8427784452	8422094858	2495400849	842173494681	842347395037	150
8427784452	8422094858	2495400849	842173494681	842347395037	150
647673209	640035982	6582400776	64789692665	64507434595	150
647673209	640035982	6582400776	64789692665	64507434595	150
792074021	795121635	8381600720	79550541742	79286162926	150
792074021	795121635	8381600720	79550541742	79286162926	150
6352372908	6357593480	6684500695	635869119661	635840704563	150
6352372908	6357593480	6684500695	635869119661	635840704563	150
9898125792	9898289488	5505310913	989299417558	989864895609	150
9898125792	9898289488	5505310913	989299417558	989864895609	150
9712997034	9710259567	9698510940	971013978648	971047114350	150

5219467972	5217248955	4016400010	521168678834	521377244762	150
5219467972	5217248955	4016400010	521168678834	521377244762	150
1177550795	1176259434	7021500102	117430633189	117315802194	150
1177550795	1176259434	7021500102	117430633189	117315802194	150
6595550681	6598104487	9392500818	659409666042	659387969943	150
6595550681	6598104487	9392500818	659409666042	659387969943	150
1104682825	1108512497	3633400277	110213268331	110063137325	150
4120623248	4123394585	5454700470	412881052686	412885674779	150
693216885	694514300	763400580	69485603087	69311615826	150
693216885	694514300	763400580	69485603087	69311615826	150
2886752986	2882475616	4384600696	288098520139	288460237310	150
2886752986	2882475616	4384600696	288098520139	288460237310	150
2109740012	2100686233	5780500773	210551680580	210682755532	150
2109740012	2100686233	5780500773	210551680580	210682755532	150
9489023164	9480343271	578400673	948769722581	948822394672	150
9489023164	9480343271	578400673	948769722581	948822394672	150
614900000	614900055	614900088	61086349999	61508964397	150
614900000	614900055	614900088	61086349999	61508964397	150
1241900000	1241900560	1241900413	124895564756	124232302352	150
1241900000	1241900560	1241900413	124895564756	124232302352	150
1514110000	1514110435	1514110133	151793778199	151230505873	150
1514110000	1514110435	1514110133	151793778199	151230505873	150
2560500000	2560500193	2560500553	256562901051	256619937451	150
2560500000	2560500193	2560500553	256562901051	256619937451	150
5041900000	5041900534	5041900397	504707564819	504053065688	150
5041900000	5041900534	5041900397	504707564819	504053065688	150
5314110000	5314110409	5314110117	531311278049	531212339045	150
5314110000	5314110409	5314110117	531311278049	531212339045	150
5324900000	5324900162	5324900160	532953046545	532554164231	150
5324900000	5324900162	5324900160	532953046545	532554164231	150
5404900000	5404900915	5404900974	540874886544	540858595799	150
5404900000	5404900915	5404900974	540874886544	540858595799	150
5904900000	5904900964	5904900023	590716765301	590784640998	150
5904900000	5904900964	5904900023	590716765301	590784640998	150
6544010000	6544010183	6544010284	654936827798	654935611156	150
6544010000	6544010183	6544010284	654936827798	654935611156	150
7304900000	7304900903	7304900966	730509668946	730612680119	150
7304900000	7304900903	7304900966	730509668946	730612680119	150
7604900000	7604900924	7604900995	760492002314	760438863430	150
7604900000	7604900924	7604900995	760492002314	760438863430	150
8644010000	8644010210	8644010296	864081180987	864010811775	150
8644010000	8644010210	8644010296	864081180987	864010811775	150
9914900000	9914900109	9914900126	991945413852	991749899826	150
9914900000	9914900109	9914900126	991945413852	991749899826	150
5371759447	5371759838	5493900878	537413297345	537689954232	150
7675665270	7675665657	9665910000	767422702433	767874041394	150
7675665270	7675665657	9665910000	767422702433	767874041394	150

7464310401	7464310584	9793900909	746604808198	746926126130	150
7464310401	7464310584	9793900909	746604808198	746926126130	150
1171608842	1171608797	4314900062	117789848456	117199304535	150
1171608842	1171608797	4314900062	117789848456	117199304535	150
4140184111	4140184140	5614110147	414869413960	414037972556	150
4140184111	4140184140	5614110147	414869413960	414037972556	150
9915280978	9915280346	124900137	991517718557	991768011121	150
9915280978	9915280346	124900137	991517718557	991768011121	150
9615012481	9615012293	3944010321	961004834058	961819982479	150
9615012481	9615012293	3944010321	961004834058	961819982479	150
1813320622	1813320792	2214900050	181476927887	181202147356	150
4382412734	4382412129	204900949	438611839107	438854619232	150
4382412734	4382412129	204900949	438611839107	438854619232	150
8894220566	8894220831	8744010306	889328676343	889864118531	150
4227868769	4227868049	6593900889	422610010226	422422206856	150
4227868769	4227868049	6593900889	422610010226	422422206856	150
8029250276	8020045713	1904900019	802365551678	802008443017	150
8029250276	8020045713	1904900019	802365551678	802008443017	150
787849915	784106145	7893900917	78312657078	78563194093	150
787849915	784106145	7893900917	78312657078	78563194093	150
614900000	614900056	614900088	61435565063	61508964397	150
1241900000	1241900561	1241900413	124813356268	124232302352	150
1514110000	1514110436	1514110133	151799403634	151230505873	150
2560500000	2560500194	2560500553	256877665203	256619937451	150
5041900000	5041900535	5041900397	504512254010	504053065688	150
5314110000	5314110410	5314110117	531465736067	531212339045	150
5324900000	5324900163	5324900160	532691990676	532554164231	150
5404900000	5404900916	5404900974	540459132707	540858595799	150
5904900000	5904900965	5904900023	590335070754	590784640998	150
6544010000	6544010184	6544010284	654758230382	654935611156	150
7304900000	7304900904	7304900966	730850379032	730612680119	150
7604900000	7604900925	7604900995	760389633058	760438863430	150
8644010000	8644010211	8644010296	864219882563	864010811775	150
9914900000	9914900110	9914900126	991224246500	991749899826	150
5371759447	5371759351	5493900878	537905699416	537689954232	150
7675665270	7675665982	9665910000	767032119481	767874041394	150
7464310401	7464310263	9793900909	746769067328	746926126130	150
1171608842	1171608920	4314900062	117940484583	117199304535	150
9915280978	9915280595	124900137	991043610179	991768011121	150
4140184111	4140184993	5614110147	414214761049	414037972556	150
9615012481	9615012996	3944010321	961543183428	961819982479	150
1813320622	1813320051	2214900050	181375785599	181202147356	150
4382412734	4382412566	204900949	438383469030	438854619232	150
8894220566	8894220841	8744010306	889647013435	889864118531	150
4227868769	4227868203	6593900889	422536942685	422422206856	150
8029250276	8025399442	1904900019	802349317993	802008443017	150
787849915	789484593	7893900917	78478796567	78563194093	150

9420173468	9420173737	2195500766	942410027123	942307147237	150
9193915788	9193915568	9499410847	919187939107	919372770979	150
9420173468	9420173439	2195500766	942547427736	942307147237	150
9420173468	9420173439	2195500766	942547427736	942307147237	150
9193915788	9193915723	9499410847	919751761349	919372770979	150
4766500000	4766500212	4766500533	476770024876	476747958401	150
6694800000	6694800800	6694800913	669777876899	669859215691	150
884158503	884158753	2127410142	88999349405	88781148831	150
884158503	884158153	2127410142	88468344083	88781148831	150
884158503	884158153	2127410142	88468344083	88781148831	150
8494800000	8494800773	8494800893	849155741452	849985309038	150
4104900000	4104900863	4104900944	410658025578	410225828414	150
4104900000	4104900863	4104900944	410658025578	410225828414	150
4104900000	4104900864	4104900944	410184644860	410225828414	150
5993900000	5993900831	5993900925	599814797857	599611827271	150
5993900000	5993900831	5993900925	599814797857	599611827271	150
5993900000	5993900832	5993900925	599316115509	599611827271	150
945400000	945400029	945400400	94605582235	94679481302	150
1585400000	1585400456	1585400760	158129002611	158476363807	150
2223700000	2223700404	2223700167	222724421228	222256201085	150
2394800000	2394800751	2394800877	239362273131	239691597252	150
3652400000	3652400001	3652400484	365036046710	365691235843	150
4395400000	4395400551	4395400841	439737668628	439252775790	150
4957400000	4957400422	4957400535	495484610145	495743200569	150
4989400000	4989400389	4989400802	498294374915	498500841501	150
5209400000	5209400221	5209400944	520803286859	520922337832	150
5412500000	5412500198	5412500025	541513734821	541962174710	150
5372500000	5372500692	5372500617	537395607803	537641733177	150
6553510000	6553510496	6553510449	655817787700	655301314824	150
7244400000	7244400991	7244400327	724981974832	724884887094	150
7509400000	7509400273	7509400975	750543963241	750933133652	150
9563500000	9563500507	9563500526	956865944311	956880411248	150
9657500000	9657500407	9657500414	965770099998	965677727506	150
9696400000	9696400037	9696400910	969098722441	969472098347	150
3827202410	3827202690	2593400859	382278021230	382693185269	150
945400000	945400028	945400400	94219081141	94679481302	150
945400000	945400028	945400400	94219081141	94679481302	150
1585400000	1585400455	1585400760	158788388983	158476363807	150
1585400000	1585400455	1585400760	158788388983	158476363807	150
2223700000	2223700403	2223700167	222231928144	222256201085	150
2223700000	2223700403	2223700167	222231928144	222256201085	150
2394800000	2394800750	2394800877	239841203909	239691597252	150
2394800000	2394800750	2394800877	239841203909	239691597252	150
3652400000	3652400000	3652400484	365172004335	365691235843	150
3652400000	3652400000	3652400484	365172004335	365691235843	150
4395400000	4395400550	4395400841	439538950688	439252775790	150
4395400000	4395400550	4395400841	439538950688	439252775790	150

4957400000	4957400421	4957400535	495380701973	495743200569	150
4957400000	4957400421	4957400535	495380701973	495743200569	150
4989400000	4989400388	4989400802	498318588196	498500841501	150
5209400000	5209400220	5209400944	520785924701	520922337832	150
5209400000	5209400220	5209400944	520785924701	520922337832	150
5412500000	5412500197	5412500025	541291739798	541962174710	150
5412500000	5412500197	5412500025	541291739798	541962174710	150
5372500000	5372500691	5372500617	537647833750	537641733177	150
5372500000	5372500691	5372500617	537647833750	537641733177	150
6553510000	6553510495	6553510449	655003221357	655301314824	150
6553510000	6553510495	6553510449	655003221357	655301314824	150
7244400000	7244400990	7244400327	724162168134	724884887094	150
7244400000	7244400990	7244400327	724162168134	724884887094	150
7509400000	7509400272	7509400975	750818099098	750933133652	150
7509400000	7509400272	7509400975	750818099098	750933133652	150
9563500000	9563500506	9563500526	956354801899	956880411248	150
9563500000	9563500506	9563500526	956354801899	956880411248	150
9657500000	9657500406	9657500414	965891422810	965677727506	150
9657500000	9657500406	9657500414	965891422810	965677727506	150
9696400000	9696400036	9696400910	969166574747	969472098347	150
9696400000	9696400036	9696400910	969166574747	969472098347	150
3827202410	3827202851	2593400859	382293289750	382693185269	150
3827202410	3827202851	2593400859	382293289750	382693185269	150
1758724772	1758724063	3693900895	175965867215	175731194616	150
1758724772	1758724063	3693900895	175965867215	175731194616	150
1758724772	1758724084	3693900895	175233389433	175731194616	150
4996310000	4996310143	4996310860	499642424466	499585294795	150
4996310000	4996310143	4996310860	499642424466	499585294795	150
4996310000	4996310144	4996310860	499174370254	499585294795	150
2677100000	2677100181	2215400017	267988524403	267991552091	150
2677100000	2677100181	2215400017	267801314805	267991552091	150
2677100000	2677100042	2215400017	267612104829	267991552091	150
2677100000	2677100042	2215400017	267612104829	267991552091	150
2677100000	2677100042	2215400017	267021999480	267991552091	150
2677100000	2677100042	2215400017	267021999480	267991552091	150
4996310000	4996310130	4996310883	499870214540	499585294795	150
4996310000	4996310130	4996310883	499870214540	499585294795	150
4996310000	4996310132	4996310896	499498324599	499585294795	150
4996310000	4996310132	4996310896	499498324599	499585294795	150
4996310000	4996310136	4996310933	499222251893	499585294795	150
4996310000	4996310136	4996310933	499222251893	499585294795	150
4996310000	4996310138	4996310943	499871841976	499585294795	150
4996310000	4996310140	4996310957	499380505607	499585294795	150
4996310000	4996310140	4996310957	499380505607	499585294795	150
4996310000	4996310145	4996310869	499229728256	499585294795	150
4996310000	4996310145	4996310869	499229728256	499585294795	150
4996310000	4996310147	4996310429	499509094584	499585294795	150

4996310000	4996310131	4996310883	499021804158	499585294795	150
4996310000	4996310133	4996310896	499796349702	499585294795	150
4996310000	4996310137	4996310933	499476493868	499585294795	150
4996310000	4996310139	4996310943	499090776414	499585294795	150
4996310000	4996310141	4996310957	499025257337	499585294795	150
4996310000	4996310146	4996310869	499392218673	499585294795	150
4996310000	4996310134	4996310910	499185099608	499585294795	150
4996310000	4996310135	4996310920	499780257060	499585294795	150
8688253954	8688253874	8533910000	868660418757	868863207208	150
8688253954	8688253874	8533910000	868473433655	868863207208	150
8688253954	8688253874	8533910000	868240922602	868863207208	150
8688253954	8688253874	8533910000	868680393890	868863207208	150
8688253954	8688253874	8533910000	868145454439	868863207208	150
8688253954	8688253099	8533910000	868621096995	868863207208	150
8688253954	8688253099	8533910000	868673514016	868863207208	150
8688253954	8688253099	8533910000	868195732879	868863207208	150
8688253954	8688253099	8533910000	868607791264	868863207208	150
8688253954	8688253099	8533910000	868607791264	868863207208	150
8688253954	8688253099	8533910000	868099974454	868863207208	150
8688253954	8688253099	8533910000	868099974454	868863207208	150
4737510000	4737510994	4737510357	473166538805	473843728841	150
8278739046	8273363861	9079410613	827542209961	827217843810	150
4737510000	4737510993	4737510357	473938580956	473843728841	150
4737510000	4737510993	4737510357	473938580956	473843728841	150
8278739046	8273306767	9079410613	827686657589	827217843810	150
8278739046	8273306767	9079410613	827686657589	827217843810	150
6024795930	6024795431	7073500574	602622301703	602666341454	150
6024795930	6024795566	7073500574	602690901301	602666341454	150
6024795930	6024795566	7073500574	602690901301	602666341454	150
2756510000	2756510074	2756510545	275224193533	275506161819	150
2756510000	2756510074	2756510545	275812683169	275506161819	150
3273510000	3273510666	3273510616	327424694477	327520726518	150
4383795644	4383423234	5791510855	438617632677	438551686577	150
2756510000	2756510073	2756510545	275648260047	275506161819	150
2756510000	2756510073	2756510545	275648260047	275506161819	150
2756510000	2756510073	2756510545	275304848252	275506161819	150
2756510000	2756510073	2756510545	275304848252	275506161819	150
3273510000	3273510665	3273510616	327039370699	327520726518	150
3273510000	3273510665	3273510616	327039370699	327520726518	150
4383795644	4381924813	5791510855	438417412587	438551686577	150
4383795644	4381924813	5791510855	438417412587	438551686577	150
6302195502	6302195937	5272500607	630824262589	630503333495	150
3963512535	3960310327	8455510486	396565806187	396190860919	150
6302195502	6302195847	5272500607	630447312322	630503333495	150
3963512535	3966366267	8455510486	396474184784	396190860919	150
3963512535	3966366267	8455510486	396474184784	396190860919	150
799828474	799828311	8703774150	79054061459	79375507210	150

2862600000	2862600536	2862600559	286130076938	286256071515	150
2862600000	2862600536	2862600559	286130076938	286256071515	150
3813541512	3813541805	1541308116	381529603257	381687550637	150
3813541512	3813541805	1541308116	381529603257	381687550637	150
2862600000	2862600537	2862600559	286495934879	286256071515	150
3813541512	3813541570	1541308116	381468141170	381687550637	150
8639410000	8639410708	8639410273	863026111914	863340501613	150
8639410000	8639410707	8639410273	863707390789	863340501613	150
8639410000	8639410707	8639410273	863707390789	863340501613	150
48510000	48510428	48510372	4168232877	4177268093	150
33500000	33500234	33500174	3107477377	3818939504	150
5510000	5510074	5510911	577051581	796914165	150
19410000	19410333	19410008	1752055927	1623383823	150
56500000	56500016	56500359	5304517536	5497858713	150
11610000	11610695	11610058	1143729373	1103664567	150
46500000	46500856	46500258	4031405500	4924263079	150
28510000	28510220	28510174	2613771195	2376526319	150
10610000	10610500	10610066	1447462589	1116033079	150
610000	610350	610966	549287624	419116135	150
39510000	39510550	39510274	3845081056	3854289087	150
108410000	108410830	108410930	10616882428	10634339412	150
109410000	109410220	109410919	10575373219	10134614617	150
229410000	229410548	229410127	22046949585	22211104555	150
207410000	207410697	207410951	20286105348	20013555948	150
190610000	190610444	190610870	19461072198	19910124305	150
232510000	232510894	232510205	23769102782	23058887314	150
198410000	198410097	198410820	19660037248	19301670916	150
129410000	129410528	129410117	12874622900	12477671340	150
149410000	149410786	149410315	14672592320	14327507732	150
147410000	147410276	147410336	14159346559	14572459441	150
131510000	131510052	9031510194	13196156152	13561773107	150
351510000	351510025	351510409	35085122063	35310354731	150
358410000	358410511	358410445	35600041151	35604286692	150
325510000	325510328	325510149	32571464612	32258567886	150
349410000	349410825	349410335	34260848493	34563704525	150
356510000	356510002	356510501	35661198325	35853557931	150
321610000	321610854	321610185	32513925119	32107692875	150
288410000	288410932	288410729	28539934948	28066132377	150
291610000	291610219	291610865	29842606974	29605685286	150
267510000	267510274	267510600	26376224400	26195059749	150
285500000	285500259	285500664	28197681208	28759379082	150
278410000	278410781	278410630	27095652582	27909203524	150
270510000	270510247	270510609	27963736182	27808709284	150
249410000	249410806	249410325	24031278592	24984556419	150
437410000	437410240	437410270	43579725770	43280546639	150
436410000	436410801	436410268	43848886189	43653184554	150
453510000	453510468	453510435	45843538511	45767484453	150

479510000	479510119	479510708	47607812982	47501672431	150
443510000	443510288	443510333	44795039448	44749203664	150
459510000	459510903	459510511	45337231137	45517032766	150
396510000	396510556	396510908	39993009482	39093713837	150
416510000	416510597	416510110	41845947843	41173449745	150
410610000	410610464	410610106	41286838087	41374862495	150
426500000	426500689	426500099	42943204945	42199830110	150
397410000	397410704	397410850	39353576647	39668189705	150
376410000	376410317	376410659	37628281116	37781421783	150
427410000	427410028	427410171	42487760487	42397982811	150
378410000	378410797	378410640	37905108944	37159567279	150
590610000	590610516	590610909	59553910727	59813694115	150
597410000	597410734	597410870	59251067334	59114037066	150
618410000	618410967	618410081	61171722021	61862041160	150
575510000	575510068	575510710	57815566596	57549326197	150
616410000	616410514	616410088	61015841479	61085395858	150
585500000	585500234	585500695	58222221939	58267433238	150
586410000	586410506	586410781	58451012057	58256125673	150
543510000	543510306	543510343	54009342715	54664294771	150
546500000	546500937	546500309	54859805299	54455643390	150
556500000	556500017	556500409	55354016151	55166963267	150
495510000	495510336	495510910	49291709732	49060961348	150
549510000	549510753	549510421	54993004759	54616918178	150
527510000	527510906	527510228	52782695351	52545922005	150
497510000	497510872	497510916	49447011661	49155289664	150
525500000	525500873	525500095	52563576233	52352063390	150
498410000	498410109	498410850	49284775505	49166806315	150
702510000	702510430	702510952	70611422979	70678602019	150
717410000	717410838	717410102	71184323953	71199733138	150
706500000	706500486	706500928	70572746863	70446475849	150
709510000	709510286	709510042	70585333663	70147194109	150
691610000	691610291	691610905	69801880405	69471166767	150
725510000	725510392	725510191	72583877192	72997015480	150
646500000	646500955	646500319	64545729002	64054204413	150
681610000	681610116	681610805	68180860716	68916488068	150
672510000	672510162	672510646	67538709252	67470914017	150
658410000	658410569	658410475	65198882962	65998713683	150
637410000	637410286	637410290	63846505348	63946182682	150
667410000	667410568	667410584	66963204745	66596264628	150
638510000	638510422	638510332	63368134208	63696713217	150
676510000	676510324	676510737	67835058801	67769845758	150
836500000	836500827	836500238	83475015788	83695048705	150
839510000	839510692	839510351	83634829452	83872316689	150
843510000	843510360	843510374	84229833925	84650198199	150
861610000	861610776	861610626	86917650001	86126574439	150
837410000	837410199	9737410308	83748719066	83946536951	150
852510000	852510403	852510467	85229817998	85458426808	150

757510000	757510184	757510551	75090225843	75268945859	150
749410000	749410773	749410375	74913245685	74617312534	150
750510000	750510990	750510461	75213304821	75799657876	150
770610000	770610281	770610729	77872113457	77323989294	150
795510000	795510390	795510940	79359360208	79397710839	150
758410000	758410590	758410484	75570167109	75465431585	150
771610000	771610938	771610715	77165173661	77384255895	150
778410000	778410842	778410680	77904146881	77848503440	150
958410000	958410550	958410504	95849598463	95102480423	150
943510000	943510377	943510384	94000100659	94513691214	150
967510000	967510392	967510668	96494160535	96506424824	150
935510000	935510622	935510315	93362240631	93059407276	150
960610000	960610155	960610649	96343610947	96903852798	150
912510000	912510656	912510074	91016017200	91975916230	150
915510000	915510257	915510110	91045157853	91079893646	150
918410000	918410014	918410110	91576980863	91550874336	150
890510000	890510244	890510865	89880659893	89671324018	150
924510000	924510359	924510192	92756629179	92843216946	150
1095510000	1095510264	1095510870	109157052473	109639018523	150
929410000	929410567	929410196	92432381341	92488026445	150
896510000	896510647	896510958	89623417034	89146178418	150
885510000	885510224	885510849	88926508534	88488897199	150
1117510000	1117510772	1117510090	111021563433	111744316365	150
1107410000	1107410679	1107410941	110616315346	110836909372	150
1080610000	1080610261	1080610761	108665741992	108044848866	150
1059410000	1059410827	1059410406	105770371711	105163903927	150
1103510000	1103510785	1103510901	110691536252	110003267660	150
1016500000	1016500533	1016500960	101617936753	101829858314	150
1050510000	1050510862	1050510392	105496281169	105393699258	150
1025510000	1025510276	1025510121	102999566370	102689513893	150
1039410000	1039410584	1039410207	103169022067	103661117441	150
1055510000	1055510721	1055510437	105035548477	105467607612	150
1027510000	1027510814	1027510179	102809731479	102029454421	150
1211510000	1211510570	1211510007	121071015945	121015712789	150
1216410000	1216410454	1216410049	121243998026	121495750050	150
1193510000	1193510935	1193510806	119970981342	119258896449	150
1217510000	1217510791	1217510101	121092201679	121308581681	150
1187410000	1187410667	1187410732	118799459706	118953907665	150
1189510000	1189510152	1189510779	118057569383	118055849813	150
1239510000	1239510588	1239510294	123615922873	123592033727	150
1183510000	1183510771	1183510703	118167934941	118483112454	150
1197510000	1197510818	1197510888	119571287420	119533630210	150
1209510000	1209510201	1209510992	120535632327	120380840870	150
1241610000	1241610285	1241610369	124638271863	124273207131	150
1186410000	1186410447	1186410742	118722550321	118402869861	150
1139410000	1139410600	1139410217	113291448977	113173049943	150
1142510000	1142510902	1142510296	114242504012	114104556306	150

1126500000	1126500646	1126500070	112165789788	112691858562	150
1159410000	1159410845	1159410416	115660998245	115371635780	150
1146410000	1146410912	1146410339	114904009440	114660745525	150
1127510000	1127510834	1127510188	112207122958	112856753625	150
1135510000	1135510489	1135510235	113906805114	113188572863	150
1346410000	1346410943	1346410359	134545306630	134661901914	150
1309410000	1309410259	1309410940	130182558409	130191096650	150
1347510000	1347510089	1347510413	134342223035	134476243730	150
1326510000	1326510668	1326510203	132422623535	132071368747	150
1332510000	1332510914	1332510216	133419793295	133253146579	150
1335510000	1335510527	1335510256	133367172829	133969551591	150
1270610000	1270610205	1270610680	127943527664	127057667581	150
1298410000	1298410116	1298410831	129790200165	129113411658	150
1283510000	1283510787	1283510713	128413762955	128696476847	150
1263510000	1263510483	1263510513	126203137127	126305614851	150
1254510000	1254510646	1254510431	125426623471	125424558878	150
1435500000	1435500838	1435500184	143867163628	143474803303	150
1487410000	1487410718	1487410762	148412328657	148046945621	150
1441510000	1441510748	1441510322	144507885706	144910766530	150
1438410000	1438410209	1438410259	143455469156	143826104656	150
1476410000	1476410333	1476410670	147625187527	147364114550	150
1485500000	1485500219	1485500687	148720900095	148934269255	150
1446500000	1446500923	1446500300	144235294720	144114268136	150
1446510000	1446510914	1446510415	144680132124	144022719495	150
1405510000	1405510141	1405510955	140155951355	140878718325	150
1387410000	1387410700	1387410752	138383986975	138303789500	150
1425500000	1425500859	1425500086	142576896842	142770753908	150
1591510000	1591510697	1591510831	159389504733	159755859121	150
1606500000	1606500473	1606500919	160496967827	160227744742	150
1608510000	1608510974	1608510037	160602997719	160298763778	150
1595500000	1595500392	1595500808	159697525334	159305673831	150
1616500000	1616500628	1616500020	161116845579	161600868142	150
1579410000	1579410165	1579410654	157545871749	157998298599	150
1596510000	1596510595	1596510929	159618079415	159557608398	150
1569410000	1569410973	1569410555	156918408246	156608105654	150
1496510000	1496510576	1496510919	149871962377	149860574317	150
1509410000	1509410296	1509410960	150639135470	150074398476	150
1510610000	1510610483	1510610117	151983161935	151243104209	150
1537510000	1537510071	1537510330	153618417834	153845751469	150
1699510000	1699510288	1699510927	169247924066	169713713461	150
1715500000	1715500741	1715500014	171143744699	171568578761	150
1730510000	1730510799	1730510263	173337264609	173910145924	150
1716510000	1716510565	1716510143	171543661524	171043010340	150
1703510000	1703510800	1703510963	170884877449	170803569328	150
1725500000	1725500907	1725500116	172103829181	172612207233	150
1698510000	1698510102	1698510932	169235959095	169494212221	150
1710510000	1710510613	1710510066	171319423740	171257394680	150

1693510000	1693510955	1693510855	169051751103	169897505677	150
1638410000	1638410246	1638410280	163816473225	163382769180	150
1622510000	1622510790	1622510146	162794621502	162460257680	150
1671510000	1671510318	1671510641	167783955952	167642636447	150
1662510000	1662510554	1662510548	166312996341	166600476512	150
1647410000	1647410390	1647410383	164361214881	164934098595	150
1858410000	1858410533	1858410495	185567912732	185712441242	150
1863500000	1863500545	1863500548	186330367370	186669377814	150
1786510000	1786510450	1786510849	178527255291	178504537893	150
1803510000	1803510819	1803510973	180812734198	180103973119	150
1786410000	1786410471	1786410800	178195110900	178430642718	150
1802510000	1802510454	1802510963	180821749982	180876560384	150
1756500000	1756500052	1756500430	175954293910	175554231563	150
1772510000	1772510184	1772510657	177116403399	177957120772	150
1773500000	1773500805	1773500636	177785549282	177371944012	150
1968410000	1968410732	1968410602	196347913162	196451163394	150
1914600000	1914600133	1914600056	191158614027	191206414799	150
1879410000	1879410218	1879410684	187645375671	187108539058	150
1887410000	1887410787	1887410801	188408404046	188546681479	150
1873510000	1873510720	1873510673	187485378574	187473083140	150
1889510000	1889510263	1889510849	188742866182	188135931908	150
1926500000	1926500769	1926500150	192599074011	192410745836	150
1890610000	1890610490	1890610940	189602090889	189416580127	150
2077510000	2077510277	2077510680	207968678358	207033328546	150
2086510000	2086510397	2086510779	208558843888	208561013950	150
2088410000	2088410901	2088410711	208294876405	208811148102	150
2090510000	2090510088	2090510789	209630996672	209380850649	150
2084510000	2084510871	2084510713	208781414165	208203745179	150
2067510000	2067510239	2067510583	206215109099	206499998919	150
2098410000	2098410083	2098410812	209494895941	209468417317	150
2092510000	2092510586	2092510787	209770235748	209069141207	150
2068410000	2068410570	2068410515	206027681983	206196641241	150
2049410000	2049410771	2049410307	204194435016	204874547897	150
1991510000	1991510768	1991510872	199108577769	199229236752	150
1996510000	1996510663	1996510969	199937758491	199038168291	150
2041510000	2041510667	2041510285	204182093548	204275688721	150
2022510000	2022510679	2022510087	202021214137	202119812248	150
2191510000	2191510624	2191510792	219927951976	219308558632	150
2186510000	2186510416	2186510790	218541954619	218671842775	150
2218510000	2218510083	2218510097	221413661634	221290605190	150
2179510000	2179510077	2179510680	217740868524	217470206629	150
2209410000	2209410240	2209410931	220303581159	220893624787	150
2235500000	2235500808	2235500166	223794074905	223296415547	150
2168410000	2168410588	2168410525	216012079341	216370340678	150
2137410000	2137410179	2137410244	213260170666	213409133527	150
2339410000	2339410637	2339410237	233643983402	233088347395	150
2132510000	2132510879	2132510197	213361866480	213400811336	150

2158410000	2158410477	2158410428	215946427626	215659297873	150
2164510000	2164510678	2164510523	216201891769	216787016698	150
2156500000	2156500034	2156500371	215445154847	215379247578	150
2312510000	2312510545	2312510014	231414258963	231883447700	150
2348510000	2348510483	2348510405	234802543618	234741645596	150
2316410000	2316410472	2316410060	231293472352	231692190263	150
2357410000	2357410509	2357410455	235885772414	235129861395	150
2329410000	2329410572	2329410139	232569179340	232674719554	150
2329510000	2329510510	2329510206	232934968420	232083185605	150
2290510000	2290510126	2290510807	229953924011	229451904708	150
2258410000	2258410496	2258410437	225620821089	225664429590	150
2291510000	2291510643	2291510802	229410524391	229190280181	150
2293510000	2293510887	2293510817	229321829339	229433478647	150
2271610000	2271610852	2271610667	227256547877	227571422128	150
2285500000	2285500262	2285500666	228301232619	228272224009	150
2285510000	2285510126	2285510790	228029276220	228627894217	150
2250510000	2250510900	2250510413	225469628159	225927843840	150
2280610000	2280610298	2280610782	228329669761	228137936915	150
2456500000	2456500005	2456500401	245223315366	245057889504	150
2438510000	2438510393	2438510314	243818033035	243151642084	150
2479410000	2479410149	2479410645	247975084438	247609716748	150
2467510000	2467510308	2467510622	246450806857	246209668797	150
2489510000	2489510198	2489510810	248371267779	248029637082	150
2428510000	2428510215	2428510216	242902283114	242185599174	150
2442510000	2442510956	2442510328	244793466292	244279266863	150
2470610000	2470610235	2470610701	247994762414	247125432809	150
2458510000	2458510667	2458510516	245260616587	245552756607	150
2468510000	2468510761	2468510615	246099673988	246724757308	150
2488410000	2488410973	2488410751	248321860644	248941207035	150
2371510000	2371510260	2371510611	237255597512	237048705949	150
2363510000	2363510504	2363510524	236201176346	236741322087	150
2395500000	2395500362	2395500788	239923420135	239390163550	150
2377510000	2377510325	2377510710	237223038025	237041945878	150
2579510000	2579510138	2579510720	257282130501	257460221118	150
2597510000	2597510893	2597510928	259732085287	259511306783	150
2595510000	2595510359	2595510922	259711705276	259929590210	150
2555510000	2555510806	2555510491	255326229567	255168474468	150
2608410000	2608410910	2608410983	260494873349	260684608656	150
2580610000	2580610341	2580610812	258175979230	258613892525	150
2578410000	2578410807	2578410662	257513386498	257264173693	150
2591610000	2591610276	2591610897	259496975789	259101300397	150
2508410000	2508410894	2508410973	250519622422	250168110869	150
2532510000	2532510952	2532510238	253396639635	253133867063	150
2538410000	2538410228	2538410271	253053141669	253316018624	150
2491510000	2491510680	2491510822	249821342732	249430653866	150
2519410000	2519410430	2519410059	251472307078	251837709059	150
2533510000	2533510224	2533510246	253041501172	253773269698	150

2548410000	2548410362	2548410370	254173726780	254675621839	150
2539410000	2539410679	2539410257	253337928287	253503679252	150
2702610000	2702610023	2702610016	270848373669	270733193120	150
2684510000	2684510974	2684510773	268233524055	268403216041	150
2718410000	2718410987	2718410092	271922657664	271602508987	150
2697410000	2697410754	2697410882	269850263789	269846066505	150
2676410000	2676410365	2676410691	267919823170	267476428144	150
2641610000	2641610359	2641610409	264304405157	264549720628	150
2658510000	2658510621	2658510536	265711350991	265320537878	150
2668410000	2668410683	2668410573	266780671978	266571638051	150
2619410000	2619410445	2619410069	261465397326	261350623217	150
2656500000	2656500038	2656500421	265000929542	265210159453	150
2624510000	2624510309	2624510163	262735005013	262430067972	150
2627510000	2627510926	2627510240	262511880812	262985556319	150
2669410000	2669410992	2669410566	266073070530	266055982957	150
2805510000	2805510208	2805510996	280173917238	280865284175	150
2807510000	2807510722	2807510061	280816794789	280829917319	150
2818410000	2818410001	2818410102	281134121331	281288752441	150
2812510000	2812510638	2812510066	281578649680	281051988093	150
2816500000	2816500603	2816500041	281284575150	281836270240	150
2825500000	2825500928	2825500127	282668958108	282279315278	150
2834510000	2834510514	2834510286	283168972544	283565945553	150
2829410000	2829410554	2829410188	282284658864	282416154938	150
2763510000	2763510575	2763510564	276558158469	276263985191	150
2748510000	2748510549	2748510445	274697284480	274373017553	150
2794510000	2794510024	2794510884	279891465219	279855100155	150
2765510000	2765510924	2765510624	276034359335	276643593366	150
2788510000	2788510039	2788510843	278876881221	278790020509	150
2766410000	2766410304	2766410601	276977955310	276004128553	150
2973510000	2973510741	2973510684	297233054227	297141629939	150
2979410000	2979410059	2979410695	297708567278	297907871263	150
2946510000	2946510937	2946510465	294291645714	294143209846	150
2935500000	2935500920	2935500235	293522174950	293123888518	150
2925500000	2925500946	2925500137	292215713298	292994318745	150
2891610000	2891610330	2891610927	289271010607	289986691917	150
2898410000	2898410178	2898410891	289410671122	289979261897	150
2900610000	2900610489	2900610058	290830013299	290488977373	150
2915500000	2915500775	2915500037	291242823636	291387915473	150
2919410000	2919410494	2919410099	291798413855	291880803981	150
2872510000	2872510208	2872510667	287938257079	287523361189	150
2911510000	2911510814	2911510078	291789396267	291004727495	150
2876410000	2876410396	2876410711	287771317655	287711470212	150
3057410000	3057410464	3057410426	305592970571	305278717532	150
3075510000	3075510982	3075510658	307080901767	307110661022	150
3078410000	3078410755	3078410613	307302235168	307007598227	150
3081610000	3081610994	3081610748	308812292759	308689841249	150
3051510000	3051510869	3051510382	305022286310	305969786165	150

3051610000	3051610945	3051610450	305477627266	305050220870	150
3069500000	3069500609	3069500487	306653952849	306393535049	150
3091510000	3091510608	3091510783	309456840207	309950478711	150
3074510000	3074510833	3074510614	307448364954	307639066551	150
3032510000	3032510863	3032510188	303203081216	303222199327	150
3035500000	3035500779	3035500148	303645560183	303974811977	150
3045500000	3045500940	3045500246	304635901851	304246649312	150
2984510000	2984510022	2984510803	298183664121	298493845090	150
3025500000	3025500795	3025500048	302985446468	302637425711	150
3028410000	3028410035	2028410122	302219203713	302465719688	150
3026510000	3026510619	3026510175	302855234252	302347041259	150
2997510000	2997510963	2997510968	299221742779	299104864951	150
3003510000	3003510771	3003510891	300225860508	300785615749	150
3013510000	3013510865	3013510997	301031920934	301748818900	150
3191610000	3191610205	3191610858	319290928896	319770537376	150
3222510000	3222510718	3222510107	322731555031	322867377873	150
3223510000	3223510094	3223510117	322115478372	322561875410	150
3177410000	3177410654	3177410635	317403120523	317819112373	150
3219410000	3219410375	3219410031	321571764134	321304564404	150
3227410000	3227410000	3227410154	322916817984	322685604124	150
3187510000	3187510456	3187510791	318637260128	318092857958	150
3150510000	3150510883	3150510404	315221624434	315173654799	150
3144510000	3144510568	3144510320	314077142130	314818419770	150
3119410000	3119410356	3119410021	311061111517	311069943343	150
3136410000	3136410760	3136410241	313049828127	313132813370	150
3133500000	3133500260	3133500187	313811824007	313774571636	150
3158510000	3158510617	3158510487	315312202536	315323224385	150
3118410000	3118410886	3118410034	311762646942	311812207319	150
3338510000	3338510378	3338510305	333204379583	333960972347	150
3319410000	3319410394	3319410041	331339341070	331396406363	150
3354510000	3354510665	3354510443	335407226627	335312162454	150
3300610000	3300610400	3300610999	330863162381	330086621988	150
3252510000	3252510108	3252510409	325646174238	325455750787	150
3286510000	3286510434	3286510801	328217608832	328968786227	150
3236510000	3236510703	3236510298	323022280074	323336247352	150
3258410000	3258410498	3258410438	325614470398	325544103656	150
3245500000	3245500972	3245500265	324867722353	324358287854	150
3448410000	3448410345	3448410361	344233271303	344765145874	150
3470510000	3470510293	3470510632	347425696268	347685200382	150
3428410000	3428410048	3428410161	342127311495	342974694590	150
3429410000	3429410593	3429410149	342017173213	342116940488	150
3461510000	3461510240	3461510524	346191832848	346012439099	150
3461610000	3461610190	3461610589	346870553758	346069180569	150
3439510000	3439510628	3439510315	343807692885	343824135892	150
3478510000	3478510849	3478510713	347539797297	347863013727	150
3435500000	3435500842	3435500186	343376189185	343336660102	150
3401510000	3401510407	3401510929	340687166161	340398009903	150

3378410000	3378410803	3378410643	337370089005	337531494893	150
3375510000	3375510036	3375510692	337903254589	337497539249	150
3392510000	3392510643	3392510819	339685278060	339952377856	150
3406500000	3406500445	3406500901	340265285184	340109236144	150
3387410000	3387410704	3387410754	338351696185	338965063688	150
3383510000	3383510808	3383510727	338655539551	338104210546	150
3416500000	3416500599	3416500002	341837877794	341581340301	150
3552510000	3552510349	3552510440	355326456471	355804906100	150
3600610000	3600610445	3600610029	360754640006	360001214919	150
3550510000	3550510956	3550510444	355055468415	355382810686	150
3581510000	3581510515	3581510733	358427040958	358386789622	150
3547410000	3547410375	3547410376	354700715874	354008293504	150
3506500000	3506500462	3506500911	350801848484	350641936967	150
3512510000	3512510583	3512510036	351259805555	351185618548	150
3515510000	3515510195	3515510071	351249641612	351624622192	150
3529410000	3529410610	3529410159	352183107887	352104598005	150
3486410000	3486410495	3486410774	348970736554	348717301664	150
3545500000	3545500023	3545500295	354861730551	354584455290	150
3729410000	3729410537	3729410179	372683101958	372681948659	150
3712510000	3712510620	3712510056	371125511087	371711732327	150
3700610000	3700610460	3700610039	370559380883	370217733457	150
3657510000	3657510171	3657510544	365240164002	365040337423	150
3660510000	3660510132	3660510554	366182347947	366535250908	150
3664510000	3664510766	3664510575	366086104519	366179834639	150
3658410000	3658410576	3658410478	365765213359	365939361095	150
3609410000	3609410316	3609410972	360113326324	360873468117	150
3612510000	3612510603	3612510046	361129303613	361243099299	150
3625500000	3625500893	3625500108	362273106055	362605680682	150
3666500000	3666500198	3666500522	366073686119	366772818228	150
3659410000	3659410943	3659410467	365700699298	365720911725	150
3817510000	3817510781	3817510161	381228179705	381439886309	150
3801610000	3801610666	3801610041	380010289849	380085792168	150
3819410000	3819410481	3819410090	381976680843	381966130123	150
3804510000	3804510158	3804510982	380979017900	380243573969	150
3808410000	3808410838	3808410004	380676749455	380560505880	150
3797410000	3797410769	3797410893	379568827921	379612293560	150
3837510000	3837510009	3837510366	383211373595	383220580364	150
3769410000	3769410012	3769410577	376510806531	376494357584	150
3757410000	3757410422	3757410496	375685734224	375897882457	150
3767410000	3767410591	3767410596	376395784090	376206990369	150
3969410000	3969410054	3969410597	396008217575	396427361837	150
3939510000	3939510717	3939510364	393303258499	393687220799	150
3927510000	3927510980	3927510272	392873555354	392158401453	150
3860510000	3860510170	3860510573	386051817072	386029581462	150
3881610000	3881610152	3881610828	388181580772	388766608633	150
3882510000	3882510545	3882510768	388605865577	388842555781	150
3916500000	3916500617	3916500052	391141291648	391385998116	150

3888410000	3888410048	3888410793	388304177465	388780316050	150
3918410000	3918410018	3918410113	391783022900	391484076059	150
3895500000	3895500438	3895500841	389828375832	389459200690	150
4058410000	4058410463	4058410420	405851194987	405951023112	150
4042510000	4042510888	4042510289	404200194016	404000373851	150
4036500000	4036500788	4036500163	403214193378	403382711797	150
4090610000	4090610434	4090610864	409998593443	409359422222	150
4078510000	4078510862	4078510675	407942513450	407421804234	150
4065510000	4065510891	4065510548	406508634982	406544116678	150
4066500000	4066500104	4066500463	406786946824	406434565517	150
4069410000	4069410020	4069410508	406398194677	406003691331	150
4076510000	4076510227	4076510679	407972603648	407764478072	150
4049410000	4049410774	4049410309	404322468066	404268800401	150
4021510000	4021510840	4021510090	402051135235	402342069095	150
4006500000	4006500467	4006500864	400534966063	400047028914	150
4008410000	4008410818	4008410924	400413344781	400748828821	150
3995510000	3995510338	3995510963	399502141626	399253626206	150
4011610000	4011610704	4011610061	401560427066	401269161485	150
3998410000	3998410195	3998410902	399165889998	399829203179	150
3996410000	3996410648	3996410923	399433470022	399214638466	150
4002610000	4002610899	4002610949	400433548953	400270536006	150
4201510000	4201510369	4201510909	420138466816	420107529570	150
4165510000	4165510909	4165510560	416841624368	416955767916	150
4166500000	4166500121	4166500473	416716165145	416426856429	150
4189410000	4189410100	4189410717	418301508317	418576689809	150
4202510000	4202510347	4202510905	420282395437	420059780470	150
4175510000	4175510005	4175510671	417740121719	417336735407	150
4133510000	4133510155	4133510208	413363596114	413786120444	150
4136500000	4136500804	4136500173	413260746733	413382371334	150
4123510000	4123510076	4123510108	412647091571	412678366470	150
4129410000	4129410536	4129410121	412878054231	412476006616	150
4105510000	4105510098	4105510925	410052799976	410289429001	150
4112510000	4112510514	4112510995	411892649168	411342730406	150
4115510000	4115510263	4115510029	411969804470	411031532543	150
4125510000	4125510301	4125510133	412648704754	412747195146	150
4141610000	4141610274	4141610362	414150309294	414786760963	150
4318410000	4318410928	4318410055	431313885995	431130663411	150
4325500000	4325500845	4325500079	432787454093	432738731348	150
4306500000	4306500431	4306500892	430734398360	430541987026	150
4337510000	4337510046	4337510312	433277446574	433636908880	150
4290610000	4290610470	4290610884	429300542657	429183448303	150
4284510000	4284510907	4284510735	428463357585	428496527112	150
4342510000	4342510943	4342510319	434521119227	434161502408	150
4302610000	4302610951	4302610978	430992774793	430681721173	150
4272510000	4272510095	4272510613	427090920288	427999417712	150
4225510000	4225510318	4225510143	422261752484	422068958744	150
4242510000	4242510924	4242510309	424233876517	424991635299	150

4258510000	4258510637	4258510498	425472503946	425873441785	150
4445510000	4445510723	4445510374	444393988178	444786095325	150
4267410000	4267410508	4267410547	426161056919	426499434616	150
4239410000	4239410624	4239410230	423513739033	423088412167	150
4268410000	4268410611	4268410536	426636705596	426442410870	150
4246510000	4246510882	4246510399	424204758519	424200489183	150
4237410000	4237410209	4237410255	423447882017	423770550097	150
4417510000	4417510829	4417510124	441082299729	441505263983	150
4427410000	4427410035	4427410175	442917006261	442152483636	150
4409510000	4409510240	4409510015	440499130494	440186114252	150
4407510000	4407510656	4407510023	440562819789	440473181492	150
4425500000	4425500863	4425500089	442561559631	442201447154	150
4425510000	4425510350	4425510164	442666383076	442177434640	150
4346500000	4346500914	4346500293	434501649075	434917199058	150
4401610000	4401610599	4401610003	440624913142	440167322947	150
4361610000	4361610172	4361610580	436226305411	436997878205	150
4393510000	4393510907	4393510830	439607413167	439454026637	150
4380610000	4380610314	4380610794	438466108239	438686379985	150
4374510000	4374510886	4374510644	437044726192	437709866725	150
4404510000	4404510093	4404510941	440812399034	440278130392	150
4564510000	4564510748	4564510565	456546946616	456040978302	150
4571610000	4571610910	4571610699	457539613218	457642705287	150
4551510000	4551510069	4551510433	455955997231	455753906997	150
4590510000	4590510187	4590510839	459389013725	459786612609	150
4587410000	4587410744	4587410775	458802202097	458734817822	150
4557510000	4557510155	4557510535	455690925334	455872142253	150
4506410000	4506410346	4506410981	450121987893	450562699327	150
4477410000	4477410558	4477410666	447737340652	447610780876	150
4511510000	4511510638	4511510040	451525621291	451074076090	150
4531610000	4531610164	4531610303	453586031446	453561534079	150
4483510000	4483510828	4483510738	448404433550	448591165069	150
4711610000	4711610751	4711610129	471538454336	471166705657	150
4682510000	4682510421	4682510749	468004099068	468597560495	150
4716500000	4716500647	4716500033	471369577858	471864162886	150
4601510000	4601510450	4601510950	460086971752	460649443140	150
4616510000	4616510551	4616510134	461160808536	461216517995	150
4601610000	4601610635	4601610023	460721011256	460107736082	150
4633510000	4633510246	4633510259	463529463813	463131757195	150
4621610000	4621610913	4621610217	462722493188	462147169879	150
4602610000	4602610009	4602610008	460663384548	460350866258	150
4623510000	4623510067	4623510158	462198509395	462927629056	150
4792510000	4792510720	4792510861	479857963263	479639096623	150
4801510000	4801510494	4801510970	480275449590	480681113029	150
4822510000	4822510831	4822510168	482182773654	482708131724	150
4825510000	4825510416	4825510207	482004384561	482211607301	150
4798510000	4798510122	4798510945	479967510063	479663049399	150
4823500000	4823500205	4823500158	482084829628	482946154656	150

4747510000	4747510156	4747510456	474981932121	474233835401	150
4724510000	4724510329	4724510175	472671828922	472569276033	150
4741510000	4741510814	4741510354	474164408139	474956497986	150
4777510000	4777510395	4777510752	477315673056	477641964652	150
4719410000	4719410465	4719410081	471680383280	471932994384	150
4759410000	4759410963	4759410478	475062006842	475556576547	150
4778510000	4778510893	4778510744	477140618786	477621526290	150
4733510000	4733510263	3733510268	473882420431	473113607767	150
4719510000	4719510404	4719510148	471103498400	471629562880	150
4776510000	4776510347	4776510751	477313583127	477333651704	150
4948510000	4948510585	4948510468	494165102122	494248967316	150
4952510000	4952510429	4952510481	495360358353	495358435658	150
4938510000	4938510417	4938510366	493687173753	493849722926	150
4957410000	4957410458	4957410517	495888474423	495783205993	150
4863510000	4863510594	4863510576	486206174168	486282288624	150
4865510000	4865510947	4865510637	486632217361	486536558096	150
4870610000	4870610305	4870610744	487168226231	487231082985	150
4859410000	4859410983	4859410488	485798298873	485238747167	150
4885500000	4885500287	4885500733	488023482428	488704958759	150
4866410000	4866410321	4866410613	486421664141	486161936831	150
4857410000	4857410439	4857410507	485850698461	485189182999	150
4857510000	4857510209	4857510565	485684944809	485780653241	150
4870510000	4870510370	4870510673	487602711509	487649935666	150
5029410000	5029410520	5029410112	502537747292	502912320767	150
5085510000	5085510097	5085510770	508718843553	508560279490	150
5039410000	5039410591	5039410211	503694724284	503004266140	150
5024510000	5024510295	5024510106	502055152127	502940586039	150
5068510000	5068510695	5068510578	506360032078	506441172669	150
5043510000	5043510226	5043510299	504614279874	504688518381	150
4986510000	4986510491	4986510872	498448877900	498797810523	150
4980510000	4980510072	4980510781	498496044836	498370386965	150
5009410000	5009410212	5009410914	500955850252	500738550783	150
4962510000	4962510619	4962510583	496311655456	496146051539	150
5019410000	5019410343	5019410013	501534957537	501142082116	150
4988510000	4988510069	4988510865	498577019423	498398801661	150
4992510000	4992510754	4992510881	499266811798	499341157325	150
4995500000	4995500453	4995500853	499168525792	499905603290	150
5173510000	5173510653	5173510608	517255014583	517780717268	150
5194510000	5194510058	5194510827	519142264962	519874460467	150
5184510000	5184510891	5184510726	518376113379	518428442490	150
5207510000	5207510623	5207510004	520687304934	520444808909	150
5157410000	5157410483	5157410438	515931530540	515218166813	150
5157510000	5157510231	5157510496	515476740639	515174737914	150
5196410000	5196410537	5196410845	519245611847	519223976777	150
5094510000	5094510040	5094510817	509988303178	509186295473	150
5097510000	5097510809	5097510882	509441883463	509333821084	150
5089510000	5089510143	5089510773	508638119032	508726682634	150

5138510000	5138510345	5138510288	513633934069	513825010729	150
5135500000	5135500797	5135500159	513097008444	513777005074	150
5106510000	5106510376	5106510985	510973100005	510747062167	150
5104510000	5104510050	5104510910	510535552384	510910609536	150
5136510000	5136510814	5136510290	513860956205	513291727655	150
5298410000	5298410081	5298410835	529973988716	529954940050	150
5278410000	5278410790	5278410635	527475187164	527281921051	150
5309510000	5309510226	5309510006	530234653044	530074917061	150
5326410000	5326410628	5326410162	532516909044	532888785407	150
5326500000	5326500682	5326500094	532529267283	532492834748	150
5296410000	5296410552	5296410855	529397155672	529426115698	150
5303510000	5303510825	5303510927	530749276819	530457626924	150
5321610000	5321610863	5321610190	532914805142	532019777119	150
5289510000	5289510173	5289510793	528453160419	528807176783	150
5226500000	5226500666	5226500084	522674714415	522707716555	150
5229410000	5229410557	5229410132	522975759203	522380763609	150
5262510000	5262510485	5262510512	526932803078	526431700255	150
5231510000	5231510083	5231510209	523230689458	523065105634	150
5264510000	5264510701	5264510536	526094191526	526401794306	150
5237510000	5237510031	5237510303	523058247801	523985175068	150
5225500000	5225500831	5225500070	522941152686	522153188500	150
5238410000	5238410185	5238410243	523089830517	523899827862	150
5421510000	5421510920	5421510131	542147435478	542466738430	150
5456510000	5456510027	5456510516	545011209618	545193936815	150
5416410000	5416410490	5416410073	541978927910	541974539347	150
5429510000	5429510455	5429510218	542149241130	542809148998	150
5365510000	5365510860	5365510583	536426407478	536516740786	150
5385500000	5385500210	5385500681	538179938293	538941979813	150
5385510000	5385510148	5385510804	538543315245	538412384384	150
5360510000	5360510117	5360510527	536025108459	536302172866	150
5554510000	5554510701	5554510466	555042406171	555804453100	150
5527510000	5527510914	5527510233	552700937252	552867332012	150
5558410000	5558410560	5558410470	555942901504	555895265501	150
5580510000	5580510992	5580510742	558952692600	558998043199	150
5540510000	5540510956	5540510347	554923688517	554666197268	150
5556510000	5556510046	5556510526	555329394480	555290723652	150
5525510000	5525510369	5525510176	552152942748	552041318622	150
5535510000	5535510564	5535510278	553929332430	553826717197	150
5466500000	5466500170	5466500504	546221543570	546025225544	150
5498410000	5498410118	5498410855	549994029876	549007041043	150
5501510000	5501510433	5501510941	550266424133	550786259020	150
5501610000	5501610617	5501610014	550818287115	550728216483	150
5696410000	5696410606	5696410895	569666756232	569179942345	150
5699410000	5699410338	5699410863	569817075287	569327901591	150
5701510000	5701510474	5701510961	570518384673	570587409913	150
5666510000	5666510162	5666510639	566193630923	566090672791	150
5652510000	5652510374	5652510452	565277679383	565715059674	150

5585500000	5585500242	5585500700	558100152487	558367789219	150
5588410000	5588410997	5588410764	558800026192	558690090820	150
5642510000	5642510000	5642510351	564745672125	564680992518	150
5626410000	5626410680	5626410192	562069478203	562244891976	150
5811610000	5811610771	5811610140	581378978868	581200651874	150
5784510000	5784510995	5784510786	578349717263	578243511837	150
5809510000	5809510253	5809510057	580975862604	580494175289	150
5816510000	5816510586	5816510158	581025724881	581546382193	150
5782510000	5782510442	5782510760	578403351480	578772687947	150
5775510000	5775510115	5775510737	577639282436	577061640859	150
5746510000	5746510976	5746510447	574436395956	574450359243	150
5731510000	5731510614	5731510259	573146026627	573262101848	150
5741610000	5741610382	5741610422	574698984649	574979018090	150
5721510000	5721510978	5721510161	572610174197	572038834216	150
5719510000	5719510406	5719510149	571949754723	571279179312	150
5725510000	5725510401	5725510197	572764778185	572100883542	150
5726500000	5726500742	5726500134	572752060706	572208053710	150
5933510000	5933510302	5933510289	593268004886	593910845366	150
5925510000	5925510463	5925510218	592526178148	592479677245	150
5901510000	5901510518	5901510981	590954160483	590197071781	150
5936510000	5936510829	5936510371	593499670834	593317989243	150
5879510000	5879510107	5879510753	587560181017	587700237332	150
5829510000	5829510526	5829510259	582777702716	582771611769	150
5835500000	5835500909	5835500228	583259062169	583598971353	150
5869410000	5869410035	5869410589	586847676297	586863344313	150
5844510000	5844510590	5844510393	584761465158	584592065874	150
5839410000	5839410737	5839410291	583045763007	583324856275	150
5877410000	5877410626	5877410706	587479789505	587187582850	150
5859510000	5859510972	5859510555	585945508221	585516835430	150
6040510000	6040510864	6040510298	604938861680	604163305200	150
6057410000	6057410469	6057410429	605113638729	605349203621	150
6049510000	6049510738	6049510377	604879920620	604846306084	150
6037410000	6037410169	6037410238	603526436673	603385243493	150
6067410000	6067410478	6067410529	606079770117	606637105724	150
6026410000	6026410579	6026410133	602244108918	602658399337	150
6015510000	6015510247	6015510021	601119045588	601869238846	150
6019410000	6019410345	6019410014	601970396783	601103090243	150
5957510000	5957510227	5957510576	595679226299	595501965139	150
5988410000	5988410070	5988410805	598556549143	598949982567	150
5979510000	5979510125	5979510764	597829690431	597084980963	150
5985500000	5985500302	5985500746	598801697628	598719221455	150
5951610000	5951610104	5951610541	595618845280	595683855163	150
5977410000	5977410642	5977410716	597814828909	597667503785	150
5981610000	5981610173	5981610840	598915355874	598274475785	150
6160510000	6160510082	6160510508	616893114352	616929828488	150
6145500000	6145500960	6145500258	614051895299	614543567579	150
6148410000	6148410298	6148410334	614362074470	614865448380	150

6138410000	6138410169	6138410234	613690708187	613397463916	150
6147410000	6147410308	6147410341	614195319937	614212245869	150
6096410000	6096410523	6096410836	609264805530	609254217954	150
6086500000	6086500360	6086500664	608840806056	608916726510	150
6109410000	6109410231	6109410925	610465650212	610204288365	150
6314510000	6314510182	6314510036	631363674409	631963685771	150
6311510000	6311510602	6311510022	631713260851	631785026056	150
6281510000	6281510446	6281510706	628719047611	628944217203	150
6281610000	6281610053	6281610771	628184094123	628142831528	150
6319510000	6319510339	6319510109	631995710411	631811027395	150
6279410000	6279410107	6279410630	627394641914	627460459222	150
6266500000	6266500141	6266500485	626849181739	626574945509	150
6266510000	6266510165	6266510600	626813972641	626826928358	150
6240510000	6240510899	6240510318	624669731546	624193459235	150
6229510000	6229510498	6229510200	622274326984	622174059928	150
6235500000	6235500816	6235500170	623993972649	623969025482	150
6200510000	6200510449	6200510923	620291650476	620105826027	150
6214510000	6214510164	6214510026	621295261717	621212007195	150
6259410000	6259410873	6259410431	625890215669	625798859723	150
6247510000	6247510081	6247510408	624189654069	624911787030	150
6260610000	6260610055	6260610585	626870974312	626698800416	150
6212510000	6212510534	6212510008	621104154741	621340767259	150
6417410000	6417410804	6417410078	641943349513	641863988344	150
6395500000	6395500367	6395500793	639345045090	639175215032	150
6388510000	6388510984	6388510807	638767749833	638337958582	150
6403510000	6403510845	6403510938	640685388081	640675652856	150
6419410000	6419410419	6419410053	641102460592	641439404754	150
6392510000	6392510649	6392510822	639758536426	639094931372	150
6345510000	6345510710	6345510365	634349933969	634100596844	150
6362510000	6362510506	6362510523	636058541304	636410465595	150
6337410000	6337410233	6337410266	633677399829	633780384842	150
6369510000	6369510961	6369510605	636750206652	636233536171	150
6366500000	6366500154	6366500495	636035549831	636507980983	150
6359510000	6359510896	6359510507	635705967220	635222510255	150
6386510000	6386510383	6386510814	638517227061	638467125903	150
6350510000	6350510924	6350510427	635649127882	635029078897	150
6367410000	6367410527	6367410560	636322479708	636470345052	150
6344510000	6344510504	6344510343	634170754584	634367538461	150
6374510000	6374510890	6374510646	637604451011	637317421169	150
6527410000	6527410055	6527410187	652175378813	652799189830	150
6545500000	6545500028	6545500298	654480579543	654422536767	150
6525500000	6525500882	6525500101	652177306995	652465734637	150
6565510000	6565510898	6565510607	656963085572	656556846414	150
6509510000	6509510262	6509510028	650095092217	650579857697	150
6462510000	6462510526	6462510533	646618768822	646076294140	150
6451610000	6451610017	6451610492	645730329043	645065048215	150
6467410000	6467410545	6467410570	646492300433	646535208928	150

6485500000	6485500228	5485500691	648682025729	648537046466	150
6489410000	6489410159	6489410748	648278639210	648386269323	150
6502510000	6502510405	6502510938	650004664919	650552042016	150
6474510000	6474510908	6474510656	647825568092	647585453958	150
6661610000	6661610754	6661610612	666769968894	666568639097	150
6649410000	6649410765	6649410371	664795026190	664849221307	150
6681610000	6681610125	6681610811	668762838645	668231633428	150
6647410000	6647410398	6647410388	664010645789	664670138395	150
6653510000	6653510513	6653510459	665293946784	665403788280	150
6572510000	6572510154	6572510644	657502290105	657488577123	150
6583510000	6583510848	6583510750	658612671475	658871128030	150
6586510000	6586510423	6586510834	658156391717	658260090272	150
6618510000	6618510158	6618510141	661662302437	661185935610	150
6764510000	6764510790	6764510588	676367211837	676065644883	150
6790610000	6790610481	6790610935	679404117695	679333933546	150
6797410000	6797410773	6797410896	679630907433	679116720090	150
6798410000	6798410170	6798410885	679123628642	679541141346	150
6768510000	6768510819	6768510648	676367343213	676232089944	150
6755510000	6755510844	6755510516	675920853282	675586741422	150
6739410000	6739410720	6739410282	673808990890	673592853560	150
6717410000	6717410852	6717410107	671383620599	671248519499	150
6691510000	6691510726	6691510846	669995706094	669775748597	150
6721610000	6721610933	6721610229	672317639480	672283350328	150
6715510000	6715510234	6715510095	671756903511	671781095560	150
6694510000	6694510014	6694510878	669162736896	669673006672	150
6751510000	6751510111	6751510456	675299620894	675976110851	150
6751610000	6751610069	6751610522	675511945151	675367207420	150
6695500000	6695500413	6695500823	669274515241	669788897117	150
6892510000	6892510739	6892510873	689637903836	689918748619	150
6925500000	6925500951	6925500141	692802611988	692914379260	150
6899510000	6899510330	6899510952	689804136617	689433411766	150
6878410000	6878410875	6878410695	687393772141	687428315955	150
6868410000	6868410725	6868410597	686654675203	686021436256	150
6826410000	6826410715	6826410213	682153192313	682666270494	150
6841610000	6841610911	6841610433	684140204149	684016743139	150
6827510000	6827510968	6827510264	682660579406	682218502064	150
6860510000	6860510175	6860510576	686576511236	686911832878	150
6861510000	6861510168	6861510566	686944315211	686373828084	150
6828510000	6828510294	6828510259	682193740564	682423359940	150
6850610000	6850610012	6850610547	685989119289	685718912028	150
6840510000	6840510833	6840510377	684552298848	684880378072	150
6857410000	6857410442	6857410509	685817657038	685794693215	150
6816410000	6816410544	6816410113	681663412512	681650763645	150
7023510000	7023510062	7023510101	702409963334	702798249166	150
7045510000	7045510656	7045510333	704842821341	704950608568	150
7016500000	7016500541	7016500966	701447345322	701151537769	150
7031610000	7031610993	7031610260	703421704143	703249862703	150

7037510000	7037510005	7037510286	703259945433	703512961960	150
7007410000	7007410672	7007410937	700107921956	700998718979	150
6996510000	6996510673	6996510974	699142252315	699289804974	150
7011510000	7011510541	7011510993	701279910325	701739274105	150
6991610000	6991610880	6991610941	699201757321	699113168994	150
6969410000	6969410058	6969410600	696101922175	696754825087	150
6939410000	6939410760	6939410301	693463214673	693615155801	150
6958410000	6958410561	6958410509	695706777934	695048916861	150
6959410000	6959410005	6959410500	695326892813	695876115770	150
6956500000	6956500092	6956500455	695498121775	695914857211	150
6990610000	6990610517	6990610955	699400010481	699615866904	150
6993510000	6993510015	6993510892	699109497656	699677488342	150
6950610000	6950610028	6950610557	695358503183	695206382398	150
7169510000	7169510933	7169510587	716940673963	716878043096	150
7156510000	7156510980	7156510489	715098515561	715362506062	150
7141510000	7141510696	7141510299	714179197715	714527403215	150
7149510000	7149510696	7149510388	714388068159	714623827933	150
7128410000	7128410058	7128410135	712420022341	712448942379	150
7176410000	7176410293	7176410647	717246262647	717299252400	150
7095500000	7095500321	7095500760	709676482499	709053654251	150
7071610000	7071610825	7071610652	707092938470	707110112005	150
7097410000	7097410667	7097410828	709552262342	709510841045	150
7113510000	7113510891	7113510010	711961316623	711662264412	150
7088510000	7088510940	7088510777	708816607191	708505732865	150
7107510000	7107510610	7107510995	710087995227	710530213785	150
7082510000	7082510252	7082510693	708230059998	708797651468	150
7114510000	7114510150	7114510017	711720244769	711513078403	150
7086410000	7086410441	7086410738	708564285362	708461365447	150
7108410000	7108410841	7108410937	710459270410	710204183736	150
7288510000	7288510972	7288510798	728438702133	728240047062	150
7249410000	7249410819	7249410332	724280254029	724161312993	150
7280510000	7280510938	7280510715	728163195622	728289320647	150
7269410000	7269410927	7269410531	726888906082	726450921555	150
7287410000	7287410695	7287410748	728051224863	728524707819	150
7248510000	7248510476	7248510400	724323996311	724730126379	150
7216510000	7216510573	7216510098	721008758282	721358927848	150
7181610000	7181610018	7181610762	718350579396	718844619678	150
7203510000	7203510812	7203510917	720155218570	720385058028	150
7237410000	7237410213	7237410258	723032119765	723548789125	150
7196510000	7196510531	7196510895	719101782792	719198791745	150
7208510000	7208510020	7208510003	720343647236	720783145232	150
7227510000	7227510865	7227510205	722405224617	722591374450	150
7222510000	7222510726	7222510111	722272813613	722453000539	150
7199510000	7199510316	7199510884	719409750536	719224070723	150
7197410000	7197410684	7197410838	719376687422	719980161713	150
7200610000	7200610390	7200610993	720944977608	720274009971	150
7411610000	7411610703	7411610103	741918776741	741005820902	150

7372510000	7372510123	7372510625	737757020800	737110806311	150
7402610000	7402610977	7402610991	740018381168	740078332412	150
7409410000	7409410289	7409410956	740596220838	740158712557	150
7412510000	7412510571	7412510029	741988272638	741790720704	150
7428410000	7428410054	7428410165	742484567549	742077001567	150
7406510000	7406510434	7406510018	740137231258	740144605096	150
7397410000	7397410714	7397410857	739164557412	739420629823	150
7359410000	7359410892	7359410442	735825081110	735143965836	150
7312510000	7312510554	7312510019	731256535285	731427439467	150
7351610000	7351610004	7351610483	735996253611	735334237855	150
7519410000	7519410438	7519410064	751814157323	751802344008	150
7498510000	7498510081	7498510918	749518317107	749130302544	150
7530510000	7530510775	7530510249	753709250799	753017993232	150
7531510000	7531510583	7531510241	753914115128	753418192092	150
7500510000	7500510513	7500510953	750942835004	750853549152	150
7500610000	7500610436	7500610023	750790232507	750284569406	150
7526500000	7526500716	7526500116	752525128988	752994095371	150
7536410000	7536410819	7536410285	753685750597	753565701155	150
7536500000	7536500868	7536500216	753651905421	753757322365	150
7536510000	7536510763	7536510332	753370012654	753215416286	150
7507510000	7507510680	7507510036	750066651629	750630748359	150
7492510000	7492510669	7492510833	749218760404	749571160312	150
7436500000	7436500853	7436500206	743044466591	743405406220	150
7477410000	7477410564	7477410669	747109369162	747587652487	150
7432510000	7432510946	7432510233	743802963781	743025354934	150
7481610000	7481610094	7481610792	748669887078	748856110333	150
7459510000	7459510915	7459510518	745399003603	745971163587	150
7637510000	7637510981	7637510348	763644968709	763406868458	150
7649510000	7649510781	7649510438	764904321060	764875399737	150
7646500000	7646500963	7646500326	764899043300	764948531079	150
7560510000	7560510120	7560510548	756804458793	756715016981	150
7578410000	7578410818	7578410667	757837117776	757502039291	150
7569410000	7569410982	7569410561	756654730935	756309915472	150
7568510000	7568510786	7568510630	756345118416	756273872393	150
7574510000	7574510927	7574510667	757447131360	757270911182	150
7767410000	7767410597	7767410600	776354684197	776804590514	150
7754510000	7754510739	7754510488	775457508769	775008515785	150
7771510000	7771510349	7771510657	777883530944	777742831848	150
7771610000	7771610950	7771610722	777681825809	777059953733	150
7759510000	7759510960	7759510547	775596077216	775976904197	150
7774510000	7774510827	7774510688	777495201789	777477324010	150
7728410000	7728410104	7728410194	772863085034	772365573420	150
7728510000	7728510276	7728510250	772367880981	772744484967	150
7675510000	7675510097	7675510728	767588230122	767091693932	150
7691610000	7691610305	7691610912	769636708216	769543998644	150
7676410000	7676410374	7676410696	767449796032	767940269250	150
7708510000	7708510001	7708510053	770792550457	770991485699	150

7687410000	7687410765	7687410787	768146253941	768469933906	150
7729510000	7729510514	7729510250	772064401318	772349335664	150
7719410000	7719410469	7719410084	771598481149	771680769864	150
7668410000	7668410692	7668410578	766455456024	766360950788	150
7697510000	7697510918	7697510943	769181862567	769730601077	150
7698410000	7698410157	7698410876	769938046960	769854194165	150
7845510000	7845510691	7845510422	784143223565	784354137990	150
7859410000	7859410988	7859410491	785967864797	785119727801	150
7811600000	7811600609	7811600063	781064697932	781652838251	150
7796410000	7796410624	7796410907	779142079509	779581341895	150
7827410000	7827410110	7827410220	782795744086	782998603512	150
7836510000	7836510814	7836510363	783446467330	783945581009	150
7907510000	7907510749	7907510076	790077196452	790645885110	150
7851610000	7851610087	7851610533	785410036641	785109485914	150
7911610000	7911610790	7911610152	791514421203	791639247143	150
7805510000	7805510216	7805510001	780842222789	780405303174	150
7871510000	7871510368	7871510667	787650475728	787162159511	150
7833510000	7833510287	7833510281	783953498828	783379593316	150
7929410000	7929410578	7929410203	792056434729	792975274299	150
7963510000	7963510620	7963510589	796020684600	796034470175	150
7990510000	7990510309	7990510882	799455360428	799863343920	150
8022510000	8022510691	8022510092	802998084710	802462771027	150
7921610000	7921610974	7921610250	792845555593	792021010622	150
8025500000	8025500801	8025500053	802312015642	802231842327	150
7999410000	7999410396	7999410895	799915579222	799048650462	150
7941610000	7941610935	7941610444	794145533079	794718685564	150
7957410000	7957410463	7957410520	795315050404	795284746915	150
7931610000	7931610243	7931610345	793222983992	793522474152	150
8019510000	8019510293	8019510080	801207303022	801953110340	150
7944510000	7944510609	7944510406	794298120902	794888512225	150
7978410000	7978410894	7978410706	797385952857	797708439767	150
7966410000	7966410258	7966410626	796511068262	796321335426	150
7966510000	7966510214	7966510671	796215907710	796443810589	150
8035500000	8035500786	8035500153	803673014345	803560385914	150
7926410000	7926410735	7926410225	792981505001	792705779324	150
7916500000	7916500623	7916500056	791438874143	791826405557	150
7956510000	7956510117	7956510570	795895843033	795671532737	150
8000510000	8000510416	8000510906	800793972207	800130626568	150
8002510000	8002510799	8002510889	800602898215	800330879203	150
8159410000	8159410858	8159410423	815420223884	815098711250	150
8121510000	8121510869	8121510103	812226702766	812716044474	150
8095510000	8095510277	8095510877	809132518756	809136947285	150
8134510000	8134510405	8134510221	813092166151	813904007794	150
8153510000	8153510429	8153510413	815493600226	815391968610	150
8102610000	8102610923	8102610963	810215922646	810112010579	150
8131610000	8131610096	8131610271	813642514609	813252000555	150
8092510000	8092510597	8092510793	809806561094	809661515262	150

8162510000	8162510471	8162510505	816027844963	816121946577	150
8148510000	8148510461	8148510390	814358989360	814145850970	150
8108510000	8108510005	8108510994	810409747303	810765741216	150
8110510000	8110510618	8110510013	811990093635	811258462394	150
8126500000	8126500657	8126500077	812607635511	812087320524	150
8285500000	8285500200	8285500674	828446381598	828229693112	150
8201610000	8201610576	8201610987	820837768525	820595887194	150
8179410000	8179410095	8179410622	817752541235	817068920721	150
8339510000	8339510619	8339510310	833833149478	833550065585	150
8228410000	8228410076	8228410146	822127255222	822891604601	150
8218410000	8218410916	8218410050	821513751199	821498742217	150
8234510000	8234510422	8234510231	823747892486	823940399654	150
8224510000	8224510333	8224510129	822186601972	822448091833	150
8174510000	8174510859	8174510628	817695396822	817591837130	150
8217410000	8217410778	8217410060	821967746510	821895940325	150
8202610000	8202610939	8202610972	820400036580	820861311378	150
8176510000	8176510253	8176510694	817522094195	817526571771	150
8261510000	8261510207	8261510509	826093795172	826879353951	150
8277410000	8277410533	8277410650	827984235421	827635431242	150
8195500000	8195500337	8195500773	819781030252	819668318512	150
8169410000	8169410910	8169410522	816509934215	816791623613	150
8253510000	8253510445	8253510423	825344727978	825958193070	150
8227410000	8227410009	8227410159	822849853823	822754646939	150
8418410000	8418410950	8418410069	841709112881	841881963274	150
8309410000	8309410273	8309410947	830583897869	830044827627	150
8322510000	8322510745	8322510123	832756063943	832654375063	150
8297410000	8297410701	8297410848	829134441324	829590677854	150
8297510000	8297510850	8297510905	829381281723	829761494728	150
8340510000	8340510924	8340510330	834501260564	834660402098	150
8299510000	8299510334	8299510894	829779851749	829214591004	150
8329410000	8329410581	8329410144	832958671384	832480565470	150
8391610000	8391610249	8391610883	839726155835	839572382047	150
8307510000	8307510645	8307510017	830771735725	830830253244	150
8537510000	8537510967	8537510338	853116442539	853838843624	150
8543510000	8543510321	8543510351	854620469478	854791143641	150
8529510000	8529510476	8529510231	852524437825	852029955467	150
8467410000	8467410548	8467410572	846296716230	846310641917	150
8467510000	8467510320	8467510628	846946784461	846419140839	150
8426500000	8426500702	8426500107	842559272875	842860461997	150
8539410000	8539410692	8539410263	853227162274	853986757984	150
8487410000	8487410732	8487410769	848513402073	848619343690	150
8487510000	8487510515	8487510826	848174732469	848426277284	150
8518410000	8518410963	8518410079	851697807378	851424976440	150
8430510000	8430510757	8430510240	843580712721	843208511933	150
8447410000	8447410367	8447410371	844205915719	844763266294	150
8447510000	8447510114	8447510429	844422858385	844941358801	150
8477410000	8477410566	8477410670	847631255194	847132184925	150

8493510000	8493510931	8493510843	849373128438	849370589701	150
8504510000	8504510120	8504510957	850987106341	850257144822	150
8490510000	8490510174	8490510833	849850550385	849918647787	150
8521510000	8521510947	8521510144	852579415636	852266304124	150
8545510000	8545510744	8545510389	854451039323	854597258038	150
8422510000	8422510765	8422510133	842322685711	842831094861	150
8531610000	8531610172	8531610307	853343934457	853580026888	150
8645510000	8645510659	8645510400	864619898413	864180053086	150
8631600000	8631600825	8631600249	863772864227	863065614381	150
8635510000	8635510585	8635510291	863398215702	863161646520	150
8570510000	8570510318	8570510647	857811590261	857750866269	150
8658510000	8658510631	8658510542	865313227461	865472156551	150
8549510000	8549510766	8549510429	854578765491	854528098587	150
8665510000	8665510918	8665510620	866195862910	866287709643	150
8557410000	8557410399	8557410481	855560951201	855386931271	150
8571610000	8571610917	8571610703	857304752537	857181289975	150
8639510000	8639510671	8639510340	863827865894	863289080331	150
8687510000	8687510748	8687510845	868310335988	868132033050	150
8714510000	8714510252	8714510080	871282162792	871803994411	150
8731610000	8731610208	8731610327	873755145860	873562995380	150
8732510000	8732510840	8732510264	873602792643	873448941380	150
8709410000	8709410341	8709410987	870394110621	870843676917	150
8748410000	8748410417	8748410395	874892132032	874580214478	150
8797510000	8797510937	8797510954	879916325605	879390195817	150
8697410000	8697410761	8697410888	869600387853	869929712602	150
8786410000	8786410483	8786410808	878992112913	878809440866	150
8688410000	8688410021	8688410777	868268270073	868710298118	150
8678510000	8678510885	8678510738	867444822923	867383776753	150
8679410000	8679410195	8679410671	867689268821	867481192765	150
8778410000	8778410859	8778410687	877511479235	877509418242	150
8753510000	8753510408	8753510470	875020145378	875291884548	150
8749410000	8749410788	8749410383	874122458055	874649895071	150
8749510000	8749510800	8749510449	874043318305	874528800615	150
8729410000	8729410546	8729410184	872135223984	872638068951	150
8897410000	8897410791	8897410908	889333939725	889771476249	150
8877510000	8877510416	8877510766	887152251084	887130550673	150
8847410000	8847410437	8847410410	884540687897	884736822214	150
8836410000	8836410872	8836410316	883444018110	883509052042	150
8881510000	8881510579	8881510768	888928022252	888439013507	150
8867410000	8867410615	8867410611	886003165973	886075828544	150
8813510000	8813510025	8813510082	881958348703	881797194020	150
8898410000	8898410188	8898410897	889497075953	889258376159	150
8858510000	8858510664	8858510563	885555145244	885786209825	150
8816500000	8816500610	8816500047	881457924176	881376107733	150
8808410000	8808410846	8808410009	880864030160	880037876705	150
8879410000	8879410052	8879410691	887243469519	887257294564	150
9028510000	9028510241	9028510183	902240858408	902725369610	150

9048410000	9048410284	9048410327	904127356607	904970220566	150
8991510000	8991510781	8991510879	899823772514	899342870013	150
9046500000	9046500872	9046500267	904362818137	904100291336	150
8928410000	8928410139	8928410216	892426813143	892650227207	150
8983510000	8983510915	8983510793	898779410904	898809784497	150
8959410000	8959410008	8959410502	895022657553	895913046256	150
9045500000	9045500949	9045500251	904359493440	904328108444	150
8970510000	8970510397	8970510687	897340549125	897504201129	150
9002610000	9002610906	9002610954	900165183001	900210348112	150
9038410000	9038410157	9038410227	903434077763	903105719786	150
9068410000	9068410582	9068410522	906873228925	906237927020	150
9099410000	9099410265	9099410808	909447618204	909636078615	150
9166510000	9166510149	9166510594	916856029079	916330248733	150
9080510000	9080510417	9080510697	908594650776	908982122366	150
9080610000	9080610276	9080610769	908707100837	908093839367	150
9085500000	9085500244	9085500651	908816190540	908242039750	150
9072510000	9072510066	9072510598	907390820268	907113993767	150
9110610000	9110610428	9110610085	911732129826	911296935517	150
9118410000	9118410898	9118410040	911349624889	911206656540	150
9159510000	9159510867	9159510490	915668803887	915006057144	150
9069410000	9069410029	9069410513	906298974200	906922538927	150
9125500000	9125500821	9125500064	912724360639	912832255152	150
9088410000	9088410913	9088410718	908050267819	908229253258	150
9062510000	9062510457	9062510496	906653683985	906876542938	150
9245510000	9245510697	9245510357	924114757675	924593720009	150
9233510000	9233510183	9233510223	923957423442	923810402445	150
9248410000	9248410322	9248410347	924365947758	924133934846	150
9221510000	9221510888	9221510115	922567395343	922599863069	150
9236500000	9236500827	9236500188	923380987524	923094934744	150
9225500000	9225500838	9225500074	922952370353	922188383343	150
9197510000	9197510833	9197510896	919536447631	919951028614	150
9286410000	9286410473	9286410760	928866116145	928830361282	150
9204510000	9204510069	9204510925	920679014883	920765113913	150
9249510000	9249510716	9249510400	924445395853	924222127987	150
9220510000	9220510720	9220510123	922137924798	922906828129	150
9235500000	9235500820	9235500173	923657945372	923853603587	150
9268510000	9268510738	9268510602	926583465893	926671557652	150
9213510000	9213510913	9213510023	921389591489	921759519101	150
9256500000	9256500058	9256500388	925736151184	925701753494	150
9243510000	9243510268	9243510322	924887433051	924655122284	150
9358410000	9358410528	9358410454	935119237121	935394956638	150
9302510000	9302510373	9302510920	930285494535	930586283365	150
9375510000	9375510048	9375510698	937853982808	937910498430	150
9304510000	9304510085	9304510936	930572411951	930988544068	150
9336500000	9336500841	9336500198	933755776690	933446257215	150
9306510000	9306510417	9306510009	930493176192	930124292384	150
9419510000	9419510361	9419510122	941627279035	941810741004	150

9408510000	9408510958	9408510025	940699872172	940855725824	150
9380610000	9380610323	9380610799	938269193601	938827053570	150
9352510000	9352510324	9352510425	935939665020	935412905666	150
9424510000	9424510369	9424510150	942866546585	942367501768	150
9381610000	9381610078	9381610784	938334184597	938186104549	150
9384510000	9384510936	9384510750	938115355140	938820932092	150
9399410000	9399410319	9399410837	939587877459	939535585882	150
9414510000	9414510202	9414510049	941096824475	941004688558	150
9373500000	9373500753	9373500606	937178282395	937446556832	150
9307410000	9307410638	9307410970	930858208007	930827494705	150
9364510000	9364510721	9364510550	936617539818	936895517105	150
9518510000	9518510144	9518510134	951237996052	951662133522	150
9476410000	9476410345	9476410678	947608247406	947500094956	150
9513510000	9513510969	9513510054	951655150830	951160643111	150
9499510000	9499510270	9499510915	949220739062	949904643539	150
9517410000	9517410824	9517410091	951244888454	951701515080	150
9503510000	9503510777	9503510951	950191063997	950838690290	150
9461610000	9461610203	9461610595	946818818668	946029871007	150
9468410000	9468410659	9468410560	946166779605	946496315085	150
9566510000	9566510221	8566510633	956546624517	956466805657	150
9676510000	9676510337	9676510746	967517397937	967927109815	150
9559410000	9559410935	9559410464	955940450360	955899927263	150
9560610000	9560610109	9560610618	956804463993	956902261562	150
9619410000	9619410456	9619410076	961562823084	961412759158	150
9609410000	9609410326	9609410978	960602265290	960556150817	150
9595500000	9595500404	9595500816	959719113418	959254589304	150
9679410000	9679410197	9679410672	967430213172	967691628465	150
9561610000	9561610740	9561610605	956792454309	956197348819	150
9643510000	9643510340	9643510363	964546016891	964077286794	150
9616500000	9616500639	9616500028	961724969006	961114377883	150
9604510000	9604510137	9604510968	960884337261	960654728773	150
9563510000	9563510554	9563510551	956590128818	956804690385	150
9659410000	9659410955	9659410473	965812405710	965914654893	150
9614510000	9614510235	9614510071	961483427252	961435548767	150
9592510000	9592510690	9592510846	959306569773	959192199589	150
9636410000	9636410839	9636410297	963820660254	963106224452	150
9636500000	9636500811	9636500228	963838523537	963133822888	150
9681510000	9681510546	9681510748	968234876768	968096003574	150
9756500000	9756500066	9756500438	975524419228	975098387291	150
9713510000	9713510007	9713510073	971203594183	971642078996	150
9849410000	9849410806	9849410394	984182381704	984221573453	150
9706410000	9706410384	9706410006	970260106416	970707531386	150
9806410000	9806410401	9806410017	980379931424	980833710465	150
9806510000	9806510506	9806510060	980402974754	980883509668	150
9785500000	9785500279	9785500727	978356547933	978716027510	150
9688510000	9688510034	9688510840	968036659129	968552959383	150
9727510000	9727510957	9727510257	972813491219	972305012667	150

9762510000	9762510590	9762510568	976167010760	976386720921	150
9720510000	9720510810	9720510173	972707184541	972747471565	150
9736410000	9736410858	9736410307	973944928141	973347702002	150
9819510000	9819510429	9819510163	981840513603	981206634316	150
9888410000	9888410060	9888410799	988311158471	988684087050	150
9888510000	9888510061	9888510860	988160635684	988841076590	150
9876410000	9876410408	9876410720	987977577794	987143116716	150
9836500000	9836500840	9836500247	983879017849	983456846644	150
9864510000	9864510811	9864510601	986310313506	986231047683	150
9820610000	9820610565	9820610254	982804834559	982087216707	150
9832510000	9832510862	9832510274	983279224654	983748720063	150
9835510000	9835510620	9835510314	983910874881	983785685780	150
9924510000	9924510374	9924510201	992575042093	992630612831	150
9927510000	9927510992	9927510278	992459212660	992033586357	150
9858410000	9858410548	9858410503	985223317950	985825128254	150
9950510000	9950510047	9950510491	995661902896	995253260141	150
9997510000	9997510976	9997510975	999609568256	999850230349	150
9960610000	9960610170	9960610658	996817508112	996232492496	150
1875336811	1875336269	1129910000	187072878445	187206097654	150
5354647273	5354647551	7118410038	535237587708	535147537944	150
8801716781	8801716311	9510510054	880028608962	880561326678	150
8302720957	8302720386	2171510592	830131818739	830037056748	150
5342577954	5342577648	7896410917	534223295662	534757669377	150
9490909798	9490909924	7619910000	949162671248	949334792165	150
4681427780	4681427267	4413510039	468477186891	468616916669	150
4109220903	4109220472	9241510311	410441346168	410408939272	150
2588979099	2588979626	1331610284	258017292830	258385481956	150
2228963763	2228963199	1379510699	222637107982	222822122657	150
8058065423	8058065902	228510194	805882861092	805048166821	150
3043228004	3043228741	2886510860	304433117719	304932855744	150
3452509666	3452509456	8360610597	345319982747	345471537677	150
6774914563	6774914074	5010510000	677246872901	677157756399	150
2188886171	2188886251	5038510278	218108712180	218633660151	150
6176560985	6176560398	1459410446	617691453151	617948195006	150
8081118587	8081118121	3471610688	808435646739	808129658230	150
5123185307	5123185497	6145510343	512131909450	512720030012	150
241494042	241494562	6746500335	24321210509	24373480001	150
8886129383	8886129416	9268410541	888874637252	888490545908	150
5650757018	5650757627	3495500800	565638712849	565194289410	150
7471637814	7471637296	5869510654	747310609788	747265800497	150
5604540380	5604540332	4357410457	560536086644	560187455697	150
6405586272	6405586261	9230510223	640219777719	640615065096	150
1083891348	1083891329	4709910000	108887116713	108404965105	150
64072665	64072213	9698910000	6845403790	6652522765	150
3554927675	3554927744	546510424	355575962850	355960782908	150
6402503600	6402503785	5246500284	640207454393	640180064924	150
3047181379	3047181715	2848510456	304797423575	304206017915	150

6711757141	6711757132	6541510337	671275251601	671282787727	150
2262965109	2262965249	7526510231	226795901635	226599235341	150
6797472436	6797472881	7371610682	679316527740	679980226597	150
9606790034	9606790780	4211610081	960992788524	960502295203	150
8745470735	8745470437	5795500833	874383741870	874755231163	150
6051724678	6051724355	2866401658	605527595121	605629493373	150
766470926	766470042	6826500145	76651865000	76896157726	150
7118410000	7118410654	679510728	711605514111	711011458578	150
9212167685	9212167018	9978510769	921768805430	921112941330	150
7598612947	7598612764	1919910000	759201659857	759066001138	150
6261893545	6261893957	6238510299	626439656533	626926356791	150
8121779812	8121779764	216500979	812773295489	812267129096	150
6069828130	6069828599	2558510526	606008441162	606104126226	150
974684683	974684246	6445500288	97441613068	97666177194	150
5052634177	5052634247	4277510702	505027504564	505256391669	150
1433570742	1433570239	698410869	143368216865	143798445076	150
3742561212	3742561020	1798410880	374192691698	374000476714	150
2046410000	2046410992	2046410330	204602151409	204163548461	150
2698310221	2698310076	9534510261	269129527598	269392269769	150
9939351783	9939351505	1173500578	993971739845	993859816390	150
6135161732	6135161544	9009510980	613463037598	613376912665	150
8132346632	8132346614	1388410740	813216240055	813273298214	150
1434905399	1434905757	4678410674	143068319582	143875533043	150
9766087515	9766087844	809410989	976647361682	976537408350	150
9508076760	9508076915	2259410427	950014735331	950328739574	150
5172820910	5172820977	9669510638	517201312905	517471899632	150
8755341100	8755341382	4626500123	875011701344	875168759641	150
6916432063	6916432609	5434510248	691045161179	691016486933	150
2786854709	2786854251	8366510612	278633224276	278983196328	150
8294381324	8294381866	7146500275	829216840873	829443210955	150
2945636298	2945636014	636410288	294932533234	294902967220	150
7150367029	7150367561	9528410176	715762179330	715240562996	150
3378157923	3378157952	7856510560	337165094039	337618194619	150
3771694888	3771694633	8787510855	377649230433	377232146508	150
3645829046	3645829306	8740510370	364273041856	364958790801	150
5272047182	5272047259	2918510166	527392558171	527746851603	150
9079239523	9079239572	1086410732	907755877493	907171431215	150
5678365775	5678365770	4507410985	567197257661	567134588509	150
4922140549	4922140185	8916410126	492731274645	492890248332	150
4487510000	4487510274	8597510934	448934540236	448428790830	150
5860432019	5860432130	685500705	586165592792	586968158614	150
7059410000	7059410538	7059410412	705993020770	705276161670	150
6492577798	6492577773	7677410688	649941796289	649563757936	150
5105176345	5105176812	8620510162	510414759790	510961806177	150
9807727787	9807727000	3700510968	980056018176	980861717481	150
9327273927	9327273131	8782994765	932950677755	932964265763	150
1020510000	1020510120	1020510096	102281265066	102730797815	150

2385798531	2385798576	7347410361	238121244640	238720989589	150
1466451648	1466451365	9143510313	146477264959	146523512966	150
5879961495	5879961804	8885510857	587543006991	587387748869	150
8056533842	8056533679	2769510641	805578923520	805563477324	150
2809915225	2809915428	1928510264	280708216478	280386533704	150
957826038	957826596	9149910000	95569076253	95310364664	150
5836877291	5836877102	7465510597	583163439684	583019857823	150
8042967168	8042967731	9789510847	804103600172	804880855256	150
3589802920	3589802869	9839910000	358746021842	358899511009	150
9734299691	9734299267	3628510237	973832117729	973259774695	150
6675613578	6675613475	4073910000	667786629298	667611008193	150
1256500000	1256500872	1256500380	125093575704	125893768543	150
8487625852	8487625450	1229510195	848519297516	848074729753	150
6508725199	6508725889	6001610965	650867385136	650138428032	150
3734999619	3734999774	6171610661	373237293545	373799725239	150
5894573430	5894573593	4167510594	589524482617	589001501904	150
4457410000	4457410462	4457410467	445708830320	445251511646	150
3315546040	3315546273	5904510994	331455390097	331499485320	150
1503940725	1503940198	2087510780	150626568392	150383593263	150
8583005984	8583005141	7448510420	858029029791	858953121227	150
6989052634	6989052987	9648510442	698714083278	698947420266	150
9523570103	9523570398	48410318	952986806555	952453206140	150
5802418592	5802418060	4063510497	580358258580	580371095574	150
1880070538	1880070223	224510121	188386621281	188810566628	150
6265439458	6265439645	1586510829	626742927132	626017951031	150
3360416248	3360416582	8629410174	336049177967	336943827007	150
7980240710	7980240437	8535500201	798814409257	798775605699	150
2618299630	2618299907	842510366	261403651221	261710479206	150
7674603514	7674603349	8789410780	767673196086	767171688708	150
2727048719	2727048901	8647510450	272756038688	272864161229	150
6026294118	6026294916	7809410995	602910734826	602417329389	150
560473710	560473435	7469410551	56216458879	56350041819	150
6684625876	6684625210	3407410974	668546572975	668998906666	150
7400359661	7400359139	3800610049	740982652691	740686304219	150
3381930581	3381930838	477510718	338537793707	338828946397	150
9172133151	9172133433	5127510193	917054545143	917369410898	150
7769460792	7769460920	2811510068	776783769091	776666673421	150
2361840657	2361840989	7692510854	236898180759	236967318414	150
7723442566	7723442742	5912510080	772547726302	772562685620	150
6136700264	6136700257	8997410918	613633006312	613021264880	150
9173318476	9173318008	4420510138	917653769464	917016483886	150
4958510000	4958510391	4958510568	495404835973	495531376952	150
7806692201	7806692811	6215510041	780140815996	780880339437	150
3890528455	3890528565	5026500064	389666080902	389214966171	150
8586676033	8586676721	5520510149	858104070543	858004815576	150
4515611476	4515611341	2734510275	451814446521	451149920941	150
8586410000	8586410432	8586410788	858088743053	858752374867	150

4926421580	4926421184	1708410992	492077097778	492478732374	150
6342397019	6342397146	6716410103	634559515117	634388857322	150
8293064254	8293064144	5426410172	829120115293	829170063314	150
3639495978	3639495453	8380510726	363254256233	363181285958	150
2396511559	2396511464	2709410981	239005489302	239112418201	150
8396395654	8396395176	6679510734	839624887016	839609090828	150
6865872377	6865872351	1118510086	686540980436	686998730125	150
3270124631	3270124639	2408410963	327328333699	327621739531	150
7008684484	7008684043	5757410498	700690351534	700028047323	150
2826713003	2826713841	4607510043	282025141921	282436896424	150
5026995080	5026995805	4381610779	502680083797	502352886442	150
9931079919	9931079335	345500272	993548977422	993004108236	150
4633019421	4633019918	7491512072	463664073528	463966674964	150
7139868534	7139868544	5615500007	713789594592	713820406817	150
1109873020	1109873027	2597410872	110034760952	110067788558	150
2843905199	2843905467	177410632	284704856923	284998008756	150
2481386219	2481386909	9788410789	248202829399	248168647609	150
9669401443	9669401442	815500024	966670617135	966927010072	150
8566559720	8566559971	2023510096	856299665383	856655151562	150
1468314114	1468314487	6915500041	146308159193	146532695909	150
1631254931	1631254285	8568410569	163432670439	163629390241	150
8577966475	8577966948	2359410437	857526498161	857950914488	150
6719624438	6719624620	1771510651	671934971679	671260656989	150
2789858472	2789858159	5667510644	278249907823	278217112677	150
7518063017	7518063350	2149410317	751388344391	751380783833	150
2152510000	2152510319	2152510398	215149426396	215945208849	150
4508785851	4508785230	5216500984	450461029647	450563662443	150
1740850122	1740850815	5206500883	174467712785	174391529379	150
1825432810	1825432262	8369410542	182298716710	182116078759	150
7966477277	7966477502	3295500779	796521972050	796129347798	150
9540425640	9540425800	2439410247	954850155151	954094337922	150
720788218	720788109	119910000	72365180063	72165166981	150
1230456975	1230456912	8908510073	123786622231	123373172909	150
1924486479	1924486938	7007510985	192805844890	192421467119	150
5684710606	5684710271	9484510760	568586379806	568746178483	150
2606410000	2606410577	2606410989	260909958974	260940216960	150
7281158549	7281158698	7927410230	728790612494	728439189182	150
1756389462	1756389370	435510264	175703041075	175401638167	150
4206133529	4206133170	4869410588	420680837861	420044592146	150
2285256237	2285256335	9636510344	228461531545	228141599661	150
3345456772	3345456690	1961610637	334935730417	334979264859	150
2171488761	2171488403	3269510593	217750960761	217533584803	150
7651316208	7651316749	1016510072	765931430264	765810255467	150
727965109	727965985	4874510695	72734824271	72007837659	150
4553866842	4553866677	6436510321	455095611182	455127618765	150
4379222765	4379222592	4358410449	437823348682	437969030569	150
791370134	791370411	5378510705	79210539543	79684333720	150

3123899592	3123899508	3780510760	312544242600	312851145011	150
4438155008	4438155743	5776410704	443552195516	443737370145	150
7266900507	7266900096	1880510768	726893419483	726579739946	150
7228475592	7228475476	4147510396	722109385724	722441348262	150
3628326303	3628326974	4471510624	362693850509	362301454814	150
621924247	621924353	4197410835	62226867661	62739688831	150
2922510000	2922510471	2922510176	292934417525	292485589175	150
4301753534	4301753474	6937410323	430884932550	430478876987	150
2546378053	2546378051	6219410034	254464544965	254560841763	150
7257588176	7257588674	4318510109	725569899398	725329830941	150
9580186386	9580186105	9451510428	958354582905	958512941545	150
8489829547	8489829373	7305510951	848702416565	848026921598	150
9537960125	9537960713	7168510590	953385309443	953605702704	150
7391506559	7391506269	9961510579	739923258062	739585445624	150
3945445277	3945445920	4178410624	394190568029	394934279063	150
5257815639	5257815814	4937510377	525101816202	525578748135	150
6906269077	6906269809	2581610797	690099504791	690973592208	150
4976525082	4976525713	4791610919	497349509553	497621689019	150
2560219053	2560219230	4761610620	256109025156	256877099462	150
9026511699	9026511185	7406410975	902283861527	902409417181	150
3627610000	3627610886	7130510211	362854058259	362112682168	150
8545538415	8545538316	1077410623	854612548743	854652194048	150
8215568273	8215568879	5640510357	821006784458	821742140406	150
5387599249	5387599228	9725500124	538053228004	538782187903	150
2798376205	2798376058	5476510722	279396288522	279258228682	150
4590367715	4590367255	1398410841	459232494639	459443563149	150
2184366760	2184366307	4089410707	218880351702	218911788301	150
979262040	979262311	4099510872	97319016955	97984366610	150
5950786963	5950786940	2777410693	595652182774	595457306263	150
3134212478	3134212130	4058510478	313710916829	313991892447	150
4058510000	4058510547	8489510816	405845450854	405184062394	150
5279895948	5279895841	336410258	527989171998	527748940936	150
8001320770	8001320038	2402610986	800153375967	800441525539	150
5285758217	5285758077	6767510655	528529263462	528907524062	150
339524100	339524186	2244510329	33386730467	33273666176	150
8707762638	8707762712	1680510748	870292048241	870581006535	150
7949317293	7949317149	5648410383	794101520542	794353561428	150
8402510000	8402510003	8402510929	840805743674	840657268085	150
5687771312	5687771618	7919410104	568941139928	568196280349	150
1701117727	1701117302	29510174	170398691255	170593809481	150
2250522906	2250522572	5726410202	225121974633	225417182562	150
8776347244	8776347244	6909410004	877881489334	877266986886	150
2023956227	2023956402	835500223	202095988798	202342971887	150
4002190913	4002190627	8747410400	400069378276	400261295203	150
17871505	17871985	1847410403	1425092147	1581136377	150
3535432429	3535432110	2373510625	353311886415	353283364617	150
7473510000	7473510991	1267410544	747131772727	747312879324	150

9065215450	9065215907	7473510640	906321635421	906831294750	150
2051581668	2051581241	8469510617	205289904983	205562857207	150
7445632025	7445632115	1594510863	744839838712	744039006876	150
3762289272	3762289651	6939910000	376618479387	376890574011	150
904779400	904779545	9631610318	90489276922	90963263703	150
5639263313	5639263831	8209410937	563120032677	563449441189	150
17968589	17968140	8769410582	1525122745	1340751055	150
4458571545	4458571499	7502610001	445754958185	445892899929	150
4695086884	4695086975	1868410592	469547647981	469531767329	150
3817589078	3817589671	8947510479	381059501976	381003458283	150
7269323169	7269323565	3328510207	726000958230	726470346221	150
9731043140	9731043185	7723510172	973261455377	973165868705	150
3083663634	3083663049	4336510309	308171663976	308657265390	150
1252418636	1252418181	5006510975	125279976716	125614586150	150
8851654889	8851654690	8750510469	885554742786	885997513846	150
6888330557	6888330818	4395510904	688166818824	688082908338	150
6169694783	6169694492	3949410398	616580894422	616020589155	150
115426331	115426131	4867410607	11163453227	11407120494	150
1969462626	1969462934	3949510464	196432588190	196414887087	150
7077970190	7077970803	4056510477	707289720898	707013617976	150
8434989269	8434989303	5579410658	843223823453	843613409734	150
727610000	727610639	2588510823	72905682684	72001065183	150
7937950731	7937950966	7335500181	793834632336	793647215688	150
2003528789	2003528247	4680610824	200643279578	200442071078	150
4965865677	4965865404	7526410184	496104232207	496554238248	150
7783394796	7783394801	3727410205	778971108235	778497183537	150
8542645663	8542645294	5439410250	854662864558	854949869449	150
9779342311	9779342231	8706500936	977316797521	977917519462	150
3584875716	3584875670	5738410294	358175145278	358567160168	150
2243242666	2243242481	2368410544	224011706230	224807064400	150
9317441571	9317441864	4517510134	931395400110	931539938149	150
6127888303	6127888211	6169410520	612357282776	612082753100	150
2420568877	2420568414	5931510278	242522544566	242784194955	150
6914400870	6914400828	9349510410	691900726998	691407288291	150
6363487331	6363487600	7449410352	636360523465	636787115111	150
3507448522	3507448728	5106500874	350290606658	350662106072	150
1895364871	1895364693	4376510711	189765664016	189919011929	150
8612710483	8612710152	5151510394	861672378068	861572264727	150
7887332782	7887332735	3117410045	788656558439	788751740944	150
3994653248	3994653401	1423510136	399676044645	399639914977	150
3470595444	3470595814	6482510731	347187452591	347419088775	150
6261035748	6261035252	7433510241	626344533711	626708468534	150
8324925893	8324925476	8182510704	832146054155	832786241763	150
7457538582	7457538973	3939410298	745038843754	745184291160	150
16058323	16058665	5976510772	1553977699	1499396108	150
5924149408	5924149677	4825500129	592311095812	592753846788	150
9214444769	9214444412	1761510552	921319725169	921717618649	150

4271510000	4271510116	4271510603	427510124366	427252515507	150
6337651011	6337651961	2198510883	633122214995	633543535758	150
3647564870	3647564632	2489410744	364998815210	364582449327	150
5100519112	5100519316	71610645	510024580987	510972219866	150
7381721349	7381721196	29410107	738066473445	738326694613	150
5408462230	5408462202	3497410863	540392317221	540716984957	150
8558919078	8558919567	3418410064	855171257089	855823042196	150
311610000	311610119	311610086	31814564931	31405886155	150
4565883892	4565883045	2763910000	456266261288	456861063581	150
2954752815	2954752425	9168410531	295265078332	295150209880	150
4621656858	4621656277	2744510380	462921722774	462637780994	150
8785012539	8785012435	9315510055	878745688971	878214188709	150
5366467478	5366467441	9076410639	536979571899	536570568205	150
2639410000	2639410415	2639410267	263971798640	263453987511	150
960029792	960029759	6316500995	96172573552	96595112403	150
4466967988	4466967618	900510985	446526425312	446504354140	150
855910617	855910395	4898510955	85502157113	85412813137	150
6184807560	6184807090	1427510219	618025390259	618445108286	150
9138006190	9138006293	9726510253	913651942356	913721674038	150
3870641090	3870641020	4410510039	387564921632	387459739254	150
5892626763	5892626900	4654510475	589719830481	589161647596	150
1127456011	1127456900	3441610391	112093497515	112507736978	150
2463085906	2463085114	7139410223	246259915057	246431257847	150
6991171173	6991171656	247510402	699059474788	699474318252	150
7551006914	7551006588	9135500163	755424266451	755006167715	150
754034656	754034170	290610880	75078625406	75121376227	150
2273075581	2273075442	2357510513	227744780589	227832676030	150
7783609914	7783609376	6102510897	778786863035	778907734240	150
8759895438	8759895120	4288410733	875096540549	875900844738	150
3041754410	3041754042	6750610537	304929252450	304545816493	150
2700490432	2700490109	7972510682	270737644634	270816776471	150
9161343813	9161343112	7549410362	916079245970	916755274212	150
5423157360	5423157516	9061510489	542517409686	542546497627	150
6785986358	6785986536	2895510952	678842833614	678712626829	150
8126067700	8126067944	6831610335	812362552761	812725530487	150
1676938460	1676938839	5727410208	167192990711	167039102863	150
3827292612	3827292097	8400610014	382324069128	382674930681	150
2481584947	2481584740	1277410643	248296089873	248643222243	150
3636980459	3636980343	3978510763	363704752916	363578646386	150
5007553934	5007553165	6806500944	500975043039	500967841182	150
7255969178	7255969416	8291510808	725215524454	725624133877	150
7988784892	7988784601	5566500514	798831744054	798811995123	150
1011981351	1011981285	985500740	101157686164	101170049253	150
3850584546	3850584282	5768410586	385286731576	385189907574	150
4166115940	4166115080	5125500060	416289175024	416958346357	150
8383889219	8383889481	4876510761	838163164900	838824513014	150
979237264	979237450	9206510999	97531989947	97925768387	150

3472348084	3472348939	6294510838	347821527952	347457691498	150
4765244386	4765244778	7980610857	476480226386	476648271148	150
9690483314	9690483332	6613510060	969818253225	969177158666	150
1328238137	1328238382	4178510684	132376113511	132368266704	150
2616379200	2616379462	2424510143	261910652730	261703708762	150
2113571680	2113571503	5328410152	211746241328	211109180755	150
3325736365	3325736994	3577510731	332397405858	332165782043	150
8700107915	8700107752	9444510357	870281013020	870241256665	150
5153141460	5153141522	8394510850	515578637082	515503061723	150
3402156409	3402156322	7949510468	340297107323	340845441253	150
6669657932	6669657230	7527410188	666490336299	666218120626	150
2472030245	2472030950	7819410094	247748835806	247042751184	150
7431528861	7431528872	7149410322	743193147088	743100516486	150
3479613099	3479613249	3909410001	347589347670	347899337891	150
6395865386	6395865817	4087410725	639064509566	639370050636	150
2554627899	2554627399	7635500210	255815866275	255469099067	150
5556240662	5556240420	4235500168	555497311684	555995373809	150
461107816	461107979	987410810	46954340427	46913604492	150
9683788762	9683788781	5570610714	968109175031	968268263435	150
2484870275	2484870674	9251610475	248594841419	248903525820	150
5517593346	5517593876	919410097	551775818746	551552117619	150
5527235480	5527235146	987510867	552796245298	552422145490	150
4700165712	4700165894	227410151	470321944116	470735629315	150
8949064820	8949064131	101510894	894567607819	894772340596	150
4418803878	4418803316	6987410816	441289709775	441904217574	150
1603687221	1603687163	2707510051	160604462753	160361762778	150
3489048618	3489048254	3770510662	348749006971	348764209549	150
5367300733	5367300036	5690610924	536557519224	536669739749	150
8196359329	8196359143	8641610415	819342562113	819696251397	150
9118561750	9118561781	1079410605	911840293136	911218575767	150
6261138687	6261138105	4358510508	626831334219	626370631651	150
1901623417	1901623056	118410031	190083838256	190448551573	150
6185937891	6185937018	4755510514	618290948425	618113853997	150
3722197821	3722197175	7793510872	372364193096	372576086616	150
8202610651	8202610775	9585510828	820747407354	820026653570	150
8766672033	8766672469	2917410122	876545551061	876355775954	150
9840352274	9840352206	4269410528	984225622703	984451421088	150
6008812553	6008812302	279410624	600895140492	600217253426	150
4963471027	4963471883	3968510664	496990782149	496147781185	150
9842832612	9842832988	4219510097	984474801371	984938326490	150
4441106678	4441106318	7388410746	444733943831	444118953677	150
7917478128	7917478648	6458410461	791073253718	791253891856	150
1186893314	1186893202	689510828	118463437986	118918838790	150
6226399798	6226399289	5327510213	622892743041	622847874646	150
2457509925	2457509738	4823510179	245910836533	245234138786	150
9603325805	9603325809	3027410133	960409616661	960637605460	150
3685505684	3685505921	6596410886	368830992726	368111415362	150

901019797	901019749	6418510121	90191868044	90257411345	150
2625040240	2625040723	9291610874	262963310293	262913616491	150
2460509995	2460509821	6459410451	246292591073	246535608646	150
6983702586	6983702946	9577410680	698570332973	698208793251	150
9611084567	9611084171	57510481	961148015347	961935339635	150
5207689817	5207689939	1891510861	520877052111	520873144940	150
8091915664	8091915420	5079510673	809278067033	809074208645	150
5036505800	5036505377	969910000	503370220352	503510403029	150
6616012373	6616012395	4496410874	661637135571	661865240247	150
8796876228	8796876145	5345500277	879543110920	879221165637	150
1200030930	1200030460	632510246	120282589513	120554219007	150
6978940638	6978940449	6033510201	697215955423	697125716915	150
4582030350	4582030581	5517410087	458408032716	458502443469	150
7291910850	7291910094	8060510500	729038480944	729086452954	150
356993757	356993074	9985500751	35134648831	35571215376	150
1909468571	1909468009	382510716	190177861414	190293093476	150
8968944292	8968944893	9226410156	896651245506	896177620175	150
7665195965	7665195347	4629510237	766551627554	766788398232	150
3210018226	3210018893	1047410327	321880382678	321705712782	150
9582150864	9582150177	5875510748	958269047228	958934053581	150
2374306628	2374306201	8529410164	237695164391	237427120202	150
8590532982	8590532849	1236500180	859680687310	859758154633	150
3467489268	3467489744	7468410558	346842690509	346343841741	150
5169826463	5169826409	3478410653	516317878354	516295861822	150
6507173292	6507173105	3085500645	650983628829	650753372238	150
2426510000	2426510629	2426510215	242740810851	242450467597	150
355323211	355323987	1167410534	35048289033	35169504785	150
4326939997	4326939815	9727410212	432520147454	432499097386	150
9645848981	9645848811	228410138	964333440855	964806917614	150
6876907924	6876907509	8054510417	687189214018	687987419912	150
5167571961	5167571648	7233500201	516530556672	516572855357	150
1095580099	1095580563	8463510540	109205247106	109786140386	150
1789430255	1789430678	3177510691	178238568937	178787523082	150
2128961053	2128961226	3871610728	212887221472	212647933811	150
7340969389	7340969001	5557410478	734447845398	734670145595	150
4428020784	4428020040	535500193	442159804757	442807934294	150
7105958982	7105958229	8390610898	710361597430	710274370819	150
2686043366	2686043416	3549410358	268832102388	268166297008	150
8406305483	8406305010	1445500283	840058912229	840507633780	150
3474317658	3474317202	3883510777	347947015314	347310975764	150
9721546662	9721546055	1727510249	972600603319	972857246084	150
3103066205	3103066473	2129711369	310169670077	310750633296	150
1254606897	1254606084	539510322	125539519371	125861205815	150
837285563	837285921	2955510534	83893282381	83955927919	150
8824686291	8824686316	3982510778	882885761799	882394368021	150
2853207581	2853207983	6881610831	285439041183	285575006270	150
138390290	138390245	5738510348	13688156567	13042039465	150

8109486712	8109486623	2667410586	810611070016	810304673926	150
2014069564	2014069355	6893510882	201657655595	201053143853	150
4343188805	4343188883	5116410043	434995953492	434778497803	150
5287368712	5287368588	9787410799	528348507995	528393371654	150
7718542976	7718542182	3379410637	771088727522	771414025724	150
596912131	596912679	6528410173	59350615941	59691961358	150
606653839	606653583	8817410118	60658652451	60416375200	150
3672202556	3672202589	8659510538	367803560530	367846855119	150
8944767079	8944767786	7135510241	894917117960	894949578466	150
9436018020	9436018755	2385810848	943132405444	943458896300	150
4970993333	4970993502	3327410164	497468059235	497253353484	150
9231010030	9231010315	2449410347	923173668948	923890865316	150
2145656424	2145656858	7598410866	214565191612	214295102197	150
2387998316	2387998875	4070610663	238449243922	238357400049	150
3790077792	3790077298	4101610973	379151693417	379890323671	150
5772727149	5772727672	8926500157	577852415084	577210153518	150
6039218534	6039218392	6537410286	603936878885	603498062752	150
18311356	18311505	4780610834	1308279328	1039956455	150
5717666997	5717666756	110610076	571809369230	571883549636	150
7268303348	7268303681	9028410127	726292411901	726551090801	150
9710889237	9710889034	7846500346	971130691689	971682720352	150
4374558931	4374558605	951510470	437757049743	437213602710	150
2591276184	2591276114	9708410000	259568484937	259610274368	150
6783025132	6783025129	6287510804	678620406856	678818569564	150
8398221665	8398141869	5218410047	839144788941	839453826909	150
4291664035	4296400043	4679910000	429191171164	429049323605	150
7194122753	7190991178	950510481	719984043395	719283121235	150
3413144161	3413144581	8894510900	341075148404	341115410627	150
2321132758	2321132487	9157410442	232038963827	232883191596	150
7296150747	7296150863	3446410371	729560259039	729022809426	150
7801893180	7807331467	5927410228	780910433094	780202336166	150
5991539734	5990084294	3369410537	599094614604	599888183311	150
4487031267	4487031772	7909510069	448218602101	448578811461	150
8993308382	8993308597	3081510683	899546401120	899606700360	150
1936104503	1933155744	6923510191	193865239397	193383628649	150
5464338145	5463811782	5187410736	546902718438	546453206737	150
3778973022	3778647967	6690510851	377598344859	377033095663	150
8497631597	8498284303	5155510451	849815263174	849464478193	150
9383699130	9388288701	1738510343	938665079576	938993696742	150
3364515638	3366343301	5815500030	336293155460	336390063302	150
6945374978	6941034168	4229910000	694635295735	694188185954	150
2022945130	2027225393	3783510767	202571402730	202739628573	150
9778159845	9779559264	615510078	977490712925	977989494016	150
6687155968	6680764453	5064510516	668697885731	668264600792	150
3860500316	3865408639	6505510970	386514345963	386514834678	150
5780215438	5787826527	1259910000	578880535817	578700218216	150
9204127469	9209921559	9439410254	920009040177	920631830847	150

7499211063	7497602240	279510688	749779843870	749613570000	150
700686599	708629864	8828410206	70664259598	70560706730	150
6762950280	6766004994	5047510387	676755606457	676714620232	150
4937572902	4930585464	6036410234	493311252927	493295926004	150
3266756797	3268861776	1718410091	326245869959	326412660020	150
4458134393	4454489473	818510155	445589622445	445566846902	150
6359495754	6353345205	2157510493	635199387892	635240433682	150
6474285568	6471726001	3611610119	647125045491	647713822934	150
9590958071	9595331016	953510483	959362384056	959649666213	150
1199423839	1198354505	7856500446	119595894690	119206242576	150
305330259	300416237	830510272	30536890167	30931115391	150
2521102638	2520707736	4967510672	252358166015	252897674244	150
6512200606	6519615583	7701542012	651348220400	651575411228	150
2341462163	2347433916	1460510533	234245142123	234523581409	150
7676080961	7677295278	9890510874	767603227726	767554487376	150
4741918270	4742358275	2161610558	474523304506	474071148319	150
7990181748	7995221022	2195500766	799834457382	799513044976	150
2259324010	2255470712	588410759	225437023043	225108464324	150
15385825	11633996	9499410847	1995276478	1805527352	150
294521852	297055348	9808410010	29187972309	29086759913	150
4978412630	4978477092	2318410054	497078674731	497491418547	150
5393912911	5399367113	6921510182	539920020862	539685289263	150
9269645987	9269710746	6706410003	926009960100	926224215525	150
9373601049	9377977780	708510046	937366009180	937769060245	150
4125373326	4120557021	6151610463	412520294733	412313022036	150
1230116283	1230640016	6349410341	123311745111	123943206971	150
1806503225	1803111621	6452510432	180517061592	180189169846	150
5569508844	5566796474	3614510065	556679398173	556580089277	150
9117778969	9113532484	9673510662	911869507203	911332505139	150
2400583150	2409152226	5208410946	240205821849	240301197043	150
5303147999	5303946646	1559410456	530382790026	530510584011	150
2924599853	2920290252	6547510438	292810927872	292980397044	150
8879163277	8876950471	8319410046	887557302168	887867362904	150
1041939392	1048864857	3454510454	104717799377	104908791661	150
583837331	584817856	688410769	58275332908	58522269856	150
9235761502	9239471056	8460610607	923473755276	923166379721	150
6472119247	6474870904	4779410677	647897048831	647224075633	150
6440637861	6446910090	3116510084	644984390224	644624744783	150
7172518877	7170933524	8247410353	717820691253	717471856736	150
1174123650	1176381003	8967410620	117875361382	117415022149	150
9577747001	9571822786	1018410022	957838125621	957564561643	150
9546809030	9546904734	3096510881	954221506382	954407677007	150
5761959754	5767999874	3722510157	576206006267	576075115486	150
1714856381	1713589975	907799912	171598055848	171418187792	150
7610778484	7615168061	5548510428	761481168758	761378426166	150
103871756	108018854	6261610572	10471171897	10419005876	150
1231512001	1230303697	5398410845	123092356768	123582923371	150

48510000	48510427	48510372	4339359887	4177268093	150
48510000	48510427	48510372	4339359887	4177268093	150
33500000	33500233	33500174	3710482208	3818939504	150
33500000	33500233	33500174	3710482208	3818939504	150
5510000	5510073	5510911	292111316	796914165	150
5510000	5510073	5510911	292111316	796914165	150
19410000	19410332	19410008	1085128551	1623383823	150
19410000	19410332	19410008	1085128551	1623383823	150
56500000	56500015	56500359	5916247404	5497858713	150
56500000	56500015	56500359	5916247404	5497858713	150
11610000	11610694	11610058	1804484710	1103664567	150
11610000	11610694	11610058	1804484710	1103664567	150
46500000	46500855	46500258	4888517353	4924263079	150
46500000	46500855	46500258	4888517353	4924263079	150
28510000	28510219	28510174	2729161387	2376526319	150
28510000	28510219	28510174	2729161387	2376526319	150
10610000	10610499	10610066	1022302657	1116033079	150
10610000	10610499	10610066	1022302657	1116033079	150
610000	610349	610966	991355831	419116135	150
610000	610349	610966	991355831	419116135	150
39510000	39510549	39510274	3099164946	3854289087	150
39510000	39510549	39510274	3099164946	3854289087	150
108410000	108410829	108410930	10128179710	10634339412	150
108410000	108410829	108410930	10128179710	10634339412	150
109410000	109410219	109410919	10799613832	10134614617	150
109410000	109410219	109410919	10799613832	10134614617	150
229410000	229410547	229410127	22519305623	22211104555	150
229410000	229410547	229410127	22519305623	22211104555	150
207410000	207410696	207410951	20683194969	20013555948	150
207410000	207410696	207410951	20683194969	20013555948	150
190610000	190610443	190610870	19890978029	19910124305	150
190610000	190610443	190610870	19890978029	19910124305	150
232510000	232510893	232510205	23332221038	23058887314	150
232510000	232510893	232510205	23332221038	23058887314	150
198410000	198410096	198410820	19269280331	19301670916	150
198410000	198410096	198410820	19269280331	19301670916	150
129410000	129410527	129410117	12164268556	12477671340	150
129410000	129410527	129410117	12164268556	12477671340	150
149410000	149410785	149410315	14094607004	14327507732	150
149410000	149410785	149410315	14094607004	14327507732	150
131510000	131510051	9031510194	13734282741	13561773107	150
131510000	131510051	9031510194	13734282741	13561773107	150
147410000	147410275	147410336	14977931929	14572459441	150
147410000	147410275	147410336	14977931929	14572459441	150
351510000	351510024	351510409	35692106185	35310354731	150
351510000	351510024	351510409	35692106185	35310354731	150
358410000	358410510	358410445	35027928143	35604286692	150

358410000	358410510	358410445	35027928143	35604286692	150
325510000	325510327	325510149	32310660272	32258567886	150
325510000	325510327	325510149	32310660272	32258567886	150
349410000	349410824	349410335	34780375691	34563704525	150
349410000	349410824	349410335	34780375691	34563704525	150
356510000	356510001	356510501	35737058386	35853557931	150
356510000	356510001	356510501	35737058386	35853557931	150
321610000	321610853	321610185	32021885360	32107692875	150
321610000	321610853	321610185	32021885360	32107692875	150
288410000	288410931	288410729	28326797239	28066132377	150
288410000	288410931	288410729	28326797239	28066132377	150
291610000	291610218	291610865	29715136212	29605685286	150
291610000	291610218	291610865	29715136212	29605685286	150
267510000	267510273	267510600	26910881216	26195059749	150
267510000	267510273	267510600	26910881216	26195059749	150
285500000	285500258	285500664	28747552277	28759379082	150
285500000	285500258	285500664	28747552277	28759379082	150
278410000	278410780	278410630	27566929223	27909203524	150
278410000	278410780	278410630	27566929223	27909203524	150
270510000	270510246	270510609	27368855113	27808709284	150
270510000	270510246	270510609	27368855113	27808709284	150
249410000	249410805	249410325	24421962747	24984556419	150
249410000	249410805	249410325	24421962747	24984556419	150
437410000	437410239	437410270	43596430669	43280546639	150
437410000	437410239	437410270	43596430669	43280546639	150
436410000	436410800	436410268	43756048916	43653184554	150
436410000	436410800	436410268	43756048916	43653184554	150
453510000	453510467	453510435	45828576167	45767484453	150
453510000	453510467	453510435	45828576167	45767484453	150
479510000	479510118	479510708	47168264072	47501672431	150
479510000	479510118	479510708	47168264072	47501672431	150
443510000	443510287	443510333	44352086555	44749203664	150
443510000	443510287	443510333	44352086555	44749203664	150
459510000	459510902	459510511	45969138012	45517032766	150
459510000	459510902	459510511	45969138012	45517032766	150
396510000	396510555	396510908	39094406750	39093713837	150
396510000	396510555	396510908	39094406750	39093713837	150
416510000	416510596	416510110	41607629156	41173449745	150
416510000	416510596	416510110	41607629156	41173449745	150
410610000	410610463	410610106	41771066537	41374862495	150
410610000	410610463	410610106	41771066537	41374862495	150
426500000	426500688	426500099	42514235342	42199830110	150
426500000	426500688	426500099	42514235342	42199830110	150
397410000	397410703	397410850	39197558067	39668189705	150
397410000	397410703	397410850	39197558067	39668189705	150
376410000	376410316	376410659	37185645980	37781421783	150
376410000	376410316	376410659	37185645980	37781421783	150

427410000	427410027	427410171	42664298350	42397982811	150
427410000	427410027	427410171	42664298350	42397982811	150
378410000	378410796	378410640	37772777258	37159567279	150
378410000	378410796	378410640	37772777258	37159567279	150
590610000	590610515	590610909	59771586055	59813694115	150
590610000	590610515	590610909	59771586055	59813694115	150
597410000	597410733	597410870	59951036301	59114037066	150
597410000	597410733	597410870	59951036301	59114037066	150
618410000	618410966	618410081	61891435342	61862041160	150
618410000	618410966	618410081	61891435342	61862041160	150
575510000	575510067	575510710	57320274792	57549326197	150
575510000	575510067	575510710	57320274792	57549326197	150
616410000	616410513	616410088	61733271217	61085395858	150
585500000	585500233	585500695	58481107236	58267433238	150
585500000	585500233	585500695	58481107236	58267433238	150
586410000	586410505	586410781	58237254698	58256125673	150
586410000	586410505	586410781	58237254698	58256125673	150
543510000	543510305	543510343	54412683603	54664294771	150
543510000	543510305	543510343	54412683603	54664294771	150
546500000	546500936	546500309	54688298215	54455643390	150
546500000	546500936	546500309	54688298215	54455643390	150
556500000	556500016	556500409	55884720801	55166963267	150
495510000	495510335	495510910	49745146584	49060961348	150
495510000	495510335	495510910	49745146584	49060961348	150
549510000	549510752	549510421	54513881181	54616918178	150
549510000	549510752	549510421	54513881181	54616918178	150
527510000	527510905	527510228	52388108850	52545922005	150
527510000	527510905	527510228	52388108850	52545922005	150
497510000	497510871	497510916	49193539273	49155289664	150
497510000	497510871	497510916	49193539273	49155289664	150
525500000	525500872	525500095	52102552583	52352063390	150
525500000	525500872	525500095	52102552583	52352063390	150
498410000	498410108	498410850	49632753122	49166806315	150
498410000	498410108	498410850	49632753122	49166806315	150
702510000	702510429	702510952	70042343403	70678602019	150
702510000	702510429	702510952	70042343403	70678602019	150
717410000	717410837	717410102	71719833835	71199733138	150
717410000	717410837	717410102	71719833835	71199733138	150
706500000	706500485	706500928	70933429579	70446475849	150
706500000	706500485	706500928	70933429579	70446475849	150
709510000	709510285	709510042	70239156728	70147194109	150
709510000	709510285	709510042	70239156728	70147194109	150
691610000	691610290	691610905	69700872104	69471166767	150
691610000	691610290	691610905	69700872104	69471166767	150
725510000	725510391	725510191	72326633878	72997015480	150
725510000	725510391	725510191	72326633878	72997015480	150
646500000	646500954	646500319	64243342913	64054204413	150

646500000	646500954	646500319	64243342913	64054204413	150
681610000	681610115	681610805	68436716681	68916488068	150
681610000	681610115	681610805	68436716681	68916488068	150
672510000	672510161	672510646	67129123833	67470914017	150
672510000	672510161	672510646	67129123833	67470914017	150
658410000	658410568	658410475	65809905789	65998713683	150
658410000	658410568	658410475	65809905789	65998713683	150
637410000	637410285	637410290	63876255067	63946182682	150
637410000	637410285	637410290	63876255067	63946182682	150
667410000	667410567	667410584	66206050252	66596264628	150
667410000	667410567	667410584	66206050252	66596264628	150
638510000	638510421	638510332	63017869872	63696713217	150
638510000	638510421	638510332	63017869872	63696713217	150
676510000	676510323	676510737	67807467154	67769845758	150
676510000	676510323	676510737	67807467154	67769845758	150
836500000	836500826	836500238	83759356477	83695048705	150
836500000	836500826	836500238	83759356477	83695048705	150
839510000	839510691	839510351	83894779689	83872316689	150
839510000	839510691	839510351	83894779689	83872316689	150
843510000	843510359	843510374	84014186095	84650198199	150
843510000	843510359	843510374	84014186095	84650198199	150
861610000	861610775	861610626	86275665659	86126574439	150
861610000	861610775	861610626	86275665659	86126574439	150
837410000	837410198	9737410308	83012029686	83946536951	150
837410000	837410198	9737410308	83012029686	83946536951	150
852510000	852510402	852510467	85773100813	85458426808	150
852510000	852510402	852510467	85773100813	85458426808	150
757510000	757510183	757510551	75642548696	75268945859	150
757510000	757510183	757510551	75642548696	75268945859	150
749410000	749410772	749410375	74531280209	74617312534	150
749410000	749410772	749410375	74531280209	74617312534	150
750510000	750510989	750510461	75478246520	75799657876	150
750510000	750510989	750510461	75478246520	75799657876	150
770610000	770610280	770610729	77046166929	77323989294	150
770610000	770610280	770610729	77046166929	77323989294	150
795510000	795510389	795510940	79976057824	79397710839	150
795510000	795510389	795510940	79976057824	79397710839	150
758410000	758410589	758410484	75436104684	75465431585	150
758410000	758410589	758410484	75436104684	75465431585	150
771610000	771610937	771610715	77628399627	77384255895	150
771610000	771610937	771610715	77628399627	77384255895	150
778410000	778410841	778410680	77599518445	77848503440	150
778410000	778410841	778410680	77599518445	77848503440	150
958410000	958410549	958410504	95571893052	95102480423	150
958410000	958410549	958410504	95571893052	95102480423	150
943510000	943510376	943510384	94188706424	94513691214	150
943510000	943510376	943510384	94188706424	94513691214	150

967510000	967510391	967510668	96423103903	96506424824	150
967510000	967510391	967510668	96423103903	96506424824	150
935510000	935510621	935510315	93055027160	93059407276	150
935510000	935510621	935510315	93055027160	93059407276	150
960610000	960610154	960610649	96891591733	96903852798	150
960610000	960610154	960610649	96891591733	96903852798	150
912510000	912510655	912510074	91657138199	91975916230	150
912510000	912510655	912510074	91657138199	91975916230	150
915510000	915510256	915510110	91191670095	91079893646	150
915510000	915510256	915510110	91191670095	91079893646	150
918410000	918410013	918410110	91295857235	91550874336	150
918410000	918410013	918410110	91295857235	91550874336	150
890510000	890510243	890510865	89119553006	89671324018	150
890510000	890510243	890510865	89119553006	89671324018	150
924510000	924510358	924510192	92799677219	92843216946	150
924510000	924510358	924510192	92799677219	92843216946	150
1095510000	1095510263	1095510870	109441564772	109639018523	150
1095510000	1095510263	1095510870	109441564772	109639018523	150
929410000	929410566	929410196	92010766833	92488026445	150
929410000	929410566	929410196	92010766833	92488026445	150
896510000	896510646	896510958	89267411467	89146178418	150
896510000	896510646	896510958	89267411467	89146178418	150
885510000	885510223	885510849	88348616498	88488897199	150
885510000	885510223	885510849	88348616498	88488897199	150
1107410000	1107410678	1107410941	110085749118	110836909372	150
1107410000	1107410678	1107410941	110085749118	110836909372	150
1080610000	1080610260	1080610761	108858212508	108044848866	150
1080610000	1080610260	1080610761	108858212508	108044848866	150
1059410000	1059410826	1059410406	105182063197	105163903927	150
1059410000	1059410826	1059410406	105182063197	105163903927	150
1103510000	1103510784	1103510901	110746904176	110003267660	150
1103510000	1103510784	1103510901	110746904176	110003267660	150
1117510000	1117510771	1117510090	111835705609	111744316365	150
1117510000	1117510771	1117510090	111835705609	111744316365	150
1016500000	1016500532	1016500960	101623433349	101829858314	150
1016500000	1016500532	1016500960	101623433349	101829858314	150
1050510000	1050510861	1050510392	105861132644	105393699258	150
1050510000	1050510861	1050510392	105861132644	105393699258	150
1025510000	1025510275	1025510121	102729623310	102689513893	150
1025510000	1025510275	1025510121	102729623310	102689513893	150
1039410000	1039410583	1039410207	103825158866	103661117441	150
1039410000	1039410583	1039410207	103825158866	103661117441	150
1055510000	1055510720	1055510437	105177707018	105467607612	150
1055510000	1055510720	1055510437	105177707018	105467607612	150
1027510000	1027510813	1027510179	102020141962	102029454421	150
1027510000	1027510813	1027510179	102020141962	102029454421	150
1211510000	1211510569	1211510007	121148232254	121015712789	150

1211510000	1211510569	1211510007	121148232254	121015712789	150
1193510000	1193510934	1193510806	119395827711	119258896449	150
1193510000	1193510934	1193510806	119395827711	119258896449	150
1217510000	1217510790	1217510101	121792433441	121308581681	150
1217510000	1217510790	1217510101	121792433441	121308581681	150
1187410000	1187410666	1187410732	118411385427	118953907665	150
1187410000	1187410666	1187410732	118411385427	118953907665	150
1189510000	1189510151	1189510779	118859699144	118055849813	150
1189510000	1189510151	1189510779	118859699144	118055849813	150
1239510000	1239510587	1239510294	123365956472	123592033727	150
1239510000	1239510587	1239510294	123365956472	123592033727	150
1183510000	1183510770	1183510703	118012274280	118483112454	150
1183510000	1183510770	1183510703	118012274280	118483112454	150
1197510000	1197510817	1197510888	119465114875	119533630210	150
1197510000	1197510817	1197510888	119465114875	119533630210	150
1209510000	1209510200	1209510992	120615197042	120380840870	150
1209510000	1209510200	1209510992	120615197042	120380840870	150
1216410000	1216410453	1216410049	121827546411	121495750050	150
1216410000	1216410453	1216410049	121827546411	121495750050	150
1241610000	1241610284	1241610369	124224376288	124273207131	150
1241610000	1241610284	1241610369	124224376288	124273207131	150
1186410000	1186410446	1186410742	118527892349	118402869861	150
1186410000	1186410446	1186410742	118527892349	118402869861	150
1139410000	1139410599	1139410217	113662610269	113173049943	150
1139410000	1139410599	1139410217	113662610269	113173049943	150
1142510000	1142510901	1142510296	114285213984	114104556306	150
1142510000	1142510901	1142510296	114285213984	114104556306	150
1346410000	1346410942	1346410359	134350960763	134661901914	150
1346410000	1346410942	1346410359	134350960763	134661901914	150
1126500000	1126500645	1126500070	112562994689	112691858562	150
1126500000	1126500645	1126500070	112562994689	112691858562	150
1159410000	1159410844	1159410416	115464610644	115371635780	150
1159410000	1159410844	1159410416	115464610644	115371635780	150
1146410000	1146410911	1146410339	114730952564	114660745525	150
1146410000	1146410911	1146410339	114730952564	114660745525	150
1127510000	1127510833	1127510188	112773621282	112856753625	150
1127510000	1127510833	1127510188	112773621282	112856753625	150
1135510000	1135510488	1135510235	113262450541	113188572863	150
1135510000	1135510488	1135510235	113262450541	113188572863	150
1309410000	1309410258	1309410940	130915844855	130191096650	150
1309410000	1309410258	1309410940	130915844855	130191096650	150
1347510000	1347510088	1347510413	134558194546	134476243730	150
1347510000	1347510088	1347510413	134558194546	134476243730	150
1326510000	1326510667	1326510203	132480627371	132071368747	150
1326510000	1326510667	1326510203	132480627371	132071368747	150
1335510000	1335510526	1335510256	133343116249	133969551591	150
1335510000	1335510526	1335510256	133343116249	133969551591	150

1332510000	1332510913	1332510216	133202273803	133253146579	150
1332510000	1332510913	1332510216	133202273803	133253146579	150
1270610000	1270610204	1270610680	127512572673	127057667581	150
1270610000	1270610204	1270610680	127512572673	127057667581	150
1298410000	1298410115	1298410831	129416176303	129113411658	150
1298410000	1298410115	1298410831	129416176303	129113411658	150
1283510000	1283510786	1283510713	128331523031	128696476847	150
1283510000	1283510786	1283510713	128331523031	128696476847	150
1263510000	1263510482	1263510513	126702579067	126305614851	150
1263510000	1263510482	1263510513	126702579067	126305614851	150
1254510000	1254510645	1254510431	125547868974	125424558878	150
1254510000	1254510645	1254510431	125547868974	125424558878	150
1435500000	1435500837	1435500184	143362424993	143474803303	150
1435500000	1435500837	1435500184	143362424993	143474803303	150
1487410000	1487410717	1487410762	148534125293	148046945621	150
1487410000	1487410717	1487410762	148534125293	148046945621	150
1441510000	1441510747	1441510322	144911164964	144910766530	150
1441510000	1441510747	1441510322	144911164964	144910766530	150
1438410000	1438410208	1438410259	143582615524	143826104656	150
1438410000	1438410208	1438410259	143582615524	143826104656	150
1476410000	1476410332	1476410670	147099891602	147364114550	150
1476410000	1476410332	1476410670	147099891602	147364114550	150
1485500000	1485500218	1485500687	148594943352	148934269255	150
1485500000	1485500218	1485500687	148594943352	148934269255	150
1446500000	1446500922	1446500300	144542204130	144114268136	150
1446500000	1446500922	1446500300	144542204130	144114268136	150
1446510000	1446510913	1446510415	144078508445	144022719495	150
1446510000	1446510913	1446510415	144078508445	144022719495	150
1405510000	1405510140	1405510955	140540784324	140878718325	150
1405510000	1405510140	1405510955	140540784324	140878718325	150
1387410000	1387410699	1387410752	138354143241	138303789500	150
1425500000	1425500858	1425500086	142408304806	142770753908	150
1425500000	1425500858	1425500086	142408304806	142770753908	150
1591510000	1591510696	1591510831	159951709078	159755859121	150
1591510000	1591510696	1591510831	159951709078	159755859121	150
1606500000	1606500472	1606500919	160465596052	160227744742	150
1606500000	1606500472	1606500919	160465596052	160227744742	150
1608510000	1608510973	1608510037	160909069457	160298763778	150
1608510000	1608510973	1608510037	160909069457	160298763778	150
1595500000	1595500391	1595500808	159649402462	159305673831	150
1595500000	1595500391	1595500808	159649402462	159305673831	150
1616500000	1616500627	1616500020	161948808693	161600868142	150
1616500000	1616500627	1616500020	161948808693	161600868142	150
1579410000	1579410164	1579410654	157684174933	157998298599	150
1579410000	1579410164	1579410654	157684174933	157998298599	150
1596510000	1596510594	1596510929	159141395047	159557608398	150
1596510000	1596510594	1596510929	159141395047	159557608398	150

1569410000	1569410972	1569410555	156829992850	156608105654	150
1569410000	1569410972	1569410555	156829992850	156608105654	150
1496510000	1496510575	1496510919	149586299942	149860574317	150
1496510000	1496510575	1496510919	149586299942	149860574317	150
1509410000	1509410295	1509410960	150385540662	150074398476	150
1509410000	1509410295	1509410960	150385540662	150074398476	150
1510610000	1510610482	1510610117	151266956366	151243104209	150
1510610000	1510610482	1510610117	151266956366	151243104209	150
1537510000	1537510070	1537510330	153762771086	153845751469	150
1537510000	1537510070	1537510330	153762771086	153845751469	150
1699510000	1699510287	1699510927	169052025487	169713713461	150
1699510000	1699510287	1699510927	169052025487	169713713461	150
1715500000	1715500740	1715500014	171276228338	171568578761	150
1715500000	1715500740	1715500014	171276228338	171568578761	150
1730510000	1730510798	1730510263	173457434164	173910145924	150
1730510000	1730510798	1730510263	173457434164	173910145924	150
1716510000	1716510564	1716510143	171314547059	171043010340	150
1716510000	1716510564	1716510143	171314547059	171043010340	150
1703510000	1703510799	1703510963	170422427753	170803569328	150
1703510000	1703510799	1703510963	170422427753	170803569328	150
1725500000	1725500906	1725500116	172081621999	172612207233	150
1725500000	1725500906	1725500116	172081621999	172612207233	150
1698510000	1698510101	1698510932	169863961879	169494212221	150
1698510000	1698510101	1698510932	169863961879	169494212221	150
1710510000	1710510612	1710510066	171767719029	171257394680	150
1710510000	1710510612	1710510066	171767719029	171257394680	150
1728410000	1728410093	1728410188	172175200006	172443993789	150
1728410000	1728410093	1728410188	172175200006	172443993789	150
1693510000	1693510954	1693510855	169473351936	169897505677	150
1693510000	1693510954	1693510855	169473351936	169897505677	150
1638410000	1638410245	1638410280	163767990078	163382769180	150
1638410000	1638410245	1638410280	163767990078	163382769180	150
1622510000	1622510789	1622510146	162557891368	162460257680	150
1622510000	1622510789	1622510146	162557891368	162460257680	150
1671510000	1671510317	1671510641	167945475504	167642636447	150
1671510000	1671510317	1671510641	167945475504	167642636447	150
1662510000	1662510553	1662510548	166208905582	166600476512	150
1662510000	1662510553	1662510548	166208905582	166600476512	150
1647410000	1647410389	1647410383	164800140023	164934098595	150
1647410000	1647410389	1647410383	164800140023	164934098595	150
1858410000	1858410532	1858410495	185205102438	185712441242	150
1858410000	1858410532	1858410495	185205102438	185712441242	150
1863500000	1863500544	1863500548	186140325937	186669377814	150
1863500000	1863500544	1863500548	186140325937	186669377814	150
1803510000	1803510818	1803510973	180142564484	180103973119	150
1803510000	1803510818	1803510973	180142564484	180103973119	150
1786410000	1786410470	1786410800	178800008235	178430642718	150

1786410000	1786410470	1786410800	178800008235	178430642718	150
1802510000	1802510453	1802510963	180654682108	180876560384	150
1802510000	1802510453	1802510963	180654682108	180876560384	150
1756500000	1756500051	1756500430	175265289550	175554231563	150
1756500000	1756500051	1756500430	175265289550	175554231563	150
1772510000	1772510183	1772510657	177329741224	177957120772	150
1772510000	1772510183	1772510657	177329741224	177957120772	150
1786510000	1786510449	1786510849	178388537291	178504537893	150
1786510000	1786510449	1786510849	178388537291	178504537893	150
1773500000	1773500804	1773500636	177585797353	177371944012	150
1773500000	1773500804	1773500636	177585797353	177371944012	150
1968410000	1968410731	1968410602	196925605944	196451163394	150
1968410000	1968410731	1968410602	196925605944	196451163394	150
1914600000	1914600132	1914600056	191256752619	191206414799	150
1914600000	1914600132	1914600056	191256752619	191206414799	150
1887410000	1887410786	1887410801	188050513893	188546681479	150
1887410000	1887410786	1887410801	188050513893	188546681479	150
1873510000	1873510719	1873510673	187808247383	187473083140	150
1873510000	1873510719	1873510673	187808247383	187473083140	150
1889510000	1889510262	1889510849	188982594725	188135931908	150
1889510000	1889510262	1889510849	188982594725	188135931908	150
1926500000	1926500768	1926500150	192661539381	192410745836	150
1926500000	1926500768	1926500150	192661539381	192410745836	150
1890610000	1890610489	1890610940	189999140827	189416580127	150
1890610000	1890610489	1890610940	189999140827	189416580127	150
1879410000	1879410217	1879410684	187458281887	187108539058	150
1879410000	1879410217	1879410684	187458281887	187108539058	150
2077510000	2077510276	2077510680	207516497279	207033328546	150
2077510000	2077510276	2077510680	207516497279	207033328546	150
2086510000	2086510396	2086510779	208411686960	208561013950	150
2086510000	2086510396	2086510779	208411686960	208561013950	150
2088410000	2088410900	2088410711	208925899739	208811148102	150
2088410000	2088410900	2088410711	208925899739	208811148102	150
2090510000	2090510087	2090510789	209198581597	209380850649	150
2090510000	2090510087	2090510789	209198581597	209380850649	150
2084510000	2084510870	2084510713	208841247581	208203745179	150
2084510000	2084510870	2084510713	208841247581	208203745179	150
2067510000	2067510238	2067510583	206895942461	206499998919	150
2067510000	2067510238	2067510583	206895942461	206499998919	150
2092510000	2092510585	2092510787	209219891115	209069141207	150
2092510000	2092510585	2092510787	209219891115	209069141207	150
2098410000	2098410082	2098410812	209477389065	209468417317	150
2098410000	2098410082	2098410812	209477389065	209468417317	150
2068410000	2068410569	2068410515	206269100187	206196641241	150
2068410000	2068410569	2068410515	206269100187	206196641241	150
2049410000	2049410770	2049410307	204955516588	204874547897	150
2049410000	2049410770	2049410307	204955516588	204874547897	150

1991510000	1991510767	1991510872	199303155198	199229236752	150
1991510000	1991510767	1991510872	199303155198	199229236752	150
1996510000	1996510662	1996510969	199116708685	199038168291	150
1996510000	1996510662	1996510969	199116708685	199038168291	150
2041510000	2041510666	2041510285	204008445364	204275688721	150
2041510000	2041510666	2041510285	204008445364	204275688721	150
2022510000	2022510678	2022510087	202536267798	202119812248	150
2022510000	2022510678	2022510087	202536267798	202119812248	150
2191510000	2191510623	2191510792	219222616344	219308558632	150
2191510000	2191510623	2191510792	219222616344	219308558632	150
2209410000	2209410239	2209410931	220384223069	220893624787	150
2209410000	2209410239	2209410931	220384223069	220893624787	150
2186510000	2186510415	2186510790	218364540280	218671842775	150
2186510000	2186510415	2186510790	218364540280	218671842775	150
2218510000	2218510082	2218510097	221746561899	221290605190	150
2218510000	2218510082	2218510097	221746561899	221290605190	150
2179510000	2179510076	2179510680	217405429340	217470206629	150
2179510000	2179510076	2179510680	217405429340	217470206629	150
2235500000	2235500807	2235500166	223220456112	223296415547	150
2235500000	2235500807	2235500166	223220456112	223296415547	150
2168410000	2168410587	2168410525	216113085079	216370340678	150
2168410000	2168410587	2168410525	216113085079	216370340678	150
2137410000	2137410178	2137410244	213550703628	213409133527	150
2137410000	2137410178	2137410244	213550703628	213409133527	150
2339410000	2339410636	2339410237	233003782928	233088347395	150
2339410000	2339410636	2339410237	233003782928	233088347395	150
2132510000	2132510878	2132510197	213513069829	213400811336	150
2132510000	2132510878	2132510197	213513069829	213400811336	150
2158410000	2158410476	2158410428	215417319501	215659297873	150
2158410000	2158410476	2158410428	215417319501	215659297873	150
2164510000	2164510677	2164510523	216520627860	216787016698	150
2164510000	2164510677	2164510523	216520627860	216787016698	150
2156500000	2156500033	2156500371	215260049714	215379247578	150
2156500000	2156500033	2156500371	215260049714	215379247578	150
2348510000	2348510482	2348510405	234070803770	234741645596	150
2348510000	2348510482	2348510405	234070803770	234741645596	150
2312510000	2312510544	2312510014	231682166933	231883447700	150
2312510000	2312510544	2312510014	231682166933	231883447700	150
2316410000	2316410471	2316410060	231501665467	231692190263	150
2316410000	2316410471	2316410060	231501665467	231692190263	150
2357410000	2357410508	2357410455	235548308674	235129861395	150
2357410000	2357410508	2357410455	235548308674	235129861395	150
2329410000	2329410571	2329410139	232456955143	232674719554	150
2329410000	2329410571	2329410139	232456955143	232674719554	150
2329510000	2329510509	2329510206	232407856500	232083185605	150
2329510000	2329510509	2329510206	232407856500	232083185605	150
2290510000	2290510125	2290510807	229815561690	229451904708	150

2290510000	2290510125	2290510807	229815561690	229451904708	150
2258410000	2258410495	2258410437	225837266978	225664429590	150
2258410000	2258410495	2258410437	225837266978	225664429590	150
2291510000	2291510642	2291510802	229879282573	229190280181	150
2291510000	2291510642	2291510802	229879282573	229190280181	150
2293510000	2293510886	2293510817	229805199683	229433478647	150
2293510000	2293510886	2293510817	229805199683	229433478647	150
2271610000	2271610851	2271610667	227496388655	227571422128	150
2271610000	2271610851	2271610667	227496388655	227571422128	150
2285500000	2285500261	2285500666	228045924819	228272224009	150
2285500000	2285500261	2285500666	228045924819	228272224009	150
2285510000	2285510125	2285510790	228234047473	228627894217	150
2285510000	2285510125	2285510790	228234047473	228627894217	150
2250510000	2250510899	2250510413	225617916584	225927843840	150
2250510000	2250510899	2250510413	225617916584	225927843840	150
2280610000	2280610297	2280610782	228929378682	228137936915	150
2280610000	2280610297	2280610782	228929378682	228137936915	150
2456500000	2456500004	2456500401	245840033738	245057889504	150
2456500000	2456500004	2456500401	245840033738	245057889504	150
2438510000	2438510392	2438510314	243040895562	243151642084	150
2438510000	2438510392	2438510314	243040895562	243151642084	150
2479410000	2479410148	2479410645	247613882559	247609716748	150
2479410000	2479410148	2479410645	247613882559	247609716748	150
2467510000	2467510309	2467510622	246055313119	246209668797	150
2467510000	2467510309	2467510622	246055313119	246209668797	150
2489510000	2489510197	2489510810	248001219896	248029637082	150
2489510000	2489510197	2489510810	248001219896	248029637082	150
2428510000	2428510214	2428510216	242145817209	242185599174	150
2428510000	2428510214	2428510216	242145817209	242185599174	150
2442510000	2442510955	2442510328	244233205059	244279266863	150
2442510000	2442510955	2442510328	244233205059	244279266863	150
2470610000	2470610234	2470610701	247572531578	247125432809	150
2470610000	2470610234	2470610701	247572531578	247125432809	150
2458510000	2458510666	2458510516	245972079670	245552756607	150
2458510000	2458510666	2458510516	245972079670	245552756607	150
2468510000	2468510760	2468510615	246732528384	246724757308	150
2468510000	2468510760	2468510615	246732528384	246724757308	150
2488410000	2488410972	2488410751	248021680404	248941207035	150
2488410000	2488410972	2488410751	248021680404	248941207035	150
2371510000	2371510259	2371510611	237808724596	237048705949	150
2371510000	2371510259	2371510611	237808724596	237048705949	150
2363510000	2363510503	2363510524	236950352341	236741322087	150
2363510000	2363510503	2363510524	236950352341	236741322087	150
2395500000	2395500361	2395500788	239905201681	239390163550	150
2395500000	2395500361	2395500788	239905201681	239390163550	150
2377510000	2377510324	2377510710	237623383939	237041945878	150
2377510000	2377510324	2377510710	237623383939	237041945878	150

2579510000	2579510137	2579510720	257937109381	257460221118	150
2579510000	2579510137	2579510720	257937109381	257460221118	150
2597510000	2597510892	2597510928	259095389413	259511306783	150
2597510000	2597510892	2597510928	259095389413	259511306783	150
2595510000	2595510358	2595510922	259921238953	259929590210	150
2595510000	2595510358	2595510922	259921238953	259929590210	150
2555510000	2555510805	2555510491	255958274222	255168474468	150
2555510000	2555510805	2555510491	255958274222	255168474468	150
2608410000	2608410909	2608410983	260089683662	260684608656	150
2608410000	2608410909	2608410983	260089683662	260684608656	150
2580610000	2580610340	2580610812	258126744406	258613892525	150
2580610000	2580610340	2580610812	258126744406	258613892525	150
2578410000	2578410806	2578410662	257790621373	257264173693	150
2578410000	2578410806	2578410662	257790621373	257264173693	150
2591610000	2591610275	2591610897	259914756826	259101300397	150
2591610000	2591610275	2591610897	259914756826	259101300397	150
2508410000	2508410893	2508410973	250731322729	250168110869	150
2508410000	2508410893	2508410973	250731322729	250168110869	150
2532510000	2532510951	2532510238	253440702620	253133867063	150
2532510000	2532510951	2532510238	253440702620	253133867063	150
2538410000	2538410227	2538410271	253732796393	253316018624	150
2538410000	2538410227	2538410271	253732796393	253316018624	150
2491510000	2491510679	2491510822	249374135211	249430653866	150
2491510000	2491510679	2491510822	249374135211	249430653866	150
2519410000	2519410429	2519410059	251954721419	251837709059	150
2519410000	2519410429	2519410059	251954721419	251837709059	150
2533510000	2533510223	2533510246	253819827019	253773269698	150
2533510000	2533510223	2533510246	253819827019	253773269698	150
2548410000	2548410361	2548410370	254003088762	254675621839	150
2548410000	2548410361	2548410370	254003088762	254675621839	150
2539410000	2539410678	2539410257	253254650982	253503679252	150
2539410000	2539410678	2539410257	253254650982	253503679252	150
2702610000	2702610022	2702610016	270487386077	270733193120	150
2702610000	2702610022	2702610016	270487386077	270733193120	150
2684510000	2684510973	2684510773	268857181489	268403216041	150
2684510000	2684510973	2684510773	268857181489	268403216041	150
2718410000	2718410986	2718410092	271733074919	271602508987	150
2718410000	2718410986	2718410092	271733074919	271602508987	150
2697410000	2697410753	2697410882	269678559519	269846066505	150
2697410000	2697410753	2697410882	269678559519	269846066505	150
2676410000	2676410364	2676410691	267581989280	267476428144	150
2676410000	2676410364	2676410691	267581989280	267476428144	150
2641610000	2641610358	2641610409	264814248333	264549720628	150
2641610000	2641610358	2641610409	264814248333	264549720628	150
2658510000	2658510620	2658510536	265230576116	265320537878	150
2658510000	2658510620	2658510536	265230576116	265320537878	150
2668410000	2668410682	2668410573	266377160603	266571638051	150

2668410000	2668410682	2668410573	266377160603	266571638051	150
2619410000	2619410444	2619410069	261186289461	261350623217	150
2619410000	2619410444	2619410069	261186289461	261350623217	150
2656500000	2656500037	2656500421	265650391485	265210159453	150
2656500000	2656500037	2656500421	265650391485	265210159453	150
2624510000	2624510308	2624510163	262883675586	262430067972	150
2624510000	2624510308	2624510163	262883675586	262430067972	150
2627510000	2627510925	2627510240	262118902123	262985556319	150
2627510000	2627510925	2627510240	262118902123	262985556319	150
2669410000	2669410991	2669410566	266636992490	266055982957	150
2669410000	2669410991	2669410566	266636992490	266055982957	150
2805510000	2805510207	2805510996	280644059884	280865284175	150
2805510000	2805510207	2805510996	280644059884	280865284175	150
2807510000	2807510721	2807510061	280602046959	280829917319	150
2807510000	2807510721	2807510061	280602046959	280829917319	150
2818410000	2818410000	2818410102	281725559534	281288752441	150
2818410000	2818410000	2818410102	281725559534	281288752441	150
2812510000	2812510637	2812510066	281249265525	281051988093	150
2812510000	2812510637	2812510066	281249265525	281051988093	150
2816500000	2816500602	2816500041	281784561172	281836270240	150
2816500000	2816500602	2816500041	281784561172	281836270240	150
2829410000	2829410553	2829410188	282075273385	282416154938	150
2829410000	2829410553	2829410188	282075273385	282416154938	150
2834510000	2834510513	2834510286	283540667535	283565945553	150
2834510000	2834510513	2834510286	283540667535	283565945553	150
2825500000	2825500927	2825500127	282746709331	282279315278	150
2825500000	2825500927	2825500127	282746709331	282279315278	150
2763510000	2763510574	2763510564	276159086704	276263985191	150
2763510000	2763510574	2763510564	276159086704	276263985191	150
2748510000	2748510548	2748510445	274377430167	274373017553	150
2748510000	2748510548	2748510445	274377430167	274373017553	150
2794510000	2794510023	2794510884	279478334528	279855100155	150
2794510000	2794510023	2794510884	279478334528	279855100155	150
2765510000	2765510923	2765510624	276661454628	276643593366	150
2765510000	2765510923	2765510624	276661454628	276643593366	150
2788510000	2788510038	2788510843	278432368030	278790020509	150
2788510000	2788510038	2788510843	278432368030	278790020509	150
2766410000	2766410303	2766410601	276392023770	276004128553	150
2766410000	2766410303	2766410601	276392023770	276004128553	150
2973510000	2973510740	2973510684	297800631448	297141629939	150
2973510000	2973510740	2973510684	297800631448	297141629939	150
2979410000	2979410058	2979410695	297946246322	297907871263	150
2979410000	2979410058	2979410695	297946246322	297907871263	150
2946510000	2946510936	2946510465	294884073682	294143209846	150
2946510000	2946510936	2946510465	294884073682	294143209846	150
2935500000	2935500919	2935500235	293216072059	293123888518	150
2935500000	2935500919	2935500235	293216072059	293123888518	150

2925500000	2925500945	2925500137	292222885993	292994318745	150
2925500000	2925500945	2925500137	292222885993	292994318745	150
2891610000	2891610329	2891610927	289065783840	289986691917	150
2891610000	2891610329	2891610927	289065783840	289986691917	150
2898410000	2898410177	2898410891	289996652819	289979261897	150
2898410000	2898410177	2898410891	289996652819	289979261897	150
2900610000	2900610488	2900610058	290235443432	290488977373	150
2900610000	2900610488	2900610058	290235443432	290488977373	150
2915500000	2915500774	2915500037	291121871310	291387915473	150
2915500000	2915500774	2915500037	291121871310	291387915473	150
2919410000	2919410493	2919410099	291050359134	291880803981	150
2919410000	2919410493	2919410099	291050359134	291880803981	150
2872510000	2872510207	2872510667	287621369841	287523361189	150
2872510000	2872510207	2872510667	287621369841	287523361189	150
2911510000	2911510813	2911510078	291144187410	291004727495	150
2911510000	2911510813	2911510078	291144187410	291004727495	150
2876410000	2876410395	2876410711	287856315859	287711470212	150
2876410000	2876410395	2876410711	287856315859	287711470212	150
3057410000	3057410463	3057410426	305810172388	305278717532	150
3057410000	3057410463	3057410426	305810172388	305278717532	150
3075510000	3075510981	3075510658	307390700652	307110661022	150
3075510000	3075510981	3075510658	307390700652	307110661022	150
3078410000	3078410754	3078410613	307689077132	307007598227	150
3078410000	3078410754	3078410613	307689077132	307007598227	150
3081610000	3081610993	3081610748	308062847137	308689841249	150
3081610000	3081610993	3081610748	308062847137	308689841249	150
3051510000	3051510868	3051510382	305015297534	305969786165	150
3051510000	3051510868	3051510382	305015297534	305969786165	150
3051610000	3051610944	3051610450	305368940248	305050220870	150
3051610000	3051610944	3051610450	305368940248	305050220870	150
3069500000	3069500608	3069500487	306463883211	306393535049	150
3069500000	3069500608	3069500487	306463883211	306393535049	150
3091510000	3091510607	3091510783	309886168561	309950478711	150
3091510000	3091510607	3091510783	309886168561	309950478711	150
3074510000	3074510832	3074510614	307555287845	307639066551	150
3074510000	3074510832	3074510614	307555287845	307639066551	150
3032510000	3032510862	3032510188	303609289357	303222199327	150
3032510000	3032510862	3032510188	303609289357	303222199327	150
3035500000	3035500778	3035500148	303023515189	303974811977	150
3035500000	3035500778	3035500148	303023515189	303974811977	150
3045500000	3045500939	3045500246	304647163517	304246649312	150
3045500000	3045500939	3045500246	304647163517	304246649312	150
2984510000	2984510021	2984510803	298044579413	298493845090	150
2984510000	2984510021	2984510803	298044579413	298493845090	150
3025500000	3025500794	3025500048	302764710180	302637425711	150
3025500000	3025500794	3025500048	302764710180	302637425711	150
3028410000	3028410034	2028410122	302513772100	302465719688	150

3028410000	3028410034	2028410122	302513772100	302465719688	150
3026510000	3026510618	3026510175	302662530318	302347041259	150
3026510000	3026510618	3026510175	302662530318	302347041259	150
2997510000	2997510962	2997510968	299574213400	299104864951	150
2997510000	2997510962	2997510968	299574213400	299104864951	150
3003510000	3003510770	3003510891	300251350410	300785615749	150
3003510000	3003510770	3003510891	300251350410	300785615749	150
3013510000	3013510864	3013510997	301171115935	301748818900	150
3013510000	3013510864	3013510997	301171115935	301748818900	150
3191610000	3191610204	3191610858	319471123258	319770537376	150
3191610000	3191610204	3191610858	319471123258	319770537376	150
3222510000	3222510717	3222510107	322049646181	322867377873	150
3222510000	3222510717	3222510107	322049646181	322867377873	150
3223510000	3223510093	3223510117	322137668948	322561875410	150
3223510000	3223510093	3223510117	322137668948	322561875410	150
3177410000	3177410653	3177410635	317231447336	317819112373	150
3177410000	3177410653	3177410635	317231447336	317819112373	150
3219410000	3219410374	3219410031	321511129427	321304564404	150
3219410000	3219410374	3219410031	321511129427	321304564404	150
3227410000	3227410999	3227410154	322850818055	322685604124	150
3227410000	3227410999	3227410154	322850818055	322685604124	150
3187510000	3187510455	3187510791	318451421973	318092857958	150
3187510000	3187510455	3187510791	318451421973	318092857958	150
3150510000	3150510882	3150510404	315987605489	315173654799	150
3150510000	3150510882	3150510404	315987605489	315173654799	150
3144510000	3144510567	3144510320	314111260333	314818419770	150
3144510000	3144510567	3144510320	314111260333	314818419770	150
3119410000	3119410355	3119410021	311423126603	311069943343	150
3119410000	3119410355	3119410021	311423126603	311069943343	150
3136410000	3136410759	3136410241	313085938452	313132813370	150
3136410000	3136410759	3136410241	313085938452	313132813370	150
3133500000	3133500259	3133500187	313034383069	313774571636	150
3133500000	3133500259	3133500187	313034383069	313774571636	150
3158510000	3158510616	3158510487	315986369963	315323224385	150
3158510000	3158510616	3158510487	315986369963	315323224385	150
3118410000	3118410885	3118410034	311640394533	311812207319	150
3118410000	3118410885	3118410034	311640394533	311812207319	150
3338510000	3338510377	3338510305	333214615150	333960972347	150
3338510000	3338510377	3338510305	333214615150	333960972347	150
3319410000	3319410393	3319410041	331534159047	331396406363	150
3319410000	3319410393	3319410041	331534159047	331396406363	150
3354510000	3354510664	3354510443	335801351636	335312162454	150
3354510000	3354510664	3354510443	335801351636	335312162454	150
3300610000	3300610399	3300610999	330120694470	330086621988	150
3300610000	3300610399	3300610999	330120694470	330086621988	150
3252510000	3252510107	3252510409	325602152791	325455750787	150
3252510000	3252510107	3252510409	325602152791	325455750787	150

3286510000	3286510433	3286510801	328579316272	328968786227	150
3286510000	3286510433	3286510801	328579316272	328968786227	150
3236510000	3236510702	3236510298	323206671792	323336247352	150
3236510000	3236510702	3236510298	323206671792	323336247352	150
3258410000	3258410497	3258410438	325264493033	325544103656	150
3258410000	3258410497	3258410438	325264493033	325544103656	150
3245500000	3245500971	3245500265	324484438681	324358287854	150
3245500000	3245500971	3245500265	324484438681	324358287854	150
3448410000	3448410344	3448410361	344982475876	344765145874	150
3448410000	3448410344	3448410361	344982475876	344765145874	150
3470510000	3470510292	3470510632	347072436173	347685200382	150
3470510000	3470510292	3470510632	347072436173	347685200382	150
3428410000	3428410047	3428410161	342842529769	342974694590	150
3428410000	3428410047	3428410161	342842529769	342974694590	150
3429410000	3429410592	3429410149	342750684853	342116940488	150
3429410000	3429410592	3429410149	342750684853	342116940488	150
3461510000	3461510239	3461510524	346305423457	346012439099	150
3461510000	3461510239	3461510524	346305423457	346012439099	150
3461610000	3461610189	3461610589	346020978539	346069180569	150
3461610000	3461610189	3461610589	346020978539	346069180569	150
3439510000	3439510627	3439510315	343915638508	343824135892	150
3439510000	3439510627	3439510315	343915638508	343824135892	150
3478510000	3478510848	3478510713	347178651247	347863013727	150
3478510000	3478510848	3478510713	347178651247	347863013727	150
3435500000	3435500841	3435500186	343470036983	343336660102	150
3435500000	3435500841	3435500186	343470036983	343336660102	150
3401510000	3401510406	3401510929	340517194831	340398009903	150
3401510000	3401510406	3401510929	340517194831	340398009903	150
3378410000	3378410802	3378410643	337689744452	337531494893	150
3378410000	3378410802	3378410643	337689744452	337531494893	150
3375510000	3375510035	3375510692	337875665144	337497539249	150
3375510000	3375510035	3375510692	337875665144	337497539249	150
3392510000	3392510642	3392510819	339792501617	339952377856	150
3392510000	3392510642	3392510819	339792501617	339952377856	150
3406500000	3406500444	3406500901	340999113888	340109236144	150
3406500000	3406500444	3406500901	340999113888	340109236144	150
3387410000	3387410703	3387410754	338862216339	338965063688	150
3387410000	3387410703	3387410754	338862216339	338965063688	150
3383510000	3383510807	3383510727	338892999489	338104210546	150
3383510000	3383510807	3383510727	338892999489	338104210546	150
3416500000	3416500598	3416500002	341239852282	341581340301	150
3416500000	3416500598	3416500002	341239852282	341581340301	150
3552510000	3552510348	3552510440	355617921415	355804906100	150
3552510000	3552510348	3552510440	355617921415	355804906100	150
3600610000	3600610444	3600610029	360048707163	360001214919	150
3600610000	3600610444	3600610029	360048707163	360001214919	150
3581510000	3581510514	3581510733	358430299147	358386789622	150

3581510000	3581510514	3581510733	358430299147	358386789622	150
3550510000	3550510955	3550510444	355081385115	355382810686	150
3550510000	3550510955	3550510444	355081385115	355382810686	150
3547410000	3547410374	3547410376	354363461173	354008293504	150
3547410000	3547410374	3547410376	354363461173	354008293504	150
3506500000	3506500461	3506500911	350809060492	350641936967	150
3506500000	3506500461	3506500911	350809060492	350641936967	150
3512510000	3512510582	3512510036	351416040083	351185618548	150
3512510000	3512510582	3512510036	351416040083	351185618548	150
3515510000	3515510194	3515510071	351767814924	351624622192	150
3515510000	3515510194	3515510071	351767814924	351624622192	150
3529410000	3529410609	3529410159	352350416682	352104598005	150
3529410000	3529410609	3529410159	352350416682	352104598005	150
3486410000	3486410494	3486410774	348822323897	348717301664	150
3486410000	3486410494	3486410774	348822323897	348717301664	150
3545500000	3545500022	3545500295	354993638809	354584455290	150
3545500000	3545500022	3545500295	354993638809	354584455290	150
3729410000	3729410536	3729410179	372973488305	372681948659	150
3729410000	3729410536	3729410179	372973488305	372681948659	150
3712510000	3712510619	3712510056	371319670207	371711732327	150
3712510000	3712510619	3712510056	371319670207	371711732327	150
3700610000	3700610459	3700610039	370360250737	370217733457	150
3700610000	3700610459	3700610039	370360250737	370217733457	150
3657510000	3657510170	3657510544	365796996751	365040337423	150
3657510000	3657510170	3657510544	365796996751	365040337423	150
3660510000	3660510131	3660510554	366765010408	366535250908	150
3660510000	3660510131	3660510554	366765010408	366535250908	150
3664510000	3664510765	3664510575	366893691415	366179834639	150
3664510000	3664510765	3664510575	366893691415	366179834639	150
3609410000	3609410315	3609410972	360503634526	360873468117	150
3609410000	3609410315	3609410972	360503634526	360873468117	150
3658410000	3658410575	3658410478	365571770387	365939361095	150
3658410000	3658410575	3658410478	365571770387	365939361095	150
3612510000	3612510602	3612510046	361983095648	361243099299	150
3612510000	3612510602	3612510046	361983095648	361243099299	150
3625500000	3625500892	3625500108	362125102566	362605680682	150
3625500000	3625500892	3625500108	362125102566	362605680682	150
3666500000	3666500197	3666500522	366002118975	366772818228	150
3666500000	3666500197	3666500522	366002118975	366772818228	150
3659410000	3659410942	3659410467	365717606381	365720911725	150
3659410000	3659410942	3659410467	365717606381	365720911725	150
3817510000	3817510780	3817510161	381079452883	381439886309	150
3817510000	3817510780	3817510161	381079452883	381439886309	150
3801610000	3801610665	3801610041	380468658172	380085792168	150
3801610000	3801610665	3801610041	380468658172	380085792168	150
3819410000	3819410480	3819410090	381696621888	381966130123	150
3819410000	3819410480	3819410090	381696621888	381966130123	150

3804510000	3804510157	3804510982	380459552217	380243573969	150
3804510000	3804510157	3804510982	380459552217	380243573969	150
3808410000	3808410837	3808410004	380820175975	380560505880	150
3808410000	3808410837	3808410004	380820175975	380560505880	150
3797410000	3797410768	3797410893	379274220859	379612293560	150
3797410000	3797410768	3797410893	379274220859	379612293560	150
3837510000	3837510008	3837510366	383358994050	383220580364	150
3837510000	3837510008	3837510366	383358994050	383220580364	150
3769410000	3769410011	3769410577	376408375198	376494357584	150
3769410000	3769410011	3769410577	376408375198	376494357584	150
3757410000	3757410421	3757410496	375805199149	375897882457	150
3757410000	3757410421	3757410496	375805199149	375897882457	150
3767410000	3767410590	3767410596	376764942971	376206990369	150
3767410000	3767410590	3767410596	376764942971	376206990369	150
3969410000	3969410053	3969410597	396468961716	396427361837	150
3969410000	3969410053	3969410597	396468961716	396427361837	150
3939510000	3939510716	3939510364	393660114611	393687220799	150
3939510000	3939510716	3939510364	393660114611	393687220799	150
3927510000	3927510979	3927510272	392116917030	392158401453	150
3927510000	3927510979	3927510272	392116917030	392158401453	150
3860510000	3860510169	3860510573	386079817559	386029581462	150
3860510000	3860510169	3860510573	386079817559	386029581462	150
3881610000	3881610151	3881610828	388918265367	388766608633	150
3881610000	3881610151	3881610828	388918265367	388766608633	150
3882510000	3882510544	3882510768	388618151894	388842555781	150
3882510000	3882510544	3882510768	388618151894	388842555781	150
3916500000	3916500616	3916500052	391112696009	391385998116	150
3916500000	3916500616	3916500052	391112696009	391385998116	150
3888410000	3888410047	3888410793	388449340052	388780316050	150
3888410000	3888410047	3888410793	388449340052	388780316050	150
3918410000	3918410017	3918410113	391536786118	391484076059	150
3918410000	3918410017	3918410113	391536786118	391484076059	150
3895500000	3895500437	3895500841	389910331174	389459200690	150
3895500000	3895500437	3895500841	389910331174	389459200690	150
4058410000	4058410462	4058410420	405008870663	405951023112	150
4058410000	4058410462	4058410420	405008870663	405951023112	150
4042510000	4042510887	4042510289	404701478241	404000373851	150
4042510000	4042510887	4042510289	404701478241	404000373851	150
4036500000	4036500787	4036500163	403523083567	403382711797	150
4036500000	4036500787	4036500163	403523083567	403382711797	150
4090610000	4090610433	4090610864	409057966790	409359422222	150
4090610000	4090610433	4090610864	409057966790	409359422222	150
4078510000	4078510861	4078510675	407355946812	407421804234	150
4078510000	4078510861	4078510675	407355946812	407421804234	150
4065510000	4065510890	4065510548	406618366814	406544116678	150
4065510000	4065510890	4065510548	406618366814	406544116678	150
4066500000	4066500103	4066500463	406424690432	406434565517	150

4066500000	4066500103	4066500463	406424690432	406434565517	150
4069410000	4069410019	4069410508	406075281605	406003691331	150
4069410000	4069410019	4069410508	406075281605	406003691331	150
4076510000	4076510226	4076510679	407440208878	407764478072	150
4076510000	4076510226	4076510679	407440208878	407764478072	150
4049410000	4049410773	4049410309	404394332620	404268800401	150
4049410000	4049410773	4049410309	404394332620	404268800401	150
4011610000	4011610703	4011610061	401613759548	401269161485	150
4011610000	4011610703	4011610061	401613759548	401269161485	150
4021510000	4021510839	4021510090	402204224334	402342069095	150
4021510000	4021510839	4021510090	402204224334	402342069095	150
4006500000	4006500466	4006500864	400215882773	400047028914	150
4006500000	4006500466	4006500864	400215882773	400047028914	150
4008410000	4008410817	4008410924	400119020711	400748828821	150
4008410000	4008410817	4008410924	400119020711	400748828821	150
3995510000	3995510337	3995510963	399966325621	399253626206	150
3995510000	3995510337	3995510963	399966325621	399253626206	150
3998410000	3998410194	3998410902	399915536381	399829203179	150
3998410000	3998410194	3998410902	399915536381	399829203179	150
3996410000	3996410647	3996410923	399493788433	399214638466	150
3996410000	3996410647	3996410923	399493788433	399214638466	150
4002610000	4002610898	4002610949	400683935674	400270536006	150
4002610000	4002610898	4002610949	400683935674	400270536006	150
4201510000	4201510368	4201510909	420241094515	420107529570	150
4201510000	4201510368	4201510909	420241094515	420107529570	150
4165510000	4165510908	4165510560	416279841557	416955767916	150
4165510000	4165510908	4165510560	416279841557	416955767916	150
4166500000	4166500120	4166500473	416461214878	416426856429	150
4166500000	4166500120	4166500473	416461214878	416426856429	150
4189410000	4189410099	4189410717	418743852816	418576689809	150
4189410000	4189410099	4189410717	418743852816	418576689809	150
4202510000	4202510346	4202510905	420965925760	420059780470	150
4202510000	4202510346	4202510905	420965925760	420059780470	150
4175510000	4175510004	4175510671	417926061747	417336735407	150
4175510000	4175510004	4175510671	417926061747	417336735407	150
4133510000	4133510154	4133510208	413311234923	413786120444	150
4133510000	4133510154	4133510208	413311234923	413786120444	150
4136500000	4136500803	4136500173	413670674073	413382371334	150
4136500000	4136500803	4136500173	413670674073	413382371334	150
4105510000	4105510097	4105510925	410238390516	410289429001	150
4105510000	4105510097	4105510925	410238390516	410289429001	150
4123510000	4123510075	4123510108	412177933718	412678366470	150
4123510000	4123510075	4123510108	412177933718	412678366470	150
4129410000	4129410535	4129410121	412294891738	412476006616	150
4129410000	4129410535	4129410121	412294891738	412476006616	150
4112510000	4112510513	4112510995	411321060573	411342730406	150
4112510000	4112510513	4112510995	411321060573	411342730406	150

4115510000	4115510262	4115510029	411977962896	411031532543	150
4115510000	4115510262	4115510029	411977962896	411031532543	150
4125510000	4125510300	4125510133	412483103815	412747195146	150
4125510000	4125510300	4125510133	412483103815	412747195146	150
4141610000	4141610273	4141610362	414990527782	414786760963	150
4141610000	4141610273	4141610362	414990527782	414786760963	150
4318410000	4318410927	4318410055	431317393876	431130663411	150
4318410000	4318410927	4318410055	431317393876	431130663411	150
4325500000	4325500844	4325500079	432179620023	432738731348	150
4325500000	4325500844	4325500079	432179620023	432738731348	150
4306500000	4306500430	4306500892	430275122625	430541987026	150
4306500000	4306500430	4306500892	430275122625	430541987026	150
4337510000	4337510045	4337510312	433690751994	433636908880	150
4337510000	4337510045	4337510312	433690751994	433636908880	150
4290610000	4290610469	4290610884	429073522933	429183448303	150
4290610000	4290610469	4290610884	429073522933	429183448303	150
4284510000	4284510906	4284510735	428476041358	428496527112	150
4284510000	4284510906	4284510735	428476041358	428496527112	150
4342510000	4342510942	4342510319	434433186132	434161502408	150
4342510000	4342510942	4342510319	434433186132	434161502408	150
4302610000	4302610950	4302610978	430979057433	430681721173	150
4302610000	4302610950	4302610978	430979057433	430681721173	150
4272510000	4272510096	4272510613	427597759784	427999417712	150
4272510000	4272510096	4272510613	427597759784	427999417712	150
4242510000	4242510923	4242510309	424029587664	424991635299	150
4242510000	4242510923	4242510309	424029587664	424991635299	150
4258510000	4258510636	4258510498	425439372591	425873441785	150
4258510000	4258510636	4258510498	425439372591	425873441785	150
4445510000	4445510722	4445510374	444755202786	444786095325	150
4445510000	4445510722	4445510374	444755202786	444786095325	150
4267410000	4267410507	4267410547	426803108769	426499434616	150
4267410000	4267410507	4267410547	426803108769	426499434616	150
4239410000	4239410623	4239410230	423751502024	423088412167	150
4239410000	4239410623	4239410230	423751502024	423088412167	150
4268410000	4268410610	4268410536	426972778674	426442410870	150
4268410000	4268410610	4268410536	426972778674	426442410870	150
4225510000	4225510317	4225510143	422609479246	422068958744	150
4225510000	4225510317	4225510143	422609479246	422068958744	150
4246510000	4246510881	4246510399	424555625928	424200489183	150
4246510000	4246510881	4246510399	424555625928	424200489183	150
4237410000	4237410208	4237410255	423260649670	423770550097	150
4237410000	4237410208	4237410255	423260649670	423770550097	150
4417510000	4417510828	4417510124	441538836320	441505263983	150
4417510000	4417510828	4417510124	441538836320	441505263983	150
4427410000	4427410034	4427410175	442900586302	442152483636	150
4427410000	4427410034	4427410175	442900586302	442152483636	150
4407510000	4407510655	4407510023	440102265247	440473181492	150

4407510000	4407510655	4407510023	440102265247	440473181492	150
4425500000	4425500862	4425500089	442490551415	442201447154	150
4425500000	4425500862	4425500089	442490551415	442201447154	150
4425510000	4425510349	4425510164	442418318587	442177434640	150
4425510000	4425510349	4425510164	442418318587	442177434640	150
4409510000	4409510239	4409510015	440064810477	440186114252	150
4409510000	4409510239	4409510015	440064810477	440186114252	150
4346500000	4346500913	4346500293	434838549300	434917199058	150
4346500000	4346500913	4346500293	434838549300	434917199058	150
4401610000	4401610598	4401610003	440189540453	440167322947	150
4401610000	4401610598	4401610003	440189540453	440167322947	150
4361610000	4361610171	4361610580	436964806705	436997878205	150
4361610000	4361610171	4361610580	436964806705	436997878205	150
4393510000	4393510906	4393510830	439875213891	439454026637	150
4393510000	4393510906	4393510830	439875213891	439454026637	150
4380610000	4380610313	4380610794	438997379827	438686379985	150
4380610000	4380610313	4380610794	438997379827	438686379985	150
4374510000	4374510885	4374510644	437743291037	437709866725	150
4374510000	4374510885	4374510644	437743291037	437709866725	150
4404510000	4404510092	4404510941	440221062777	440278130392	150
4404510000	4404510092	4404510941	440221062777	440278130392	150
4564510000	4564510747	4564510565	456623337627	456040978302	150
4564510000	4564510747	4564510565	456623337627	456040978302	150
4571610000	4571610909	4571610699	457676158095	457642705287	150
4571610000	4571610909	4571610699	457676158095	457642705287	150
4551510000	4551510068	4551510433	455488169643	455753906997	150
4551510000	4551510068	4551510433	455488169643	455753906997	150
4590510000	4590510186	4590510839	459677169257	459786612609	150
4590510000	4590510186	4590510839	459677169257	459786612609	150
4587410000	4587410743	4587410775	458636467078	458734817822	150
4587410000	4587410743	4587410775	458636467078	458734817822	150
4557510000	4557510154	4557510535	455670250812	455872142253	150
4557510000	4557510154	4557510535	455670250812	455872142253	150
4506410000	4506410345	4506410981	450087160995	450562699327	150
4506410000	4506410345	4506410981	450087160995	450562699327	150
4477410000	4477410557	4477410666	447719546416	447610780876	150
4477410000	4477410557	4477410666	447719546416	447610780876	150
4511510000	4511510637	4511510040	451316938675	451074076090	150
4511510000	4511510637	4511510040	451316938675	451074076090	150
4531610000	4531610163	4531610303	453872570400	453561534079	150
4531610000	4531610163	4531610303	453872570400	453561534079	150
4483510000	4483510827	4483510738	448474017522	448591165069	150
4483510000	4483510827	4483510738	448474017522	448591165069	150
4711610000	4711610750	4711610129	471273658701	471166705657	150
4711610000	4711610750	4711610129	471273658701	471166705657	150
4682510000	4682510420	4682510749	468757573704	468597560495	150
4682510000	4682510420	4682510749	468757573704	468597560495	150

4716500000	4716500646	4716500033	471536462117	471864162886	150
4716500000	4716500646	4716500033	471536462117	471864162886	150
4601510000	4601510449	4601510950	460430733663	460649443140	150
4601510000	4601510449	4601510950	460430733663	460649443140	150
4616510000	4616510550	4616510134	461626073701	461216517995	150
4616510000	4616510550	4616510134	461626073701	461216517995	150
4601610000	4601610634	4601610023	460762674637	460107736082	150
4601610000	4601610634	4601610023	460762674637	460107736082	150
4633510000	4633510245	4633510259	463247094681	463131757195	150
4633510000	4633510245	4633510259	463247094681	463131757195	150
4621610000	4621610912	4621610217	462529647168	462147169879	150
4621610000	4621610912	4621610217	462529647168	462147169879	150
4602610000	4602610008	4602610008	460839024626	460350866258	150
4602610000	4602610008	4602610008	460839024626	460350866258	150
4623510000	4623510066	4623510158	462713609971	462927629056	150
4623510000	4623510066	4623510158	462713609971	462927629056	150
4792510000	4792510719	4792510861	479969261387	479639096623	150
4792510000	4792510719	4792510861	479969261387	479639096623	150
4801510000	4801510493	4801510970	480787525907	480681113029	150
4801510000	4801510493	4801510970	480787525907	480681113029	150
4822510000	4822510830	4822510168	482975065262	482708131724	150
4822510000	4822510830	4822510168	482975065262	482708131724	150
4825510000	4825510415	4825510207	482063116899	482211607301	150
4825510000	4825510415	4825510207	482063116899	482211607301	150
4798510000	4798510121	4798510945	479695972177	479663049399	150
4798510000	4798510121	4798510945	479695972177	479663049399	150
4823500000	4823500204	4823500158	482007309632	482946154656	150
4823500000	4823500204	4823500158	482007309632	482946154656	150
4747510000	4747510155	4747510456	474526217959	474233835401	150
4747510000	4747510155	4747510456	474526217959	474233835401	150
4724510000	4724510328	4724510175	472064375593	472569276033	150
4724510000	4724510328	4724510175	472064375593	472569276033	150
4741510000	4741510813	4741510354	474444992723	474956497986	150
4741510000	4741510813	4741510354	474444992723	474956497986	150
4777510000	4777510394	4777510752	477425849505	477641964652	150
4777510000	4777510394	4777510752	477425849505	477641964652	150
4719410000	4719410464	4719410081	471897177757	471932994384	150
4719410000	4719410464	4719410081	471897177757	471932994384	150
4719510000	4719510403	4719510148	471233485871	471629562880	150
4719510000	4719510403	4719510148	471233485871	471629562880	150
4759410000	4759410962	4759410478	475083914895	475556576547	150
4759410000	4759410962	4759410478	475083914895	475556576547	150
4778510000	4778510892	4778510744	477484298039	477621526290	150
4778510000	4778510892	4778510744	477484298039	477621526290	150
4733510000	4733510262	3733510268	473750845299	473113607767	150
4733510000	4733510262	3733510268	473750845299	473113607767	150
4776510000	4776510346	4776510751	477471867023	477333651704	150

4776510000	4776510346	4776510751	477471867023	477333651704	150
4948510000	4948510584	4948510468	494536210609	494248967316	150
4948510000	4948510584	4948510468	494536210609	494248967316	150
4952510000	4952510428	4952510481	495243759858	495358435658	150
4952510000	4952510428	4952510481	495243759858	495358435658	150
4938510000	4938510416	4938510366	493414006351	493849722926	150
4938510000	4938510416	4938510366	493414006351	493849722926	150
4957410000	4957410457	4957410517	495429390385	495783205993	150
4957410000	4957410457	4957410517	495429390385	495783205993	150
4863510000	4863510593	4863510576	486569189632	486282288624	150
4863510000	4863510593	4863510576	486569189632	486282288624	150
4865510000	4865510946	4865510637	486451593193	486536558096	150
4865510000	4865510946	4865510637	486451593193	486536558096	150
4870610000	4870610304	4870610744	487617172875	487231082985	150
4870610000	4870610304	4870610744	487617172875	487231082985	150
4859410000	4859410982	4859410488	485875172876	485238747167	150
4859410000	4859410982	4859410488	485875172876	485238747167	150
4885500000	4885500286	4885500733	488471228183	488704958759	150
4885500000	4885500286	4885500733	488471228183	488704958759	150
4866410000	4866410320	4866410613	486578842421	486161936831	150
4866410000	4866410320	4866410613	486578842421	486161936831	150
4857410000	4857410438	4857410507	485310468213	485189182999	150
4857410000	4857410438	4857410507	485310468213	485189182999	150
4857510000	4857510208	4857510565	485402222866	485780653241	150
4857510000	4857510208	4857510565	485402222866	485780653241	150
4870510000	4870510369	4870510673	487142005350	487649935666	150
4870510000	4870510369	4870510673	487142005350	487649935666	150
5029410000	5029410519	5029410112	502347543447	502912320767	150
5029410000	5029410519	5029410112	502347543447	502912320767	150
5085510000	5085510096	5085510770	508834051962	508560279490	150
5085510000	5085510096	5085510770	508834051962	508560279490	150
5039410000	5039410590	5039410211	503241704119	503004266140	150
5039410000	5039410590	5039410211	503241704119	503004266140	150
5024510000	5024510294	5024510106	502426756169	502940586039	150
5024510000	5024510294	5024510106	502426756169	502940586039	150
5068510000	5068510694	5068510578	506376149287	506441172669	150
5068510000	5068510694	5068510578	506376149287	506441172669	150
5043510000	5043510225	5043510299	504290795377	504688518381	150
5043510000	5043510225	5043510299	504290795377	504688518381	150
4986510000	4986510490	4986510872	498008866170	498797810523	150
4986510000	4986510490	4986510872	498008866170	498797810523	150
4980510000	4980510071	4980510781	498994157003	498370386965	150
4980510000	4980510071	4980510781	498994157003	498370386965	150
5009410000	5009410211	5009410914	500788126785	500738550783	150
5009410000	5009410211	5009410914	500788126785	500738550783	150
4962510000	4962510618	4962510583	496146525792	496146051539	150
4962510000	4962510618	4962510583	496146525792	496146051539	150

5019410000	5019410342	5019410013	501283591249	501142082116	150
5019410000	5019410342	5019410013	501283591249	501142082116	150
4988510000	4988510068	4988510865	498710040423	498398801661	150
4988510000	4988510068	4988510865	498710040423	498398801661	150
4992510000	4992510753	4992510881	499827527461	499341157325	150
4992510000	4992510753	4992510881	499827527461	499341157325	150
4995500000	4995500452	4995500853	499987463497	499905603290	150
4995500000	4995500452	4995500853	499987463497	499905603290	150
5173510000	5173510652	5173510608	517116532108	517780717268	150
5173510000	5173510652	5173510608	517116532108	517780717268	150
5194510000	5194510057	5194510827	519664366970	519874460467	150
5194510000	5194510057	5194510827	519664366970	519874460467	150
5184510000	5184510890	5184510726	518078171896	518428442490	150
5184510000	5184510890	5184510726	518078171896	518428442490	150
5207510000	5207510622	5207510004	520854079611	520444808909	150
5207510000	5207510622	5207510004	520854079611	520444808909	150
5157410000	5157410482	5157410438	515358824083	515218166813	150
5157410000	5157410482	5157410438	515358824083	515218166813	150
5157510000	5157510230	5157510496	515420800799	515174737914	150
5157510000	5157510230	5157510496	515420800799	515174737914	150
5196410000	5196410536	5196410845	519424168652	519223976777	150
5196410000	5196410536	5196410845	519424168652	519223976777	150
5094510000	5094510039	5094510817	509776358752	509186295473	150
5094510000	5094510039	5094510817	509776358752	509186295473	150
5097510000	5097510808	5097510882	509285661089	509333821084	150
5097510000	5097510808	5097510882	509285661089	509333821084	150
5089510000	5089510142	5089510773	508339758741	508726682634	150
5089510000	5089510142	5089510773	508339758741	508726682634	150
5106510000	5106510375	5106510985	510809219918	510747062167	150
5106510000	5106510375	5106510985	510809219918	510747062167	150
5135500000	5135500796	5135500159	513982539361	513777005074	150
5135500000	5135500796	5135500159	513982539361	513777005074	150
5138510000	5138510344	5138510288	513893062829	513825010729	150
5138510000	5138510344	5138510288	513893062829	513825010729	150
5104510000	5104510049	5104510910	510190329985	510910609536	150
5104510000	5104510049	5104510910	510190329985	510910609536	150
5136510000	5136510813	5136510290	513507936697	513291727655	150
5136510000	5136510813	5136510290	513507936697	513291727655	150
5298410000	5298410080	5298410835	529458663678	529954940050	150
5298410000	5298410080	5298410835	529458663678	529954940050	150
5278410000	5278410789	5278410635	527191141726	527281921051	150
5278410000	5278410789	5278410635	527191141726	527281921051	150
5309510000	5309510225	5309510006	530368473015	530074917061	150
5309510000	5309510225	5309510006	530368473015	530074917061	150
5326410000	5326410627	5326410162	532875608391	532888785407	150
5326410000	5326410627	5326410162	532875608391	532888785407	150
5326500000	5326500681	5326500094	532692412176	532492834748	150

5326500000	5326500681	5326500094	532692412176	532492834748	150
5296410000	5296410551	5296410855	529844141531	529426115698	150
5296410000	5296410551	5296410855	529844141531	529426115698	150
5303510000	5303510824	5303510927	530857339466	530457626924	150
5303510000	5303510824	5303510927	530857339466	530457626924	150
5321610000	5321610862	5321610190	532714738921	532019777119	150
5321610000	5321610862	5321610190	532714738921	532019777119	150
5289510000	5289510172	5289510793	528822056402	528807176783	150
5289510000	5289510172	5289510793	528822056402	528807176783	150
5226500000	5226500665	5226500084	522072316587	522707716555	150
5226500000	5226500665	5226500084	522072316587	522707716555	150
5229410000	5229410556	5229410132	522097018916	522380763609	150
5229410000	5229410556	5229410132	522097018916	522380763609	150
5262510000	5262510484	5262510512	526357776074	526431700255	150
5262510000	5262510484	5262510512	526357776074	526431700255	150
5231510000	5231510082	5231510209	523561922297	523065105634	150
5231510000	5231510082	5231510209	523561922297	523065105634	150
5264510000	5264510700	5264510536	526394677315	526401794306	150
5264510000	5264510700	5264510536	526394677315	526401794306	150
5237510000	5237510030	5237510303	523005418314	523985175068	150
5237510000	5237510030	5237510303	523005418314	523985175068	150
5225500000	5225500830	5225500070	522307177590	522153188500	150
5225500000	5225500830	5225500070	522307177590	522153188500	150
5238410000	5238410184	5238410243	523257554520	523899827862	150
5238410000	5238410184	5238410243	523257554520	523899827862	150
5421510000	5421510919	5421510131	542184528965	542466738430	150
5421510000	5421510919	5421510131	542184528965	542466738430	150
5456510000	5456510026	5456510516	545053172762	545193936815	150
5456510000	5456510026	5456510516	545053172762	545193936815	150
5416410000	5416410489	5416410073	541715195317	541974539347	150
5416410000	5416410489	5416410073	541715195317	541974539347	150
5429510000	5429510454	5429510218	542812996490	542809148998	150
5429510000	5429510454	5429510218	542812996490	542809148998	150
5365510000	5365510859	5365510583	536586670104	536516740786	150
5365510000	5365510859	5365510583	536586670104	536516740786	150
5385500000	5385500209	5385500681	538210372837	538941979813	150
5385500000	5385500209	5385500681	538210372837	538941979813	150
5385510000	5385510147	5385510804	538547349837	538412384384	150
5385510000	5385510147	5385510804	538547349837	538412384384	150
5360510000	5360510116	5360510527	536101444577	536302172866	150
5360510000	5360510116	5360510527	536101444577	536302172866	150
5554510000	5554510700	5554510466	555056860339	555804453100	150
5554510000	5554510700	5554510466	555056860339	555804453100	150
5527510000	5527510913	5527510233	552862908523	552867332012	150
5527510000	5527510913	5527510233	552862908523	552867332012	150
5558410000	5558410559	5558410470	555078162321	555895265501	150
5558410000	5558410559	5558410470	555078162321	555895265501	150

5580510000	5580510991	5580510742	558434809070	558998043199	150
5580510000	5580510991	5580510742	558434809070	558998043199	150
5540510000	5540510955	5540510347	554546046535	554666197268	150
5556510000	5556510045	5556510526	555181900643	555290723652	150
5556510000	5556510045	5556510526	555181900643	555290723652	150
5525510000	5525510368	5525510176	552754950612	552041318622	150
5525510000	5525510368	5525510176	552754950612	552041318622	150
5535510000	5535510563	5535510278	553475059437	553826717197	150
5535510000	5535510563	5535510278	553475059437	553826717197	150
5466500000	5466500169	5466500504	546274928325	546025225544	150
5466500000	5466500169	5466500504	546274928325	546025225544	150
5498410000	5498410117	5498410855	549912492794	549007041043	150
5498410000	5498410117	5498410855	549912492794	549007041043	150
5501510000	5501510432	5501510941	550292759158	550786259020	150
5501510000	5501510432	5501510941	550292759158	550786259020	150
5501610000	5501610616	5501610014	550533674987	550728216483	150
5501610000	5501610616	5501610014	550533674987	550728216483	150
5696410000	5696410605	5696410895	569956045767	569179942345	150
5696410000	5696410605	5696410895	569956045767	569179942345	150
5699410000	5699410337	5699410863	569777083536	569327901591	150
5699410000	5699410337	5699410863	569777083536	569327901591	150
5701510000	5701510473	5701510961	570047191199	570587409913	150
5701510000	5701510473	5701510961	570047191199	570587409913	150
5666510000	5666510161	5666510639	566817226184	566090672791	150
5666510000	5666510161	5666510639	566817226184	566090672791	150
5652510000	5652510373	5652510452	565626546484	565715059674	150
5652510000	5652510373	5652510452	565626546484	565715059674	150
5585500000	5585500241	5585500700	558597880351	558367789219	150
5585500000	5585500241	5585500700	558597880351	558367789219	150
5588410000	5588410996	5588410764	558458527831	558690090820	150
5588410000	5588410996	5588410764	558458527831	558690090820	150
5642510000	5642510999	5642510351	564388616684	564680992518	150
5642510000	5642510999	5642510351	564388616684	564680992518	150
5626410000	5626410679	5626410192	562289010744	562244891976	150
5626410000	5626410679	5626410192	562289010744	562244891976	150
5811610000	5811610770	5811610140	581372317213	581200651874	150
5811610000	5811610770	5811610140	581372317213	581200651874	150
5784510000	5784510994	5784510786	578899856667	578243511837	150
5784510000	5784510994	5784510786	578899856667	578243511837	150
5809510000	5809510252	5809510057	580516921085	580494175289	150
5809510000	5809510252	5809510057	580516921085	580494175289	150
5816510000	5816510585	5816510158	581260860049	581546382193	150
5816510000	5816510585	5816510158	581260860049	581546382193	150
5782510000	5782510441	5782510760	578147205405	578772687947	150
5782510000	5782510441	5782510760	578147205405	578772687947	150
5775510000	5775510114	5775510737	577724787345	577061640859	150
5775510000	5775510114	5775510737	577724787345	577061640859	150

5746510000	5746510975	5746510447	574101921858	574450359243	150
5746510000	5746510975	5746510447	574101921858	574450359243	150
5731510000	5731510613	5731510259	573592176868	573262101848	150
5731510000	5731510613	5731510259	573592176868	573262101848	150
5741610000	5741610381	5741610422	574193473385	574979018090	150
5741610000	5741610381	5741610422	574193473385	574979018090	150
5721510000	5721510977	5721510161	572444253226	572038834216	150
5721510000	5721510977	5721510161	572444253226	572038834216	150
5719510000	5719510405	5719510149	571262058364	571279179312	150
5719510000	5719510405	5719510149	571262058364	571279179312	150
5725510000	5725510400	5725510197	572358070720	572100883542	150
5725510000	5725510400	5725510197	572358070720	572100883542	150
5726500000	5726500741	5726500134	572243941960	572208053710	150
5726500000	5726500741	5726500134	572243941960	572208053710	150
5933510000	5933510301	5933510289	593065739426	593910845366	150
5933510000	5933510301	5933510289	593065739426	593910845366	150
5925510000	5925510462	5925510218	592233357897	592479677245	150
5925510000	5925510462	5925510218	592233357897	592479677245	150
5901510000	5901510517	5901510981	590704011688	590197071781	150
5901510000	5901510517	5901510981	590704011688	590197071781	150
5936510000	5936510828	5936510371	593813709893	593317989243	150
5936510000	5936510828	5936510371	593813709893	593317989243	150
5879510000	5879510106	5879510753	587793422016	587700237332	150
5879510000	5879510106	5879510753	587793422016	587700237332	150
5829510000	5829510525	5829510259	582221861246	582771611769	150
5829510000	5829510525	5829510259	582221861246	582771611769	150
5835500000	5835500908	5835500228	583029813677	583598971353	150
5835500000	5835500908	5835500228	583029813677	583598971353	150
5869410000	5869410034	5869410589	586926418244	586863344313	150
5869410000	5869410034	5869410589	586926418244	586863344313	150
5844510000	5844510589	5844510393	584016966828	584592065874	150
5844510000	5844510589	5844510393	584016966828	584592065874	150
5839410000	5839410736	5839410291	583694874247	583324856275	150
5839410000	5839410736	5839410291	583694874247	583324856275	150
5877410000	5877410625	5877410706	587375310719	587187582850	150
5877410000	5877410625	5877410706	587375310719	587187582850	150
5859510000	5859510971	5859510555	585644301969	585516835430	150
5859510000	5859510971	5859510555	585644301969	585516835430	150
6040510000	6040510863	6040510298	604995565964	604163305200	150
6040510000	6040510863	6040510298	604995565964	604163305200	150
6057410000	6057410468	6057410429	605096181752	605349203621	150
6057410000	6057410468	6057410429	605096181752	605349203621	150
6049510000	6049510737	6049510377	604738565812	604846306084	150
6049510000	6049510737	6049510377	604738565812	604846306084	150
6037410000	6037410168	6037410238	603914775404	603385243493	150
6037410000	6037410168	6037410238	603914775404	603385243493	150
6067410000	6067410477	6067410529	606613574422	606637105724	150

6067410000	6067410477	6067410529	606613574422	606637105724	150
6026410000	6026410578	6026410133	602928271247	602658399337	150
6026410000	6026410578	6026410133	602928271247	602658399337	150
6015510000	6015510246	6015510021	601606150049	601869238846	150
6015510000	6015510246	6015510021	601606150049	601869238846	150
6019410000	6019410344	6019410014	601247260142	601103090243	150
6019410000	6019410344	6019410014	601247260142	601103090243	150
5957510000	5957510226	5957510576	595810513822	595501965139	150
5957510000	5957510226	5957510576	595810513822	595501965139	150
5979510000	5979510124	5979510764	597191529327	597084980963	150
5979510000	5979510124	5979510764	597191529327	597084980963	150
5985500000	5985500301	5985500746	598508834489	598719221455	150
5985500000	5985500301	5985500746	598508834489	598719221455	150
5951610000	5951610103	5951610541	595201879141	595683855163	150
5951610000	5951610103	5951610541	595201879141	595683855163	150
5977410000	5977410641	5977410716	597794144630	597667503785	150
5977410000	5977410641	5977410716	597794144630	597667503785	150
5981610000	5981610172	5981610840	598423045537	598274475785	150
5981610000	5981610172	5981610840	598423045537	598274475785	150
5988410000	5988410069	5988410805	598768509507	598949982567	150
5988410000	5988410069	5988410805	598768509507	598949982567	150
6160510000	6160510081	6160510508	616244976983	616929828488	150
6160510000	6160510081	6160510508	616244976983	616929828488	150
6145500000	6145500959	6145500258	614351347128	614543567579	150
6145500000	6145500959	6145500258	614351347128	614543567579	150
6148410000	6148410297	6148410334	614990491041	614865448380	150
6148410000	6148410297	6148410334	614990491041	614865448380	150
6138410000	6138410168	6138410234	613476795473	613397463916	150
6138410000	6138410168	6138410234	613476795473	613397463916	150
6147410000	6147410307	6147410341	614328911158	614212245869	150
6147410000	6147410307	6147410341	614328911158	614212245869	150
6096410000	6096410522	6096410836	609185025768	609254217954	150
6096410000	6096410522	6096410836	609185025768	609254217954	150
6086500000	6086500359	6086500664	608207806486	608916726510	150
6086500000	6086500359	6086500664	608207806486	608916726510	150
6109410000	6109410230	6109410925	610248471661	610204288365	150
6109410000	6109410230	6109410925	610248471661	610204288365	150
6314510000	6314510181	6314510036	631217307655	631963685771	150
6314510000	6314510181	6314510036	631217307655	631963685771	150
6311510000	6311510601	6311510022	631406785648	631785026056	150
6311510000	6311510601	6311510022	631406785648	631785026056	150
6281510000	6281510445	6281510706	628052231962	628944217203	150
6281510000	6281510445	6281510706	628052231962	628944217203	150
6281610000	6281610052	6281610771	628120643298	628142831528	150
6281610000	6281610052	6281610771	628120643298	628142831528	150
6319510000	6319510338	6319510109	631326788036	631811027395	150
6319510000	6319510338	6319510109	631326788036	631811027395	150

6279410000	6279410106	6279410630	627204350406	627460459222	150
6279410000	6279410106	6279410630	627204350406	627460459222	150
6266500000	6266500140	6266500485	626552963374	626574945509	150
6266500000	6266500140	6266500485	626552963374	626574945509	150
6266510000	6266510164	6266510600	626418040229	626826928358	150
6266510000	6266510164	6266510600	626418040229	626826928358	150
6240510000	6240510898	6240510318	624529910906	624193459235	150
6240510000	6240510898	6240510318	624529910906	624193459235	150
6229510000	6229510497	6229510200	622098059092	622174059928	150
6229510000	6229510497	6229510200	622098059092	622174059928	150
6235500000	6235500815	6235500170	623090077743	623969025482	150
6235500000	6235500815	6235500170	623090077743	623969025482	150
6200510000	6200510448	6200510923	620236892120	620105826027	150
6200510000	6200510448	6200510923	620236892120	620105826027	150
6214510000	6214510163	6214510026	621116157975	621212007195	150
6214510000	6214510163	6214510026	621116157975	621212007195	150
6259410000	6259410872	6259410431	625473349294	625798859723	150
6259410000	6259410872	6259410431	625473349294	625798859723	150
6247510000	6247510080	6247510408	624465123724	624911787030	150
6260610000	6260610054	6260610585	626236766315	626698800416	150
6260610000	6260610054	6260610585	626236766315	626698800416	150
6212510000	6212510533	6212510008	621655755251	621340767259	150
6212510000	6212510533	6212510008	621655755251	621340767259	150
6417410000	6417410803	6417410078	641900372691	641863988344	150
6417410000	6417410803	6417410078	641900372691	641863988344	150
6395500000	6395500366	6395500793	639682942095	639175215032	150
6395500000	6395500366	6395500793	639682942095	639175215032	150
6388510000	6388510983	6388510807	638251895528	638337958582	150
6388510000	6388510983	6388510807	638251895528	638337958582	150
6403510000	6403510844	6403510938	640390128401	640675652856	150
6403510000	6403510844	6403510938	640390128401	640675652856	150
6419410000	6419410418	6419410053	641366390817	641439404754	150
6419410000	6419410418	6419410053	641366390817	641439404754	150
6392510000	6392510648	6392510822	639811637218	639094931372	150
6392510000	6392510648	6392510822	639811637218	639094931372	150
6345510000	6345510709	6345510365	634778253042	634100596844	150
6345510000	6345510709	6345510365	634778253042	634100596844	150
6362510000	6362510505	6362510523	636455914599	636410465595	150
6362510000	6362510505	6362510523	636455914599	636410465595	150
6337410000	6337410232	6337410266	633724620689	633780384842	150
6337410000	6337410232	6337410266	633724620689	633780384842	150
6369510000	6369510960	6369510605	636539648672	636233536171	150
6369510000	6369510960	6369510605	636539648672	636233536171	150
6366500000	6366500153	6366500495	636955099207	636507980983	150
6366500000	6366500153	6366500495	636955099207	636507980983	150
6359510000	6359510895	6359510507	635512325419	635222510255	150
6359510000	6359510895	6359510507	635512325419	635222510255	150

6350510000	6350510923	6350510427	635171830335	635029078897	150
6350510000	6350510923	6350510427	635171830335	635029078897	150
6386510000	6386510382	6386510814	638052978079	638467125903	150
6386510000	6386510382	6386510814	638052978079	638467125903	150
6344510000	6344510503	6344510343	634684685969	634367538461	150
6344510000	6344510503	6344510343	634684685969	634367538461	150
6367410000	6367410526	6367410560	636005274253	636470345052	150
6367410000	6367410526	6367410560	636005274253	636470345052	150
6374510000	6374510889	6374510646	637347664784	637317421169	150
6374510000	6374510889	6374510646	637347664784	637317421169	150
6527410000	6527410054	6527410187	652358719941	652799189830	150
6527410000	6527410054	6527410187	652358719941	652799189830	150
6545500000	6545500027	6545500298	654822356050	654422536767	150
6545500000	6545500027	6545500298	654822356050	654422536767	150
6525500000	6525500881	6525500101	652270061637	652465734637	150
6525500000	6525500881	6525500101	652270061637	652465734637	150
6565510000	6565510897	6565510607	656394509002	656556846414	150
6565510000	6565510897	6565510607	656394509002	656556846414	150
6509510000	6509510261	6509510028	650366425738	650579857697	150
6509510000	6509510261	6509510028	650366425738	650579857697	150
6462510000	6462510525	6462510533	646758100327	646076294140	150
6462510000	6462510525	6462510533	646758100327	646076294140	150
6451610000	6451610016	6451610492	645382679798	645065048215	150
6451610000	6451610016	6451610492	645382679798	645065048215	150
6467410000	6467410544	6467410570	646740178753	646535208928	150
6467410000	6467410544	6467410570	646740178753	646535208928	150
6485500000	6485500227	5485500691	648443768661	648537046466	150
6485500000	6485500227	5485500691	648443768661	648537046466	150
6489410000	6489410158	6489410748	648754479666	648386269323	150
6489410000	6489410158	6489410748	648754479666	648386269323	150
6502510000	6502510404	6502510938	650319530150	650552042016	150
6502510000	6502510404	6502510938	650319530150	650552042016	150
6474510000	6474510907	6474510656	647620802111	647585453958	150
6474510000	6474510907	6474510656	647620802111	647585453958	150
6661610000	6661610753	6661610612	666419371565	666568639097	150
6661610000	6661610753	6661610612	666419371565	666568639097	150
6649410000	6649410764	6649410371	664919641604	664849221307	150
6649410000	6649410764	6649410371	664919641604	664849221307	150
6681610000	6681610124	6681610811	668373942287	668231633428	150
6681610000	6681610124	6681610811	668373942287	668231633428	150
6647410000	6647410397	6647410388	664785292775	664670138395	150
6647410000	6647410397	6647410388	664785292775	664670138395	150
6653510000	6653510512	6653510459	665859780377	665403788280	150
6653510000	6653510512	6653510459	665859780377	665403788280	150
6572510000	6572510153	6572510644	657893594884	657488577123	150
6572510000	6572510153	6572510644	657893594884	657488577123	150
6583510000	6583510847	6583510750	658717330119	658871128030	150

6583510000	6583510847	6583510750	658717330119	658871128030	150
6586510000	6586510422	6586510834	658814524390	658260090272	150
6586510000	6586510422	6586510834	658814524390	658260090272	150
6618510000	6618510157	6618510141	661351968733	661185935610	150
6618510000	6618510157	6618510141	661351968733	661185935610	150
6764510000	6764510789	6764510588	676066144197	676065644883	150
6764510000	6764510789	6764510588	676066144197	676065644883	150
6790610000	6790610480	6790610935	679355197315	679333933546	150
6790610000	6790610480	6790610935	679355197315	679333933546	150
6797410000	6797410772	6797410896	679838072796	679116720090	150
6797410000	6797410772	6797410896	679838072796	679116720090	150
6798410000	6798410169	6798410885	679577575052	679541141346	150
6798410000	6798410169	6798410885	679577575052	679541141346	150
6768510000	6768510818	6768510648	676020061208	676232089944	150
6768510000	6768510818	6768510648	676020061208	676232089944	150
6755510000	6755510843	6755510516	675721702432	675586741422	150
6739410000	6739410719	6739410282	673877889340	673592853560	150
6739410000	6739410719	6739410282	673877889340	673592853560	150
6717410000	6717410851	6717410107	671096095357	671248519499	150
6717410000	6717410851	6717410107	671096095357	671248519499	150
6691510000	6691510725	6691510846	669427419943	669775748597	150
6691510000	6691510725	6691510846	669427419943	669775748597	150
6721610000	6721610932	6721610229	672997814789	672283350328	150
6721610000	6721610932	6721610229	672997814789	672283350328	150
6715510000	6715510233	6715510095	671038155557	671781095560	150
6715510000	6715510233	6715510095	671038155557	671781095560	150
6694510000	6694510013	6694510878	669136272476	669673006672	150
6694510000	6694510013	6694510878	669136272476	669673006672	150
6751510000	6751510110	6751510456	675203781906	675976110851	150
6751510000	6751510110	6751510456	675203781906	675976110851	150
6751610000	6751610068	6751610522	675242651391	675367207420	150
6751610000	6751610068	6751610522	675242651391	675367207420	150
6695500000	6695500412	6695500823	669976089709	669788897117	150
6695500000	6695500412	6695500823	669976089709	669788897117	150
6892510000	6892510738	6892510873	689318181270	689918748619	150
6892510000	6892510738	6892510873	689318181270	689918748619	150
6925500000	6925500950	6925500141	692348513764	692914379260	150
6925500000	6925500950	6925500141	692348513764	692914379260	150
6899510000	6899510329	6899510952	689741002815	689433411766	150
6899510000	6899510329	6899510952	689741002815	689433411766	150
6878410000	6878410874	6878410695	687999526528	687428315955	150
6878410000	6878410874	6878410695	687999526528	687428315955	150
6868410000	6868410724	6868410597	686677946434	686021436256	150
6868410000	6868410724	6868410597	686677946434	686021436256	150
6826410000	6826410714	6826410213	682807163277	682666270494	150
6826410000	6826410714	6826410213	682807163277	682666270494	150
6841610000	6841610910	6841610433	684836164278	684016743139	150

6841610000	6841610910	6841610433	684836164278	684016743139	150
6860510000	6860510174	6860510576	686442545027	686911832878	150
6860510000	6860510174	6860510576	686442545027	686911832878	150
6827510000	6827510967	6827510264	682386286177	682218502064	150
6827510000	6827510967	6827510264	682386286177	682218502064	150
6861510000	6861510167	6861510566	686981423567	686373828084	150
6861510000	6861510167	6861510566	686981423567	686373828084	150
6828510000	6828510293	6828510259	682078553139	682423359940	150
6828510000	6828510293	6828510259	682078553139	682423359940	150
6850610000	6850610011	6850610547	685147420501	685718912028	150
6850610000	6850610011	6850610547	685147420501	685718912028	150
6840510000	6840510832	6840510377	684617710993	684880378072	150
6840510000	6840510832	6840510377	684617710993	684880378072	150
6857410000	6857410441	6857410509	685601580561	685794693215	150
6857410000	6857410441	6857410509	685601580561	685794693215	150
6816410000	6816410543	6816410113	681144131471	681650763645	150
6816410000	6816410543	6816410113	681144131471	681650763645	150
7023510000	7023510061	7023510101	702538421723	702798249166	150
7023510000	7023510061	7023510101	702538421723	702798249166	150
7045510000	7045510655	7045510333	704799948625	704950608568	150
7045510000	7045510655	7045510333	704799948625	704950608568	150
7016500000	7016500540	7016500966	701732243345	701151537769	150
7016500000	7016500540	7016500966	701732243345	701151537769	150
7031610000	7031610992	7031610260	703425035933	703249862703	150
7031610000	7031610992	7031610260	703425035933	703249862703	150
7037510000	7037510004	7037510286	703008522419	703512961960	150
7037510000	7037510004	7037510286	703008522419	703512961960	150
7007410000	7007410671	7007410937	700596380483	700998718979	150
7007410000	7007410671	7007410937	700596380483	700998718979	150
6996510000	6996510672	6996510974	699572357314	699289804974	150
6996510000	6996510672	6996510974	699572357314	699289804974	150
7011510000	7011510540	7011510993	701040883950	701739274105	150
7011510000	7011510540	7011510993	701040883950	701739274105	150
6991610000	6991610879	6991610941	699353636342	699113168994	150
6991610000	6991610879	6991610941	699353636342	699113168994	150
6969410000	6969410057	6969410600	696590262410	696754825087	150
6969410000	6969410057	6969410600	696590262410	696754825087	150
6939410000	6939410759	6939410301	693073364541	693615155801	150
6939410000	6939410759	6939410301	693073364541	693615155801	150
6958410000	6958410560	6958410509	695616686253	695048916861	150
6958410000	6958410560	6958410509	695616686253	695048916861	150
6959410000	6959410004	6959410500	695613521700	695876115770	150
6959410000	6959410004	6959410500	695613521700	695876115770	150
6956500000	6956500091	6956500455	695117717830	695914857211	150
6956500000	6956500091	6956500455	695117717830	695914857211	150
6990610000	6990610516	6990610955	699161925166	699615866904	150
6990610000	6990610516	6990610955	699161925166	699615866904	150

6993510000	6993510014	6993510892	699646984897	699677488342	150
6993510000	6993510014	6993510892	699646984897	699677488342	150
6950610000	6950610027	6950610557	695689822195	695206382398	150
6950610000	6950610027	6950610557	695689822195	695206382398	150
7169510000	7169510932	7169510587	716150874022	716878043096	150
7169510000	7169510932	7169510587	716150874022	716878043096	150
7156510000	7156510979	7156510489	715968050251	715362506062	150
7156510000	7156510979	7156510489	715968050251	715362506062	150
7141510000	7141510695	7141510299	714820867636	714527403215	150
7141510000	7141510695	7141510299	714820867636	714527403215	150
7149510000	7149510695	7149510388	714253444366	714623827933	150
7149510000	7149510695	7149510388	714253444366	714623827933	150
7128410000	7128410057	7128410135	712097595294	712448942379	150
7128410000	7128410057	7128410135	712097595294	712448942379	150
7176410000	7176410292	7176410647	717924310291	717299252400	150
7176410000	7176410292	7176410647	717924310291	717299252400	150
7095500000	7095500320	7095500760	709454423899	709053654251	150
7095500000	7095500320	7095500760	709454423899	709053654251	150
7071610000	7071610824	7071610652	707852563627	707110112005	150
7071610000	7071610824	7071610652	707852563627	707110112005	150
7097410000	7097410666	7097410828	709959218624	709510841045	150
7097410000	7097410666	7097410828	709959218624	709510841045	150
7113510000	7113510890	7113510010	711698737961	711662264412	150
7113510000	7113510890	7113510010	711698737961	711662264412	150
7088510000	7088510939	7088510777	708021298571	708505732865	150
7088510000	7088510939	7088510777	708021298571	708505732865	150
7107510000	7107510609	7107510995	710318615146	710530213785	150
7107510000	7107510609	7107510995	710318615146	710530213785	150
7082510000	7082510251	7082510693	708247688709	708797651468	150
7082510000	7082510251	7082510693	708247688709	708797651468	150
7114510000	7114510149	7114510017	711541747190	711513078403	150
7114510000	7114510149	7114510017	711541747190	711513078403	150
7086410000	7086410440	7086410738	708911684259	708461365447	150
7086410000	7086410440	7086410738	708911684259	708461365447	150
7108410000	7108410840	7108410937	710628740532	710204183736	150
7108410000	7108410840	7108410937	710628740532	710204183736	150
7288510000	7288510971	7288510798	728755099691	728240047062	150
7288510000	7288510971	7288510798	728755099691	728240047062	150
7249410000	7249410818	7249410332	724292903603	724161312993	150
7249410000	7249410818	7249410332	724292903603	724161312993	150
7280510000	7280510937	7280510715	728549520948	728289320647	150
7280510000	7280510937	7280510715	728549520948	728289320647	150
7269410000	7269410926	7269410531	726857727130	726450921555	150
7269410000	7269410926	7269410531	726857727130	726450921555	150
7287410000	7287410694	7287410748	728317866218	728524707819	150
7287410000	7287410694	7287410748	728317866218	728524707819	150
7248510000	7248510475	7248510400	724673285761	724730126379	150

7248510000	7248510475	7248510400	724673285761	724730126379	150
7216510000	7216510572	7216510098	721146931875	721358927848	150
7216510000	7216510572	7216510098	721146931875	721358927848	150
7181610000	7181610017	7181610762	718865387004	718844619678	150
7181610000	7181610017	7181610762	718865387004	718844619678	150
7203510000	7203510811	7203510917	720180532305	720385058028	150
7203510000	7203510811	7203510917	720180532305	720385058028	150
7237410000	7237410212	7237410258	723249156380	723548789125	150
7237410000	7237410212	7237410258	723249156380	723548789125	150
7196510000	7196510530	7196510895	719816420902	719198791745	150
7196510000	7196510530	7196510895	719816420902	719198791745	150
7199510000	7199510315	7199510884	719559053831	719224070723	150
7199510000	7199510315	7199510884	719559053831	719224070723	150
7208510000	7208510019	7208510003	720054345413	720783145232	150
7208510000	7208510019	7208510003	720054345413	720783145232	150
7227510000	7227510864	7227510205	722608895085	722591374450	150
7227510000	7227510864	7227510205	722608895085	722591374450	150
7222510000	7222510725	7222510111	722162911057	722453000539	150
7222510000	7222510725	7222510111	722162911057	722453000539	150
7197410000	7197410683	7197410838	719632012471	719980161713	150
7197410000	7197410683	7197410838	719632012471	719980161713	150
7200610000	7200610389	7200610993	720515835374	720274009971	150
7200610000	7200610389	7200610993	720515835374	720274009971	150
7411610000	7411610702	7411610103	741575157911	741005820902	150
7411610000	7411610702	7411610103	741575157911	741005820902	150
7402610000	7402610976	7402610991	740599577833	740078332412	150
7402610000	7402610976	7402610991	740599577833	740078332412	150
7372510000	7372510122	7372510625	737462251121	737110806311	150
7372510000	7372510122	7372510625	737462251121	737110806311	150
7409410000	7409410288	7409410956	740840049982	740158712557	150
7409410000	7409410288	7409410956	740840049982	740158712557	150
7412510000	7412510570	7412510029	741923820875	741790720704	150
7412510000	7412510570	7412510029	741923820875	741790720704	150
7428410000	7428410053	7428410165	742304817501	742077001567	150
7428410000	7428410053	7428410165	742304817501	742077001567	150
7406510000	7406510433	7406510018	740012483875	740144605096	150
7406510000	7406510433	7406510018	740012483875	740144605096	150
7397410000	7397410713	7397410857	739823426667	739420629823	150
7397410000	7397410713	7397410857	739823426667	739420629823	150
7359410000	7359410891	7359410442	735436760239	735143965836	150
7359410000	7359410891	7359410442	735436760239	735143965836	150
7312510000	7312510553	7312510019	731010942655	731427439467	150
7312510000	7312510553	7312510019	731010942655	731427439467	150
7351610000	7351610003	7351610483	735270002981	735334237855	150
7351610000	7351610003	7351610483	735270002981	735334237855	150
7519410000	7519410437	7519410064	751561866009	751802344008	150
7519410000	7519410437	7519410064	751561866009	751802344008	150

7498510000	7498510080	7498510918	749148756697	749130302544	150
7498510000	7498510080	7498510918	749148756697	749130302544	150
7530510000	7530510774	7530510249	753516969308	753017993232	150
7530510000	7530510774	7530510249	753516969308	753017993232	150
7531510000	7531510582	7531510241	753151634854	753418192092	150
7531510000	7531510582	7531510241	753151634854	753418192092	150
7500510000	7500510512	7500510953	750853374029	750853549152	150
7500510000	7500510512	7500510953	750853374029	750853549152	150
7500610000	7500610435	7500610023	750053186543	750284569406	150
7500610000	7500610435	7500610023	750053186543	750284569406	150
7526500000	7526500715	7526500116	752861366619	752994095371	150
7526500000	7526500715	7526500116	752861366619	752994095371	150
7536410000	7536410818	7536410285	753080212257	753565701155	150
7536410000	7536410818	7536410285	753080212257	753565701155	150
7536500000	7536500867	7536500216	753784841687	753757322365	150
7536500000	7536500867	7536500216	753784841687	753757322365	150
7536510000	7536510762	7536510332	753616954367	753215416286	150
7536510000	7536510762	7536510332	753616954367	753215416286	150
7507510000	7507510679	7507510036	750877746920	750630748359	150
7507510000	7507510679	7507510036	750877746920	750630748359	150
7492510000	7492510668	7492510833	749776577435	749571160312	150
7492510000	7492510668	7492510833	749776577435	749571160312	150
7436500000	7436500852	7436500206	743565949137	743405406220	150
7436500000	7436500852	7436500206	743565949137	743405406220	150
7477410000	7477410563	7477410669	747418094146	747587652487	150
7477410000	7477410563	7477410669	747418094146	747587652487	150
7432510000	7432510945	7432510233	743546899831	743025354934	150
7432510000	7432510945	7432510233	743546899831	743025354934	150
7481610000	7481610093	7481610792	748810687858	748856110333	150
7481610000	7481610093	7481610792	748810687858	748856110333	150
7459510000	7459510914	7459510518	745160658152	745971163587	150
7459510000	7459510914	7459510518	745160658152	745971163587	150
7649510000	7649510780	7649510438	764788867015	764875399737	150
7649510000	7649510780	7649510438	764788867015	764875399737	150
7646500000	7646500962	7646500326	764816717980	764948531079	150
7646500000	7646500962	7646500326	764816717980	764948531079	150
7637510000	7637510980	7637510348	763632132471	763406868458	150
7637510000	7637510980	7637510348	763632132471	763406868458	150
7569410000	7569410981	7569410561	756027434490	756309915472	150
7569410000	7569410981	7569410561	756027434490	756309915472	150
7560510000	7560510119	7560510548	756214681605	756715016981	150
7560510000	7560510119	7560510548	756214681605	756715016981	150
7578410000	7578410817	7578410667	757487648290	757502039291	150
7578410000	7578410817	7578410667	757487648290	757502039291	150
7568510000	7568510785	7568510630	756713447923	756273872393	150
7568510000	7568510785	7568510630	756713447923	756273872393	150
7574510000	7574510926	7574510667	757450180782	757270911182	150

7574510000	7574510926	7574510667	757450180782	757270911182	150
7767410000	7767410596	7767410600	776358632241	776804590514	150
7767410000	7767410596	7767410600	776358632241	776804590514	150
7754510000	7754510738	7754510488	775487179348	775008515785	150
7754510000	7754510738	7754510488	775487179348	775008515785	150
7771510000	7771510348	7771510657	777307226868	777742831848	150
7771510000	7771510348	7771510657	777307226868	777742831848	150
7771610000	7771610949	7771610722	777872878259	777059953733	150
7771610000	7771610949	7771610722	777872878259	777059953733	150
7759510000	7759510959	7759510547	775733389915	775976904197	150
7759510000	7759510959	7759510547	775733389915	775976904197	150
7774510000	7774510826	7774510688	777973305719	777477324010	150
7774510000	7774510826	7774510688	777973305719	777477324010	150
7728410000	7728410103	7728410194	772592802554	772365573420	150
7728410000	7728410103	7728410194	772592802554	772365573420	150
7728510000	7728510275	7728510250	772563521367	772744484967	150
7728510000	7728510275	7728510250	772563521367	772744484967	150
7675510000	7675510096	7675510728	767552126417	767091693932	150
7675510000	7675510096	7675510728	767552126417	767091693932	150
7691610000	7691610304	7691610912	769176662923	769543998644	150
7691610000	7691610304	7691610912	769176662923	769543998644	150
7676410000	7676410373	7676410696	767128150142	767940269250	150
7676410000	7676410373	7676410696	767128150142	767940269250	150
7708510000	7708510000	7708510053	770187222759	770991485699	150
7708510000	7708510000	7708510053	770187222759	770991485699	150
7687410000	7687410764	7687410787	768104913849	768469933906	150
7687410000	7687410764	7687410787	768104913849	768469933906	150
7729510000	7729510513	7729510250	772903588905	772349335664	150
7729510000	7729510513	7729510250	772903588905	772349335664	150
7719410000	7719410468	7719410084	771773241191	771680769864	150
7719410000	7719410468	7719410084	771773241191	771680769864	150
7668410000	7668410691	7668410578	766527282868	766360950788	150
7668410000	7668410691	7668410578	766527282868	766360950788	150
7697510000	7697510917	7697510943	769423543085	769730601077	150
7697510000	7697510917	7697510943	769423543085	769730601077	150
7698410000	7698410156	7698410876	769398284424	769854194165	150
7698410000	7698410156	7698410876	769398284424	769854194165	150
7845510000	7845510690	7845510422	784324486704	784354137990	150
7845510000	7845510690	7845510422	784324486704	784354137990	150
7859410000	7859410987	7859410491	785458084587	785119727801	150
7859410000	7859410987	7859410491	785458084587	785119727801	150
7805510000	7805510215	7805510001	780975752980	780405303174	150
7805510000	7805510215	7805510001	780975752980	780405303174	150
7811600000	7811600608	7811600063	781186991472	781652838251	150
7811600000	7811600608	7811600063	781186991472	781652838251	150
7827410000	7827410109	7827410220	782630726841	782998603512	150
7827410000	7827410109	7827410220	782630726841	782998603512	150

7836510000	7836510813	7836510363	783559360727	783945581009	150
7836510000	7836510813	7836510363	783559360727	783945581009	150
7796410000	7796410623	7796410907	779360725868	779581341895	150
7796410000	7796410623	7796410907	779360725868	779581341895	150
7907510000	7907510748	7907510076	790933313047	790645885110	150
7907510000	7907510748	7907510076	790933313047	790645885110	150
7851610000	7851610086	7851610533	785266030516	785109485914	150
7851610000	7851610086	7851610533	785266030516	785109485914	150
7911610000	7911610789	7911610152	791453094682	791639247143	150
7911610000	7911610789	7911610152	791453094682	791639247143	150
7871510000	7871510367	7871510667	787604473855	787162159511	150
7871510000	7871510367	7871510667	787604473855	787162159511	150
7833510000	7833510286	7833510281	783097391617	783379593316	150
7833510000	7833510286	7833510281	783097391617	783379593316	150
7990510000	7990510308	7990510882	799571599871	799863343920	150
7990510000	7990510308	7990510882	799571599871	799863343920	150
7929410000	7929410577	7929410203	792018053625	792975274299	150
7929410000	7929410577	7929410203	792018053625	792975274299	150
7963510000	7963510619	7963510589	796142179815	796034470175	150
7963510000	7963510619	7963510589	796142179815	796034470175	150
8022510000	8022510690	8022510092	802303734880	802462771027	150
8022510000	8022510690	8022510092	802303734880	802462771027	150
7921610000	7921610973	7921610250	792083953454	792021010622	150
7921610000	7921610973	7921610250	792083953454	792021010622	150
8025500000	8025500800	8025500053	802155542784	802231842327	150
8025500000	8025500800	8025500053	802155542784	802231842327	150
7999410000	7999410395	7999410895	799944023015	799048650462	150
7999410000	7999410395	7999410895	799944023015	799048650462	150
7941610000	7941610934	7941610444	794176245350	794718685564	150
7941610000	7941610934	7941610444	794176245350	794718685564	150
7957410000	7957410462	7957410520	795200559696	795284746915	150
7957410000	7957410462	7957410520	795200559696	795284746915	150
7931610000	7931610242	7931610345	793804954504	793522474152	150
7931610000	7931610242	7931610345	793804954504	793522474152	150
8019510000	8019510292	8019510080	801483034262	801953110340	150
8019510000	8019510292	8019510080	801483034262	801953110340	150
7944510000	7944510608	7944510406	794382452049	794888512225	150
7944510000	7944510608	7944510406	794382452049	794888512225	150
7978410000	7978410893	7978410706	797496785250	797708439767	150
7978410000	7978410893	7978410706	797496785250	797708439767	150
8035500000	8035500785	8035500153	803895119343	803560385914	150
8035500000	8035500785	8035500153	803895119343	803560385914	150
7966410000	7966410257	7966410626	796528661324	796321335426	150
7966410000	7966410257	7966410626	796528661324	796321335426	150
7966510000	7966510213	7966510671	796516128554	796443810589	150
7966510000	7966510213	7966510671	796516128554	796443810589	150
7926410000	7926410734	7926410225	792561154342	792705779324	150

7926410000	7926410734	7926410225	792561154342	792705779324	150
7916500000	7916500622	7916500056	791812532508	791826405557	150
7916500000	7916500622	7916500056	791812532508	791826405557	150
7956510000	7956510116	7956510570	795142000627	795671532737	150
7956510000	7956510116	7956510570	795142000627	795671532737	150
8000510000	8000510415	8000510906	800566938197	800130626568	150
8000510000	8000510415	8000510906	800566938197	800130626568	150
8002510000	8002510798	8002510889	800232362786	800330879203	150
8002510000	8002510798	8002510889	800232362786	800330879203	150
8159410000	8159410857	8159410423	815834148884	815098711250	150
8159410000	8159410857	8159410423	815834148884	815098711250	150
8121510000	8121510868	8121510103	812084904290	812716044474	150
8121510000	8121510868	8121510103	812084904290	812716044474	150
8095510000	8095510276	8095510877	809721496776	809136947285	150
8095510000	8095510276	8095510877	809721496776	809136947285	150
8134510000	8134510404	8134510221	813376507494	813904007794	150
8134510000	8134510404	8134510221	813376507494	813904007794	150
8153510000	8153510428	8153510413	815303342009	815391968610	150
8153510000	8153510428	8153510413	815303342009	815391968610	150
8102610000	8102610922	8102610963	810876677740	810112010579	150
8102610000	8102610922	8102610963	810876677740	810112010579	150
8131610000	8131610095	8131610271	813657327363	813252000555	150
8131610000	8131610095	8131610271	813657327363	813252000555	150
8092510000	8092510596	8092510793	809086712806	809661515262	150
8092510000	8092510596	8092510793	809086712806	809661515262	150
8162510000	8162510470	8162510505	816350889027	816121946577	150
8162510000	8162510470	8162510505	816350889027	816121946577	150
8148510000	8148510460	8148510390	814420130990	814145850970	150
8148510000	8148510460	8148510390	814420130990	814145850970	150
8108510000	8108510004	8108510994	810893749316	810765741216	150
8108510000	8108510004	8108510994	810893749316	810765741216	150
8110510000	8110510617	8110510013	811460314316	811258462394	150
8110510000	8110510617	8110510013	811460314316	811258462394	150
8126500000	8126500656	8126500077	812344395919	812087320524	150
8126500000	8126500656	8126500077	812344395919	812087320524	150
8285500000	8285500199	8285500674	828473301200	828229693112	150
8285500000	8285500199	8285500674	828473301200	828229693112	150
8228410000	8228410075	8228410146	822493247128	822891604601	150
8228410000	8228410075	8228410146	822493247128	822891604601	150
8201610000	8201610575	8201610987	820774578667	820595887194	150
8201610000	8201610575	8201610987	820774578667	820595887194	150
8179410000	8179410094	8179410622	817018176718	817068920721	150
8179410000	8179410094	8179410622	817018176718	817068920721	150
8339510000	8339510618	8339510310	833474138765	833550065585	150
8339510000	8339510618	8339510310	833474138765	833550065585	150
8218410000	8218410915	8218410050	821388265650	821498742217	150
8218410000	8218410915	8218410050	821388265650	821498742217	150

8234510000	8234510421	8234510231	823391603457	823940399654	150
8234510000	8234510421	8234510231	823391603457	823940399654	150
8224510000	8224510332	8224510129	822494212195	822448091833	150
8224510000	8224510332	8224510129	822494212195	822448091833	150
8174510000	8174510858	8174510628	817848508165	817591837130	150
8174510000	8174510858	8174510628	817848508165	817591837130	150
8217410000	8217410777	8217410060	821989589265	821895940325	150
8217410000	8217410777	8217410060	821989589265	821895940325	150
8202610000	8202610938	8202610972	820073701439	820861311378	150
8202610000	8202610938	8202610972	820073701439	820861311378	150
8176510000	8176510252	8176510694	817159299420	817526571771	150
8176510000	8176510252	8176510694	817159299420	817526571771	150
8261510000	8261510206	8261510509	826050436178	826879353951	150
8261510000	8261510206	8261510509	826050436178	826879353951	150
8277410000	8277410532	8277410650	827458608808	827635431242	150
8277410000	8277410532	8277410650	827458608808	827635431242	150
8195500000	8195500336	8195500773	819543172285	819668318512	150
8195500000	8195500336	8195500773	819543172285	819668318512	150
8169410000	8169410909	8169410522	816666140289	816791623613	150
8169410000	8169410909	8169410522	816666140289	816791623613	150
8253510000	8253510444	8253510423	825462668364	825958193070	150
8253510000	8253510444	8253510423	825462668364	825958193070	150
8227410000	8227410008	8227410159	822330738058	822754646939	150
8227410000	8227410008	8227410159	822330738058	822754646939	150
8418410000	8418410949	8418410069	841934805961	841881963274	150
8418410000	8418410949	8418410069	841934805961	841881963274	150
8309410000	8309410272	8309410947	830548977551	830044827627	150
8309410000	8309410272	8309410947	830548977551	830044827627	150
8322510000	8322510744	8322510123	832683319004	832654375063	150
8322510000	8322510744	8322510123	832683319004	832654375063	150
8297410000	8297410700	8297410848	829917136855	829590677854	150
8297410000	8297410700	8297410848	829917136855	829590677854	150
8297510000	8297510849	8297510905	829265499452	829761494728	150
8297510000	8297510849	8297510905	829265499452	829761494728	150
8340510000	8340510923	8340510330	834420256834	834660402098	150
8340510000	8340510923	8340510330	834420256834	834660402098	150
8299510000	8299510333	8299510894	829633713284	829214591004	150
8299510000	8299510333	8299510894	829633713284	829214591004	150
8329410000	8329410580	8329410144	832374389439	832480565470	150
8329410000	8329410580	8329410144	832374389439	832480565470	150
8391610000	8391610248	8391610883	839213237800	839572382047	150
8391610000	8391610248	8391610883	839213237800	839572382047	150
8307510000	8307510644	8307510017	830214820223	830830253244	150
8307510000	8307510644	8307510017	830214820223	830830253244	150
8537510000	8537510966	8537510338	853056198350	853838843624	150
8537510000	8537510966	8537510338	853056198350	853838843624	150
8529510000	8529510475	8529510231	852657319258	852029955467	150

8529510000	8529510475	8529510231	852657319258	852029955467	150
8543510000	8543510320	8543510351	854780346033	854791143641	150
8543510000	8543510320	8543510351	854780346033	854791143641	150
8467410000	8467410547	8467410572	846673087450	846310641917	150
8467410000	8467410547	8467410572	846673087450	846310641917	150
8467510000	8467510319	8467510628	846364701820	846419140839	150
8467510000	8467510319	8467510628	846364701820	846419140839	150
8426500000	8426500701	8426500107	842471555020	842860461997	150
8426500000	8426500701	8426500107	842471555020	842860461997	150
8539410000	8539410691	8539410263	853572298485	853986757984	150
8539410000	8539410691	8539410263	853572298485	853986757984	150
8487410000	8487410731	8487410769	848324834653	848619343690	150
8487410000	8487410731	8487410769	848324834653	848619343690	150
8487510000	8487510514	8487510826	848258481290	848426277284	150
8487510000	8487510514	8487510826	848258481290	848426277284	150
8518410000	8518410962	8518410079	851224466337	851424976440	150
8518410000	8518410962	8518410079	851224466337	851424976440	150
8430510000	8430510756	8430510240	843582282014	843208511933	150
8430510000	8430510756	8430510240	843582282014	843208511933	150
8447410000	8447410366	8447410371	844071352309	844763266294	150
8447410000	8447410366	8447410371	844071352309	844763266294	150
8447510000	8447510113	8447510429	844961917545	844941358801	150
8447510000	8447510113	8447510429	844961917545	844941358801	150
8477410000	8477410565	8477410670	847642721962	847132184925	150
8477410000	8477410565	8477410670	847642721962	847132184925	150
8493510000	8493510930	8493510843	849860293742	849370589701	150
8493510000	8493510930	8493510843	849860293742	849370589701	150
8504510000	8504510119	8504510957	850933373269	850257144822	150
8504510000	8504510119	8504510957	850933373269	850257144822	150
8490510000	8490510173	8490510833	849420636024	849918647787	150
8490510000	8490510173	8490510833	849420636024	849918647787	150
8521510000	8521510946	8521510144	852081770958	852266304124	150
8521510000	8521510946	8521510144	852081770958	852266304124	150
8545510000	8545510743	8545510389	854109985830	854597258038	150
8545510000	8545510743	8545510389	854109985830	854597258038	150
8422510000	8422510764	8422510133	842184767436	842831094861	150
8422510000	8422510764	8422510133	842184767436	842831094861	150
8531610000	8531610171	8531610307	853724027461	853580026888	150
8531610000	8531610171	8531610307	853724027461	853580026888	150
8645510000	8645510658	8645510400	864633875354	864180053086	150
8645510000	8645510658	8645510400	864633875354	864180053086	150
8631600000	8631600824	8631600249	863115329781	863065614381	150
8635510000	8635510584	8635510291	863414769448	863161646520	150
8635510000	8635510584	8635510291	863414769448	863161646520	150
8570510000	8570510317	8570510647	857816897046	857750866269	150
8570510000	8570510317	8570510647	857816897046	857750866269	150
8658510000	8658510630	8658510542	865471533801	865472156551	150

8658510000	8658510630	8658510542	865471533801	865472156551	150
8549510000	8549510765	8549510429	854807352506	854528098587	150
8549510000	8549510765	8549510429	854807352506	854528098587	150
8665510000	8665510917	8665510620	866205917479	866287709643	150
8665510000	8665510917	8665510620	866205917479	866287709643	150
8557410000	8557410398	8557410481	855826147316	855386931271	150
8557410000	8557410398	8557410481	855826147316	855386931271	150
8571610000	8571610916	8571610703	857363517969	857181289975	150
8571610000	8571610916	8571610703	857363517969	857181289975	150
8639510000	8639510670	8639510340	863190204615	863289080331	150
8639510000	8639510670	8639510340	863190204615	863289080331	150
8687510000	8687510747	8687510845	868144385472	868132033050	150
8687510000	8687510747	8687510845	868144385472	868132033050	150
8731610000	8731610207	8731610327	873746310896	873562995380	150
8731610000	8731610207	8731610327	873746310896	873562995380	150
8714510000	8714510251	8714510080	871942699748	871803994411	150
8714510000	8714510251	8714510080	871942699748	871803994411	150
8732510000	8732510839	8732510264	873805651925	873448941380	150
8732510000	8732510839	8732510264	873805651925	873448941380	150
8709410000	8709410340	8709410987	870080037342	870843676917	150
8709410000	8709410340	8709410987	870080037342	870843676917	150
8748410000	8748410416	8748410395	874676134316	874580214478	150
8748410000	8748410416	8748410395	874676134316	874580214478	150
8797510000	8797510936	8797510954	879162119215	879390195817	150
8797510000	8797510936	8797510954	879162119215	879390195817	150
8697410000	8697410760	8697410888	869110489675	869929712602	150
8697410000	8697410760	8697410888	869110489675	869929712602	150
8786410000	8786410482	8786410808	878348253059	878809440866	150
8786410000	8786410482	8786410808	878348253059	878809440866	150
8688410000	8688410020	8688410777	868047025115	868710298118	150
8688410000	8688410020	8688410777	868047025115	868710298118	150
8678510000	8678510884	8678510738	867864671431	867383776753	150
8678510000	8678510884	8678510738	867864671431	867383776753	150
8679410000	8679410194	8679410671	867403474953	867481192765	150
8679410000	8679410194	8679410671	867403474953	867481192765	150
8778410000	8778410858	8778410687	877933753108	877509418242	150
8778410000	8778410858	8778410687	877933753108	877509418242	150
8753510000	8753510407	8753510470	875502920409	875291884548	150
8753510000	8753510407	8753510470	875502920409	875291884548	150
8749410000	8749410787	8749410383	874901431323	874649895071	150
8749410000	8749410787	8749410383	874901431323	874649895071	150
8749510000	8749510799	8749510449	874674481017	874528800615	150
8749510000	8749510799	8749510449	874674481017	874528800615	150
8729410000	8729410545	8729410184	872566325247	872638068951	150
8729410000	8729410545	8729410184	872566325247	872638068951	150
8897410000	8897410790	8897410908	889482501066	889771476249	150
8897410000	8897410790	8897410908	889482501066	889771476249	150

8877510000	8877510415	8877510766	887284083867	887130550673	150
8877510000	8877510415	8877510766	887284083867	887130550673	150
8847410000	8847410436	8847410410	884566181992	884736822214	150
8847410000	8847410436	8847410410	884566181992	884736822214	150
8836410000	8836410871	8836410316	883514344063	883509052042	150
8836410000	8836410871	8836410316	883514344063	883509052042	150
8881510000	8881510578	8881510768	888822776565	888439013507	150
8881510000	8881510578	8881510768	888822776565	888439013507	150
8867410000	8867410614	8867410611	886773490940	886075828544	150
8867410000	8867410614	8867410611	886773490940	886075828544	150
8813510000	8813510024	8813510082	881664418798	881797194020	150
8813510000	8813510024	8813510082	881664418798	881797194020	150
8898410000	8898410187	8898410897	889636558867	889258376159	150
8898410000	8898410187	8898410897	889636558867	889258376159	150
8858510000	8858510663	8858510563	885745977751	885786209825	150
8858510000	8858510663	8858510563	885745977751	885786209825	150
8816500000	8816500609	8816500047	881840187604	881376107733	150
8816500000	8816500609	8816500047	881840187604	881376107733	150
8808410000	8808410845	8808410009	880740217845	880037876705	150
8808410000	8808410845	8808410009	880740217845	880037876705	150
8879410000	8879410051	8879410691	887038835375	887257294564	150
8879410000	8879410051	8879410691	887038835375	887257294564	150
9028510000	9028510240	9028510183	902261966186	902725369610	150
9028510000	9028510240	9028510183	902261966186	902725369610	150
9048410000	9048410283	9048410327	904529722710	904970220566	150
9048410000	9048410283	9048410327	904529722710	904970220566	150
8991510000	8991510780	8991510879	899790967769	899342870013	150
8991510000	8991510780	8991510879	899790967769	899342870013	150
9046500000	9046500871	9046500267	904562755626	904100291336	150
9046500000	9046500871	9046500267	904562755626	904100291336	150
8928410000	8928410138	8928410216	892118607732	892650227207	150
8928410000	8928410138	8928410216	892118607732	892650227207	150
8983510000	8983510914	8983510793	898714543277	898809784497	150
8983510000	8983510914	8983510793	898714543277	898809784497	150
8959410000	8959410007	8959410502	895780102818	895913046256	150
8959410000	8959410007	8959410502	895780102818	895913046256	150
9045500000	9045500948	9045500251	904939655131	904328108444	150
9045500000	9045500948	9045500251	904939655131	904328108444	150
8970510000	8970510396	8970510687	897827993326	897504201129	150
8970510000	8970510396	8970510687	897827993326	897504201129	150
9002610000	9002610905	9002610954	900574832064	900210348112	150
9002610000	9002610905	9002610954	900574832064	900210348112	150
9038410000	9038410156	9038410227	903393521796	903105719786	150
9038410000	9038410156	9038410227	903393521796	903105719786	150
9068410000	9068410581	9068410522	906716223684	906237927020	150
9068410000	9068410581	9068410522	906716223684	906237927020	150
9099410000	9099410264	9099410808	909355043080	909636078615	150

9099410000	9099410264	9099410808	909355043080	909636078615	150
9166510000	9166510148	9166510594	916165536100	916330248733	150
9166510000	9166510148	9166510594	916165536100	916330248733	150
9080510000	9080510416	9080510697	908363543083	908982122366	150
9080510000	9080510416	9080510697	908363543083	908982122366	150
9080610000	9080610275	9080610769	908997402235	908093839367	150
9080610000	9080610275	9080610769	908997402235	908093839367	150
9085500000	9085500243	9085500651	908504858227	908242039750	150
9085500000	9085500243	9085500651	908504858227	908242039750	150
9072510000	9072510065	9072510598	907087653341	907113993767	150
9072510000	9072510065	9072510598	907087653341	907113993767	150
9110610000	9110610427	9110610085	911823761786	911296935517	150
9110610000	9110610427	9110610085	911823761786	911296935517	150
9118410000	9118410897	9118410040	911248621007	911206656540	150
9118410000	9118410897	9118410040	911248621007	911206656540	150
9159510000	9159510866	9159510490	915882425913	915006057144	150
9159510000	9159510866	9159510490	915882425913	915006057144	150
9069410000	9069410028	9069410513	906231895797	906922538927	150
9069410000	9069410028	9069410513	906231895797	906922538927	150
9125500000	9125500820	9125500064	912089093985	912832255152	150
9125500000	9125500820	9125500064	912089093985	912832255152	150
9088410000	9088410912	9088410718	908797693985	908229253258	150
9088410000	9088410912	9088410718	908797693985	908229253258	150
9062510000	9062510456	9062510496	906656737570	906876542938	150
9062510000	9062510456	9062510496	906656737570	906876542938	150
9245510000	9245510696	9245510357	924263764955	924593720009	150
9245510000	9245510696	9245510357	924263764955	924593720009	150
9233510000	9233510182	9233510223	923913235506	923810402445	150
9233510000	9233510182	9233510223	923913235506	923810402445	150
9248410000	9248410321	9248410347	924646184123	924133934846	150
9248410000	9248410321	9248410347	924646184123	924133934846	150
9221510000	9221510887	9221510115	922182582790	922599863069	150
9221510000	9221510887	9221510115	922182582790	922599863069	150
9235500000	9235500819	9235500173	923726386091	923853603587	150
9235500000	9235500819	9235500173	923726386091	923853603587	150
9236500000	9236500826	9236500188	923632176610	923094934744	150
9236500000	9236500826	9236500188	923632176610	923094934744	150
9225500000	9225500837	9225500074	922122130847	922188383343	150
9225500000	9225500837	9225500074	922122130847	922188383343	150
9197510000	9197510832	9197510896	919579920794	919951028614	150
9197510000	9197510832	9197510896	919579920794	919951028614	150
9286410000	9286410472	9286410760	928396310165	928830361282	150
9286410000	9286410472	9286410760	928396310165	928830361282	150
9204510000	9204510068	9204510925	920729185623	920765113913	150
9204510000	9204510068	9204510925	920729185623	920765113913	150
9249510000	9249510715	9249510400	924356231257	924222127987	150
9249510000	9249510715	9249510400	924356231257	924222127987	150

9220510000	9220510719	9220510123	922054567549	922906828129	150
9220510000	9220510719	9220510123	922054567549	922906828129	150
9268510000	9268510737	9268510602	926995429658	926671557652	150
9268510000	9268510737	9268510602	926995429658	926671557652	150
9213510000	9213510912	9213510023	921339200724	921759519101	150
9213510000	9213510912	9213510023	921339200724	921759519101	150
9256500000	9256500059	9256500388	925473490280	925701753494	150
9256500000	9256500059	9256500388	925473490280	925701753494	150
9243510000	9243510267	9243510322	924494537675	924655122284	150
9243510000	9243510267	9243510322	924494537675	924655122284	150
9384510000	9384510935	9384510750	938822572834	938820932092	150
9384510000	9384510935	9384510750	938822572834	938820932092	150
9358410000	9358410527	9358410454	935702603415	935394956638	150
9358410000	9358410527	9358410454	935702603415	935394956638	150
9302510000	9302510372	9302510920	930321145787	930586283365	150
9302510000	9302510372	9302510920	930321145787	930586283365	150
9375510000	9375510047	9375510698	937891542337	937910498430	150
9375510000	9375510047	9375510698	937891542337	937910498430	150
9304510000	9304510084	9304510936	930102641375	930988544068	150
9304510000	9304510084	9304510936	930102641375	930988544068	150
9336500000	9336500840	9336500198	933727165408	933446257215	150
9336500000	9336500840	9336500198	933727165408	933446257215	150
9306510000	9306510416	9306510009	930499411271	930124292384	150
9306510000	9306510416	9306510009	930499411271	930124292384	150
9419510000	9419510360	9419510122	941154349821	941810741004	150
9419510000	9419510360	9419510122	941154349821	941810741004	150
9408510000	9408510957	9408510025	940528386980	940855725824	150
9408510000	9408510957	9408510025	940528386980	940855725824	150
9380610000	9380610322	9380610799	938460803711	938827053570	150
9380610000	9380610322	9380610799	938460803711	938827053570	150
9352510000	9352510323	9352510425	935061393200	935412905666	150
9352510000	9352510323	9352510425	935061393200	935412905666	150
9424510000	9424510368	9424510150	942754811965	942367501768	150
9424510000	9424510368	9424510150	942754811965	942367501768	150
9381610000	9381610077	9381610784	938347279361	938186104549	150
9381610000	9381610077	9381610784	938347279361	938186104549	150
9399410000	9399410318	9399410837	939736879662	939535585882	150
9399410000	9399410318	9399410837	939736879662	939535585882	150
9414510000	9414510201	9414510049	941221183557	941004688558	150
9414510000	9414510201	9414510049	941221183557	941004688558	150
9373500000	9373500752	9373500606	937408559867	937446556832	150
9373500000	9373500752	9373500606	937408559867	937446556832	150
9307410000	9307410637	9307410970	930082490944	930827494705	150
9307410000	9307410637	9307410970	930082490944	930827494705	150
9364510000	9364510720	9364510550	936654772825	936895517105	150
9364510000	9364510720	9364510550	936654772825	936895517105	150
9518510000	9518510143	9518510134	951736245214	951662133522	150

9518510000	9518510143	9518510134	951736245214	951662133522	150
9476410000	9476410344	9476410678	947317081776	947500094956	150
9476410000	9476410344	9476410678	947317081776	947500094956	150
9513510000	9513510968	9513510054	951834522100	951160643111	150
9513510000	9513510968	9513510054	951834522100	951160643111	150
9499510000	9499510269	9499510915	949025384639	949904643539	150
9499510000	9499510269	9499510915	949025384639	949904643539	150
9517410000	9517410823	9517410091	951908731930	951701515080	150
9517410000	9517410823	9517410091	951908731930	951701515080	150
9503510000	9503510776	9503510951	950107291057	950838690290	150
9503510000	9503510776	9503510951	950107291057	950838690290	150
9461610000	9461610202	9461610595	946748824643	946029871007	150
9461610000	9461610202	9461610595	946748824643	946029871007	150
9468410000	9468410658	9468410560	946935521562	946496315085	150
9468410000	9468410658	9468410560	946935521562	946496315085	150
9566510000	9566510220	8566510633	956697055222	956466805657	150
9566510000	9566510220	8566510633	956697055222	956466805657	150
9676510000	9676510336	9676510746	967311548638	967927109815	150
9676510000	9676510336	9676510746	967311548638	967927109815	150
9559410000	9559410934	9559410464	955533973106	955899927263	150
9559410000	9559410934	9559410464	955533973106	955899927263	150
9560610000	9560610108	9560610618	956983372074	956902261562	150
9560610000	9560610108	9560610618	956983372074	956902261562	150
9619410000	9619410455	9619410076	961169539633	961412759158	150
9619410000	9619410455	9619410076	961169539633	961412759158	150
9609410000	9609410325	9609410978	960334022901	960556150817	150
9609410000	9609410325	9609410978	960334022901	960556150817	150
9595500000	9595500403	9595500816	959858784176	959254589304	150
9595500000	9595500403	9595500816	959858784176	959254589304	150
9679410000	9679410196	9679410672	967073827355	967691628465	150
9679410000	9679410196	9679410672	967073827355	967691628465	150
9561610000	9561610739	9561610605	956996788702	956197348819	150
9561610000	9561610739	9561610605	956996788702	956197348819	150
9643510000	9643510339	9643510363	964093001039	964077286794	150
9643510000	9643510339	9643510363	964093001039	964077286794	150
9659410000	9659410954	9659410473	965844322469	965914654893	150
9659410000	9659410954	9659410473	965844322469	965914654893	150
9616500000	9616500638	9616500028	961073418142	961114377883	150
9616500000	9616500638	9616500028	961073418142	961114377883	150
9604510000	9604510136	9604510968	960292479817	960654728773	150
9604510000	9604510136	9604510968	960292479817	960654728773	150
9563510000	9563510553	9563510551	956266344299	956804690385	150
9563510000	9563510553	9563510551	956266344299	956804690385	150
9614510000	9614510234	9614510071	961995510735	961435548767	150
9614510000	9614510234	9614510071	961995510735	961435548767	150
9592510000	9592510689	9592510846	959479377968	959192199589	150
9592510000	9592510689	9592510846	959479377968	959192199589	150

9636410000	9636410838	9636410297	963497093434	963106224452	150
9636410000	9636410838	9636410297	963497093434	963106224452	150
9636500000	9636500810	9636500228	963062413161	963133822888	150
9636500000	9636500810	9636500228	963062413161	963133822888	150
9681510000	9681510545	9681510748	968919668809	968096003574	150
9681510000	9681510545	9681510748	968919668809	968096003574	150
9756500000	9756500065	9756500438	975648454493	975098387291	150
9756500000	9756500065	9756500438	975648454493	975098387291	150
9713510000	9713510006	9713510073	971468354531	971642078996	150
9713510000	9713510006	9713510073	971468354531	971642078996	150
9849410000	9849410805	9849410394	984774174981	984221573453	150
9849410000	9849410805	9849410394	984774174981	984221573453	150
9706410000	9706410383	9706410006	970209956336	970707531386	150
9706410000	9706410383	9706410006	970209956336	970707531386	150
9806410000	9806410400	9806410017	980265467434	980833710465	150
9806410000	9806410400	9806410017	980265467434	980833710465	150
9806510000	9806510505	9806510060	980478000414	980883509668	150
9806510000	9806510505	9806510060	980478000414	980883509668	150
9785500000	9785500278	9785500727	978921871127	978716027510	150
9785500000	9785500278	9785500727	978921871127	978716027510	150
9688510000	9688510033	9688510840	968000873660	968552959383	150
9688510000	9688510033	9688510840	968000873660	968552959383	150
9727510000	9727510956	9727510257	972994459316	972305012667	150
9727510000	9727510956	9727510257	972994459316	972305012667	150
9762510000	9762510589	9762510568	976044724710	976386720921	150
9762510000	9762510589	9762510568	976044724710	976386720921	150
9720510000	9720510809	9720510173	972546200086	972747471565	150
9720510000	9720510809	9720510173	972546200086	972747471565	150
9736410000	9736410857	9736410307	973322515402	973347702002	150
9736410000	9736410857	9736410307	973322515402	973347702002	150
9819510000	9819510428	9819510163	981802538549	981206634316	150
9819510000	9819510428	9819510163	981802538549	981206634316	150
9888410000	9888410059	9888410799	988169903492	988684087050	150
9888410000	9888410059	9888410799	988169903492	988684087050	150
9888510000	9888510060	9888510860	988292611045	988841076590	150
9888510000	9888510060	9888510860	988292611045	988841076590	150
9876410000	9876410407	9876410720	987065143188	987143116716	150
9876410000	9876410407	9876410720	987065143188	987143116716	150
9836500000	9836500839	9836500247	983711562749	983456846644	150
9836500000	9836500839	9836500247	983711562749	983456846644	150
9864510000	9864510810	9864510601	986197151276	986231047683	150
9864510000	9864510810	9864510601	986197151276	986231047683	150
9820610000	9820610564	9820610254	982383556568	982087216707	150
9820610000	9820610564	9820610254	982383556568	982087216707	150
9832510000	9832510861	9832510274	983113447222	983748720063	150
9832510000	9832510861	9832510274	983113447222	983748720063	150
9835510000	9835510619	9835510314	983080677315	983785685780	150

9835510000	9835510619	9835510314	983080677315	983785685780	150
9924510000	9924510373	9924510201	992264381455	992630612831	150
9924510000	9924510373	9924510201	992264381455	992630612831	150
9927510000	9927510991	9927510278	992466197013	992033586357	150
9927510000	9927510991	9927510278	992466197013	992033586357	150
9858410000	9858410547	9858410503	985002770884	985825128254	150
9858410000	9858410547	9858410503	985002770884	985825128254	150
9950510000	9950510046	9950510491	995856750255	995253260141	150
9950510000	9950510046	9950510491	995856750255	995253260141	150
9960610000	9960610169	9960610658	996448921966	996232492496	150
9960610000	9960610169	9960610658	996448921966	996232492496	150
9997510000	9997510975	9997510975	999615991247	999850230349	150
9997510000	9997510975	9997510975	999615991247	999850230349	150
5354647273	5354647057	7118410038	535494202519	535147537944	150
5354647273	5354647057	7118410038	535494202519	535147537944	150
8801716781	8801716545	9510510054	880735713439	880561326678	150
8801716781	8801716545	9510510054	880735713439	880561326678	150
1875336811	1875336810	1129910000	187624761611	187206097654	150
1875336811	1875336810	1129910000	187624761611	187206097654	150
9490909798	9490909412	7619910000	949464575176	949334792165	150
9490909798	9490909412	7619910000	949464575176	949334792165	150
8302720957	8302720615	2171510592	830265990237	830037056748	150
8302720957	8302720615	2171510592	830265990237	830037056748	150
4681427780	4681427241	4413510039	468239717085	468616916669	150
4681427780	4681427241	4413510039	468239717085	468616916669	150
5342577954	5342577610	7896410917	534315420340	534757669377	150
5342577954	5342577610	7896410917	534315420340	534757669377	150
2228963763	2228963146	1379510699	222312503481	222822122657	150
2228963763	2228963146	1379510699	222312503481	222822122657	150
5123185307	5123185444	6145510343	512795260790	512720030012	150
5123185307	5123185444	6145510343	512795260790	512720030012	150
3452509666	3452509417	8360610597	345176535415	345471537677	150
3452509666	3452509417	8360610597	345176535415	345471537677	150
4109220903	4109220985	9241510311	410747838886	410408939272	150
4109220903	4109220985	9241510311	410747838886	410408939272	150
3043228004	3043228517	2886510860	304126762125	304932855744	150
3043228004	3043228517	2886510860	304126762125	304932855744	150
6774914563	6774914696	5010510000	677510063181	677157756399	150
6774914563	6774914696	5010510000	677510063181	677157756399	150
8081118587	8081118260	3471610688	808417429771	808129658230	150
8081118587	8081118260	3471610688	808417429771	808129658230	150
8058065423	8058065675	228510194	805170829404	805048166821	150
8058065423	8058065675	228510194	805170829404	805048166821	150
2588979099	2588979492	1331610284	258475287551	258385481956	150
2588979099	2588979492	1331610284	258475287551	258385481956	150
5604540380	5604540531	4357410457	560329470350	560187455697	150
5604540380	5604540531	4357410457	560329470350	560187455697	150

1083891348	1083891632	4709910000	108386612223	108404965105	150
1083891348	1083891632	4709910000	108386612223	108404965105	150
7471637814	7471637809	5869510654	747879033688	747265800497	150
7471637814	7471637809	5869510654	747879033688	747265800497	150
8886129383	8886129469	9268410541	888646687571	888490545908	150
8886129383	8886129469	9268410541	888646687571	888490545908	150
6176560985	6176560442	1459410446	617842763298	617948195006	150
6176560985	6176560442	1459410446	617842763298	617948195006	150
3554927675	3554927768	546510424	355187336710	355960782908	150
3554927675	3554927768	546510424	355187336710	355960782908	150
6405586272	6405586191	9230510223	640745188724	640615065096	150
6405586272	6405586191	9230510223	640745188724	640615065096	150
241494042	241494876	6746500335	24355118459	24373480001	150
241494042	241494876	6746500335	24355118459	24373480001	150
5650757018	5650757169	3495500800	565245820648	565194289410	150
5650757018	5650757169	3495500800	565245820648	565194289410	150
2188886171	2188886722	5038510278	218857029352	218633660151	150
2188886171	2188886722	5038510278	218857029352	218633660151	150
64072665	64072670	9698910000	6635688629	6652522765	150
64072665	64072670	9698910000	6635688629	6652522765	150
6402503600	6402503773	5246500284	640130401218	640180064924	150
6402503600	6402503773	5246500284	640130401218	640180064924	150
3047181379	3047181754	2848510456	304831840911	304206017915	150
3047181379	3047181754	2848510456	304831840911	304206017915	150
6711757141	6711757229	6541510337	671893695854	671282787727	150
6711757141	6711757229	6541510337	671893695854	671282787727	150
2262965109	2262965837	7526510231	226609508964	226599235341	150
2262965109	2262965837	7526510231	226609508964	226599235341	150
8745470735	8745470230	5795500833	874030082116	874755231163	150
8745470735	8745470230	5795500833	874030082116	874755231163	150
6797472436	6797472763	7371610682	679785464558	679980226597	150
6797472436	6797472763	7371610682	679785464558	679980226597	150
7118410000	7118410498	679510728	711264161663	711011458578	150
7118410000	7118410498	679510728	711264161663	711011458578	150
6051724678	6051724616	2866401658	605857142949	605629493373	150
6051724678	6051724616	2866401658	605857142949	605629493373	150
766470926	766470565	6826500145	76951966189	76896157726	150
766470926	766470565	6826500145	76951966189	76896157726	150
9606790034	9606790900	4211610081	960722672921	960502295203	150
9606790034	9606790900	4211610081	960722672921	960502295203	150
7598612947	7598612454	1919910000	759804165708	759066001138	150
7598612947	7598612454	1919910000	759804165708	759066001138	150
9212167685	9212167095	9978510769	921341179732	921112941330	150
9212167685	9212167095	9978510769	921341179732	921112941330	150
6069828130	6069828778	2558510526	606621326794	606104126226	150
6069828130	6069828778	2558510526	606621326794	606104126226	150
974684683	974684531	6445500288	97202314510	97666177194	150

974684683	974684531	6445500288	97202314510	97666177194	150
5052634177	5052634805	4277510702	505715635122	505256391669	150
5052634177	5052634805	4277510702	505715635122	505256391669	150
1433570742	1433570415	698410869	143050644542	143798445076	150
1433570742	1433570415	698410869	143050644542	143798445076	150
3742561212	3742561348	1798410880	374104885790	374000476714	150
3742561212	3742561348	1798410880	374104885790	374000476714	150
2046410000	2046410662	2046410330	204200274863	204163548461	150
2046410000	2046410662	2046410330	204200274863	204163548461	150
6261893545	6261893755	6238510299	626008571831	626926356791	150
6261893545	6261893755	6238510299	626008571831	626926356791	150
8121779812	8121779776	216500979	812094757091	812267129096	150
8121779812	8121779776	216500979	812094757091	812267129096	150
6135161732	6135161268	9009510980	613866649978	613376912665	150
6135161732	6135161268	9009510980	613866649978	613376912665	150
2698310221	2698310155	9534510261	269546834312	269392269769	150
2698310221	2698310155	9534510261	269546834312	269392269769	150
9939351783	9939351934	1173500578	993309460791	993859816390	150
9939351783	9939351934	1173500578	993309460791	993859816390	150
8132346632	8132346959	1388410740	813868697120	813273298214	150
8132346632	8132346959	1388410740	813868697120	813273298214	150
5172820910	5172820021	9669510638	517468179170	517471899632	150
5172820910	5172820021	9669510638	517468179170	517471899632	150
9766087515	9766087589	809410989	976119734961	976537408350	150
9766087515	9766087589	809410989	976119734961	976537408350	150
1434905399	1434905130	4678410674	143972176911	143875533043	150
1434905399	1434905130	4678410674	143972176911	143875533043	150
8294381324	8294381677	7146500275	829312255483	829443210955	150
8294381324	8294381677	7146500275	829312255483	829443210955	150
6916432063	6916432621	5434510248	691831567212	691016486933	150
6916432063	6916432621	5434510248	691831567212	691016486933	150
3378157923	3378157093	7856510560	337607418960	337618194619	150
3378157923	3378157093	7856510560	337607418960	337618194619	150
2786854709	2786854348	8366510612	278296899047	278983196328	150
2786854709	2786854348	8366510612	278296899047	278983196328	150
8755341100	8755341236	4626500123	875303242764	875168759641	150
8755341100	8755341236	4626500123	875303242764	875168759641	150
9508076760	9508076589	2259410427	950307452521	950328739574	150
9508076760	9508076589	2259410427	950307452521	950328739574	150
2945636298	2945636403	636410288	294465715239	294902967220	150
2945636298	2945636403	636410288	294465715239	294902967220	150
7150367029	7150367299	9528410176	715820394597	715240562996	150
7150367029	7150367299	9528410176	715820394597	715240562996	150
5678365775	5678365264	4507410985	567574152336	567134588509	150
5678365775	5678365264	4507410985	567574152336	567134588509	150
9079239523	9079239144	1086410732	907212036099	907171431215	150
9079239523	9079239144	1086410732	907212036099	907171431215	150

4922140549	4922140133	8916410126	492713540699	492890248332	150
4922140549	4922140133	8916410126	492713540699	492890248332	150
3771694888	3771694032	8787510855	377681830317	377232146508	150
3771694888	3771694032	8787510855	377681830317	377232146508	150
3645829046	3645829492	8740510370	364216574651	364958790801	150
3645829046	3645829492	8740510370	364216574651	364958790801	150
5272047182	5272047302	2918510166	527607857250	527746851603	150
5272047182	5272047302	2918510166	527607857250	527746851603	150
4487510000	4487510820	8597510934	448968295204	448428790830	150
4487510000	4487510820	8597510934	448968295204	448428790830	150
5860432019	5860432647	685500705	586558424511	586968158614	150
5860432019	5860432647	685500705	586558424511	586968158614	150
7059410000	7059410532	7059410412	705508387770	705276161670	150
7059410000	7059410532	7059410412	705508387770	705276161670	150
6492577798	6492577973	7677410688	649325025066	649563757936	150
6492577798	6492577973	7677410688	649325025066	649563757936	150
5105176345	5105176517	8620510162	510557171928	510961806177	150
5105176345	5105176517	8620510162	510557171928	510961806177	150
9807727787	9807727524	3700510968	980114406178	980861717481	150
9807727787	9807727524	3700510968	980114406178	980861717481	150
9327273927	9327273029	8782994765	932856895550	932964265763	150
9327273927	9327273029	8782994765	932856895550	932964265763	150
8042967168	8042967096	9789510847	804685329300	804880855256	150
8042967168	8042967096	9789510847	804685329300	804880855256	150
5836877291	5836877770	7465510597	583981252542	583019857823	150
5836877291	5836877770	7465510597	583981252542	583019857823	150
9734299691	9734299942	3628510237	973239272226	973259774695	150
9734299691	9734299942	3628510237	973239272226	973259774695	150
1020510000	1020510000	1020510096	102643138633	102730797815	150
1020510000	1020510000	1020510096	102643138633	102730797815	150
2385798531	2385798648	7347410361	238580811732	238720989589	150
2385798531	2385798648	7347410361	238580811732	238720989589	150
5879961495	5879961505	8885510857	587129125240	587387748869	150
5879961495	5879961505	8885510857	587129125240	587387748869	150
3589802920	3589802019	9839910000	358366513157	358899511009	150
3589802920	3589802019	9839910000	358366513157	358899511009	150
1466451648	1466451418	9143510313	146273985204	146523512966	150
1466451648	1466451418	9143510313	146273985204	146523512966	150
8056533842	8056533048	2769510641	805614154468	805563477324	150
8056533842	8056533048	2769510641	805614154468	805563477324	150
6675613578	6675613242	4073910000	667360596161	667611008193	150
6675613578	6675613242	4073910000	667360596161	667611008193	150
957826038	957826947	9149910000	95469042700	95310364664	150
957826038	957826947	9149910000	95469042700	95310364664	150
1256500000	1256500622	1256500380	125072483368	125893768543	150
1256500000	1256500622	1256500380	125072483368	125893768543	150
2809915225	2809915341	1928510264	280184829012	280386533704	150

2809915225	2809915341	1928510264	280184829012	280386533704	150
8487625852	8487625294	1229510195	848133054030	848074729753	150
8487625852	8487625294	1229510195	848133054030	848074729753	150
6508725199	6508725290	6001610965	650819524029	650138428032	150
6508725199	6508725290	6001610965	650819524029	650138428032	150
4457410000	4457410856	4457410467	445995419920	445251511646	150
4457410000	4457410856	4457410467	445995419920	445251511646	150
3734999619	3734999485	6171610661	373333978876	373799725239	150
3734999619	3734999485	6171610661	373333978876	373799725239	150
5894573430	5894573633	4167510594	589449536665	589001501904	150
5894573430	5894573633	4167510594	589449536665	589001501904	150
1503940725	1503940298	2087510780	150086500499	150383593263	150
1503940725	1503940298	2087510780	150086500499	150383593263	150
3315546040	3315546702	5904510994	331369773027	331499485320	150
3315546040	3315546702	5904510994	331369773027	331499485320	150
5802418592	5802418323	4063510497	580042829812	580371095574	150
5802418592	5802418323	4063510497	580042829812	580371095574	150
8583005984	8583005814	7448510420	858199836611	858953121227	150
8583005984	8583005814	7448510420	858199836611	858953121227	150
9523570103	9523570386	48410318	952085517038	952453206140	150
9523570103	9523570386	48410318	952085517038	952453206140	150
3360416248	3360416590	8629410174	336245966625	336943827007	150
3360416248	3360416590	8629410174	336245966625	336943827007	150
6989052634	6989052906	9648510442	698048808528	698947420266	150
6989052634	6989052906	9648510442	698048808528	698947420266	150
6265439458	6265439853	1586510829	626902858615	626017951031	150
6265439458	6265439853	1586510829	626902858615	626017951031	150
1880070538	1880070660	224510121	188512777533	188810566628	150
1880070538	1880070660	224510121	188512777533	188810566628	150
7980240710	7980240460	8535500201	798677292355	798775605699	150
7980240710	7980240460	8535500201	798677292355	798775605699	150
3381930581	3381930832	477510718	338142928626	338828946397	150
3381930581	3381930832	477510718	338142928626	338828946397	150
6026294118	6026294849	7809410995	602422857315	602417329389	150
6026294118	6026294849	7809410995	602422857315	602417329389	150
2618299630	2618299615	842510366	261279769009	261710479206	150
2618299630	2618299615	842510366	261279769009	261710479206	150
6684625876	6684625740	3407410974	668055594302	668998906666	150
6684625876	6684625740	3407410974	668055594302	668998906666	150
2727048719	2727048437	8647510450	272079252189	272864161229	150
2727048719	2727048437	8647510450	272079252189	272864161229	150
7674603514	7674603083	8789410780	767378923421	767171688708	150
7674603514	7674603083	8789410780	767378923421	767171688708	150
9172133151	9172133195	5127510193	917046793367	917369410898	150
9172133151	9172133195	5127510193	917046793367	917369410898	150
7769460792	7769460007	2811510068	776903101839	776666673421	150
7769460792	7769460007	2811510068	776903101839	776666673421	150

2361840657	2361840992	7692510854	236379758211	236967318414	150
2361840657	2361840992	7692510854	236379758211	236967318414	150
6136700264	6136700582	8997410918	613058090013	613021264880	150
6136700264	6136700582	8997410918	613058090013	613021264880	150
560473710	560473596	7469410551	56928821159	56350041819	150
560473710	560473596	7469410551	56928821159	56350041819	150
7723442566	7723442624	5912510080	772918025837	772562685620	150
7723442566	7723442624	5912510080	772918025837	772562685620	150
7400359661	7400359213	3800610049	740046528712	740686304219	150
7400359661	7400359213	3800610049	740046528712	740686304219	150
7806692201	7806692384	6215510041	780451481596	780880339437	150
7806692201	7806692384	6215510041	780451481596	780880339437	150
9173318476	9173318336	4420510138	917206667498	917016483886	150
9173318476	9173318336	4420510138	917206667498	917016483886	150
3890528455	3890528519	5026500064	389124346924	389214966171	150
3890528455	3890528519	5026500064	389124346924	389214966171	150
4926421580	4926421493	1708410992	492995122059	492478732374	150
4926421580	4926421493	1708410992	492995122059	492478732374	150
8586676033	8586676189	5520510149	858499171391	858004815576	150
8586676033	8586676189	5520510149	858499171391	858004815576	150
4958510000	4958510601	4958510568	495293756445	495531376952	150
4958510000	4958510601	4958510568	495293756445	495531376952	150
4515611476	4515611136	2734510275	451318766057	451149920941	150
4515611476	4515611136	2734510275	451318766057	451149920941	150
8293064254	8293064606	5426410172	829482994515	829170063314	150
8293064254	8293064606	5426410172	829482994515	829170063314	150
8586410000	8586410732	8586410788	858524180324	858752374867	150
8586410000	8586410732	8586410788	858524180324	858752374867	150
4633019421	4633019512	7491512072	463395853114	463966674964	150
4633019421	4633019512	7491512072	463395853114	463966674964	150
8396395654	8396395856	6679510734	839415901857	839609090828	150
8396395654	8396395856	6679510734	839415901857	839609090828	150
6342397019	6342397844	6716410103	634577893567	634388857322	150
6342397019	6342397844	6716410103	634577893567	634388857322	150
3639495978	3639495025	8380510726	363624634092	363181285958	150
3639495978	3639495025	8380510726	363624634092	363181285958	150
6865872377	6865872118	1118510086	686620301326	686998730125	150
6865872377	6865872118	1118510086	686620301326	686998730125	150
2396511559	2396511016	2709410981	239592685316	239112418201	150
2396511559	2396511016	2709410981	239592685316	239112418201	150
9931079919	9931079625	345500272	993835248094	993004108236	150
9931079919	9931079625	345500272	993835248094	993004108236	150
3270124631	3270124176	2408410963	327128008484	327621739531	150
3270124631	3270124176	2408410963	327128008484	327621739531	150
7008684484	7008684439	5757410498	700896093052	700028047323	150
7008684484	7008684439	5757410498	700896093052	700028047323	150
2826713003	2826713757	4607510043	282107934691	282436896424	150

2826713003	2826713757	4607510043	282107934691	282436896424	150
5026995080	5026995340	4381610779	502842045691	502352886442	150
5026995080	5026995340	4381610779	502842045691	502352886442	150
7139868534	7139868041	5615500007	713686416144	713820406817	150
7139868534	7139868041	5615500007	713686416144	713820406817	150
1109873020	1109873096	2597410872	110368295029	110067788558	150
1109873020	1109873096	2597410872	110368295029	110067788558	150
2843905199	2843905720	177410632	284961446086	284998008756	150
2481386219	2481386262	9788410789	248492333549	248168647609	150
2481386219	2481386262	9788410789	248492333549	248168647609	150
9669401443	9669401716	815500024	966688075079	966927010072	150
9669401443	9669401716	815500024	966688075079	966927010072	150
8566559720	8566559718	2023510096	856539221108	856655151562	150
8566559720	8566559718	2023510096	856539221108	856655151562	150
6719624438	6719624368	1771510651	671349521114	671260656989	150
6719624438	6719624368	1771510651	671349521114	671260656989	150
8577966475	8577966123	2359410437	857529576909	857950914488	150
8577966475	8577966123	2359410437	857529576909	857950914488	150
1631254931	1631254535	8568410569	163081062806	163629390241	150
1631254931	1631254535	8568410569	163081062806	163629390241	150
1468314114	1468314096	6915500041	146835292524	146532695909	150
1468314114	1468314096	6915500041	146835292524	146532695909	150
2789858472	2789858425	5667510644	278518024483	278217112677	150
2789858472	2789858425	5667510644	278518024483	278217112677	150
2152510000	2152510735	2152510398	215094951022	215945208849	150
7518063017	7518063828	2149410317	751240181826	751380783833	150
7518063017	7518063828	2149410317	751240181826	751380783833	150
4508785851	4508785823	5216500984	450849832621	450563662443	150
4508785851	4508785823	5216500984	450849832621	450563662443	150
1924486479	1924486790	7007510985	192673868367	192421467119	150
1924486479	1924486790	7007510985	192673868367	192421467119	150
1740850122	1740850225	5206500883	174828489418	174391529379	150
1740850122	1740850225	5206500883	174828489418	174391529379	150
1825432810	1825432266	8369410542	182579203666	182116078759	150
1825432810	1825432266	8369410542	182579203666	182116078759	150
7966477277	7966477956	3295500779	796546169595	796129347798	150
7966477277	7966477956	3295500779	796546169595	796129347798	150
9540425640	9540425267	2439410247	954091426059	954094337922	150
9540425640	9540425267	2439410247	954091426059	954094337922	150
7281158549	7281158851	7927410230	728722796857	728439189182	150
7281158549	7281158851	7927410230	728722796857	728439189182	150
1230456975	1230456232	8908510073	123945349327	123373172909	150
1230456975	1230456232	8908510073	123945349327	123373172909	150
720788218	720788556	119910000	72969470324	72165166981	150
720788218	720788556	119910000	72969470324	72165166981	150
1756389462	1756389318	435510264	175057213696	175401638167	150
1756389462	1756389318	435510264	175057213696	175401638167	150

2606410000	2606410144	2606410989	260603280312	260940216960	150
2606410000	2606410144	2606410989	260603280312	260940216960	150
4206133529	4206133880	4869410588	420467218898	420044592146	150
4206133529	4206133880	4869410588	420467218898	420044592146	150
2285256237	2285256750	9636510344	228867350764	228141599661	150
2285256237	2285256750	9636510344	228867350764	228141599661	150
2171488761	2171488679	3269510593	217952036766	217533584803	150
2171488761	2171488679	3269510593	217952036766	217533584803	150
5684710606	5684710413	9484510760	568384886415	568746178483	150
5684710606	5684710413	9484510760	568384886415	568746178483	150
3345456772	3345456336	1961610637	334735755636	334979264859	150
3345456772	3345456336	1961610637	334735755636	334979264859	150
727965109	727965843	4874510695	72376176096	72007837659	150
727965109	727965843	4874510695	72376176096	72007837659	150
7651316208	7651316598	1016510072	765295106734	765810255467	150
7651316208	7651316598	1016510072	765295106734	765810255467	150
4553866842	4553866780	6436510321	455677975832	455127618765	150
4438155008	4438155137	5776410704	443444893238	443737370145	150
4438155008	4438155137	5776410704	443444893238	443737370145	150
791370134	791370284	5378510705	79723326104	79684333720	150
791370134	791370284	5378510705	79723326104	79684333720	150
3628326303	3628326093	4471510624	362013227565	362301454814	150
3628326303	3628326093	4471510624	362013227565	362301454814	150
7228475592	7228475078	4147510396	722704111090	722441348262	150
7228475592	7228475078	4147510396	722704111090	722441348262	150
3123899592	3123899653	3780510760	312875594252	312851145011	150
3123899592	3123899653	3780510760	312875594252	312851145011	150
4379222765	4379222692	4358410449	437770516534	437969030569	150
4379222765	4379222692	4358410449	437770516534	437969030569	150
7266900507	7266900318	1880510768	726115766986	726579739946	150
7266900507	7266900318	1880510768	726115766986	726579739946	150
2922510000	2922510303	2922510176	292211014583	292485589175	150
2922510000	2922510303	2922510176	292211014583	292485589175	150
4301753534	4301753620	6937410323	430775033404	430478876987	150
4301753534	4301753620	6937410323	430775033404	430478876987	150
9580186386	9580186706	9451510428	958978370289	958512941545	150
9580186386	9580186706	9451510428	958978370289	958512941545	150
2546378053	2546378121	6219410034	254786395125	254560841763	150
2546378053	2546378121	6219410034	254786395125	254560841763	150
7257588176	7257588959	4318510109	725306489214	725329830941	150
7257588176	7257588959	4318510109	725306489214	725329830941	150
621924247	621924360	4197410835	62613603378	62739688831	150
621924247	621924360	4197410835	62613603378	62739688831	150
3945445277	3945445027	4178410624	394154403090	394934279063	150
3945445277	3945445027	4178410624	394154403090	394934279063	150
8489829547	8489829250	7305510951	848945258623	848026921598	150
8489829547	8489829250	7305510951	848945258623	848026921598	150

9537960125	9537960229	7168510590	953008823800	953605702704	150
9537960125	9537960229	7168510590	953008823800	953605702704	150
7391506559	7391506622	9961510579	739543915572	739585445624	150
7391506559	7391506622	9961510579	739543915572	739585445624	150
9026511699	9026511899	7406410975	902921889887	902409417181	150
9026511699	9026511899	7406410975	902921889887	902409417181	150
5257815639	5257815470	4937510377	525897638768	525578748135	150
5257815639	5257815470	4937510377	525897638768	525578748135	150
4976525082	4976525922	4791610919	497998088644	497621689019	150
4976525082	4976525922	4791610919	497998088644	497621689019	150
6906269077	6906269876	2581610797	690979006855	690973592208	150
6906269077	6906269876	2581610797	690979006855	690973592208	150
5387599249	5387599612	9725500124	538484256716	538782187903	150
5387599249	5387599612	9725500124	538484256716	538782187903	150
2798376205	2798376556	5476510722	279573573273	279258228682	150
2798376205	2798376556	5476510722	279573573273	279258228682	150
2560219053	2560219852	4761610620	256420410274	256877099462	150
2560219053	2560219852	4761610620	256420410274	256877099462	150
8545538415	8545538350	1077410623	854284551912	854652194048	150
8545538415	8545538350	1077410623	854284551912	854652194048	150
3627610000	3627610681	7130510211	362326083002	362112682168	150
3627610000	3627610681	7130510211	362326083002	362112682168	150
8215568273	8215568388	5640510357	821506532523	821742140406	150
8215568273	8215568388	5640510357	821506532523	821742140406	150
4590367715	4590367798	1398410841	459076209602	459443563149	150
4590367715	4590367798	1398410841	459076209602	459443563149	150
2184366760	2184366072	4089410707	218470157799	218911788301	150
2184366760	2184366072	4089410707	218470157799	218911788301	150
5285758217	5285758691	6767510655	528616111810	528907524062	150
5285758217	5285758691	6767510655	528616111810	528907524062	150
4058510000	4058510151	8489510816	405530962811	405184062394	150
4058510000	4058510151	8489510816	405530962811	405184062394	150
3134212478	3134212665	4058510478	313285884291	313991892447	150
3134212478	3134212665	4058510478	313285884291	313991892447	150
5950786963	5950786158	2777410693	595097251588	595457306263	150
5950786963	5950786158	2777410693	595097251588	595457306263	150
5279895948	5279895346	336410258	527146334292	527748940936	150
5279895948	5279895346	336410258	527146334292	527748940936	150
979262040	979262507	4099510872	97259084963	97984366610	150
979262040	979262507	4099510872	97259084963	97984366610	150
339524100	339524162	2244510329	33253664926	33273666176	150
339524100	339524162	2244510329	33253664926	33273666176	150
8707762638	8707762502	1680510748	870700404392	870581006535	150
8707762638	8707762502	1680510748	870700404392	870581006535	150
8001320770	8001320587	2402610986	800388303390	800441525539	150
8001320770	8001320587	2402610986	800388303390	800441525539	150
1701117727	1701117039	29510174	170781050185	170593809481	150

1701117727	1701117039	29510174	170781050185	170593809481	150
7473510000	7473510239	1267410544	747559580845	747312879324	150
7473510000	7473510239	1267410544	747559580845	747312879324	150
8776347244	8776347285	6909410004	877082980115	877266986886	150
8776347244	8776347285	6909410004	877082980115	877266986886	150
5687771312	5687771115	7919410104	568394535197	568196280349	150
5687771312	5687771115	7919410104	568394535197	568196280349	150
4002190913	4002190434	8747410400	400972048855	400261295203	150
4002190913	4002190434	8747410400	400972048855	400261295203	150
7949317293	7949317114	5648410383	794191388057	794353561428	150
7949317293	7949317114	5648410383	794191388057	794353561428	150
2250522906	2250522767	5726410202	225721786362	225417182562	150
2250522906	2250522767	5726410202	225721786362	225417182562	150
2023956227	2023956833	835500223	202470316145	202342971887	150
2023956227	2023956833	835500223	202470316145	202342971887	150
8402510000	8402510951	8402510929	840409494159	840657268085	150
8402510000	8402510951	8402510929	840409494159	840657268085	150
17871505	17871554	1847410403	1000015358	1581136377	150
17871505	17871554	1847410403	1000015358	1581136377	150
6337651011	6337651683	2198510883	633379831084	633543535758	150
6337651011	6337651683	2198510883	633379831084	633543535758	150
9065215450	9065215059	7473510640	906096773649	906831294750	150
9065215450	9065215059	7473510640	906096773649	906831294750	150
904779400	904779023	9631610318	90986524712	90963263703	150
904779400	904779023	9631610318	90986524712	90963263703	150
2051581668	2051581454	8469510617	205531189994	205562857207	150
2051581668	2051581454	8469510617	205531189994	205562857207	150
7445632025	7445632252	1594510863	744989077179	744039006876	150
7445632025	7445632252	1594510863	744989077179	744039006876	150
3762289272	3762289798	6939910000	376921375706	376890574011	150
3762289272	3762289798	6939910000	376921375706	376890574011	150
3535432429	3535432271	2373510625	353927230057	353283364617	150
3535432429	3535432271	2373510625	353927230057	353283364617	150
9731043140	9731043447	7723510172	973262906237	973165868705	150
9731043140	9731043447	7723510172	973262906237	973165868705	150
17968589	17968175	8769410582	1165000033	1340751055	150
17968589	17968175	8769410582	1165000033	1340751055	150
4695086884	4695086113	1868410592	469830228781	469531767329	150
4695086884	4695086113	1868410592	469830228781	469531767329	150
5639263313	5639263453	8209410937	563574387306	563449441189	150
5639263313	5639263453	8209410937	563574387306	563449441189	150
4458571545	4458571223	7502610001	445142890348	445892899929	150
4458571545	4458571223	7502610001	445142890348	445892899929	150
6888330557	6888330698	4395510904	688380181970	688082908338	150
6888330557	6888330698	4395510904	688380181970	688082908338	150
3083663634	3083663452	4336510309	308335336093	308657265390	150
3083663634	3083663452	4336510309	308335336093	308657265390	150

8851654889	8851654025	8750510469	885751456104	885997513846	150
8851654889	8851654025	8750510469	885751456104	885997513846	150
6169694783	6169694169	3949410398	616792134013	616020589155	150
6169694783	6169694169	3949410398	616792134013	616020589155	150
1252418636	1252418304	5006510975	125489144942	125614586150	150
1252418636	1252418304	5006510975	125489144942	125614586150	150
3817589078	3817589950	8947510479	381697630083	381003458283	150
3817589078	3817589950	8947510479	381697630083	381003458283	150
7269323169	7269323822	3328510207	726163453367	726470346221	150
7269323169	7269323822	3328510207	726163453367	726470346221	150
1969462626	1969462187	3949510464	196262652772	196414887087	150
1969462626	1969462187	3949510464	196262652772	196414887087	150
4965865677	4965865465	7526410184	496754051432	496554238248	150
4965865677	4965865465	7526410184	496754051432	496554238248	150
7077970190	7077970821	4056510477	707239765407	707013617976	150
7077970190	7077970821	4056510477	707239765407	707013617976	150
8434989269	8434989780	5579410658	843540161254	843613409734	150
8434989269	8434989780	5579410658	843540161254	843613409734	150
2003528789	2003528582	4680610824	200716930017	200442071078	150
2003528789	2003528582	4680610824	200716930017	200442071078	150
7937950731	7937950273	7335500181	793691185322	793647215688	150
7937950731	7937950273	7335500181	793691185322	793647215688	150
727610000	727610424	2588510823	72325413411	72001065183	150
727610000	727610424	2588510823	72325413411	72001065183	150
115426331	115426842	4867410607	11519016949	11407120494	150
115426331	115426842	4867410607	11519016949	11407120494	150
7783394796	7783394371	3727410205	778663491635	778497183537	150
7783394796	7783394371	3727410205	778663491635	778497183537	150
3584875716	3584875234	5738410294	358208190803	358567160168	150
3584875716	3584875234	5738410294	358208190803	358567160168	150
8542645663	8542645031	5439410250	854868590168	854949869449	150
8542645663	8542645031	5439410250	854868590168	854949869449	150
9779342311	9779342997	8706500936	977260485797	977917519462	150
9779342311	9779342997	8706500936	977260485797	977917519462	150
9317441571	9317441906	4517510134	931181172217	931539938149	150
9317441571	9317441906	4517510134	931181172217	931539938149	150
6127888303	6127888820	6169410520	612198231583	612082753100	150
6127888303	6127888820	6169410520	612198231583	612082753100	150
2243242666	2243242196	2368410544	224605645838	224807064400	150
2243242666	2243242196	2368410544	224605645838	224807064400	150
7887332782	7887332291	3117410045	788924975730	788751740944	150
7887332782	7887332291	3117410045	788924975730	788751740944	150
2420568877	2420568851	5931510278	242054163167	242784194955	150
2420568877	2420568851	5931510278	242054163167	242784194955	150
6363487331	6363487227	7449410352	636963732714	636787115111	150
6363487331	6363487227	7449410352	636963732714	636787115111	150
6914400870	6914400282	9349510410	691410656991	691407288291	150

6914400870	6914400282	9349510410	691410656991	691407288291	150
8612710483	8612710688	5151510394	861478438305	861572264727	150
8612710483	8612710688	5151510394	861478438305	861572264727	150
3994653248	3994653951	1423510136	399914784684	399639914977	150
3994653248	3994653951	1423510136	399914784684	399639914977	150
1895364871	1895364846	4376510711	189547181381	189919011929	150
1895364871	1895364846	4376510711	189547181381	189919011929	150
3507448522	3507448517	5106500874	350989664215	350662106072	150
3507448522	3507448517	5106500874	350989664215	350662106072	150
7457538582	7457538240	3939410298	745966965300	745184291160	150
7457538582	7457538240	3939410298	745966965300	745184291160	150
3470595444	3470595684	6482510731	347190684693	347419088775	150
3470595444	3470595684	6482510731	347190684693	347419088775	150
6261035748	6261035452	7433510241	626779222397	626708468534	150
6261035748	6261035452	7433510241	626779222397	626708468534	150
8324925893	8324925779	8182510704	832318082989	832786241763	150
8324925893	8324925779	8182510704	832318082989	832786241763	150
16058323	16058926	5976510772	1435925827	1499396108	150
16058323	16058926	5976510772	1435925827	1499396108	150
5924149408	5924149529	4825500129	592905002204	592753846788	150
5924149408	5924149529	4825500129	592905002204	592753846788	150
4271510000	4271510291	4271510603	427037710633	427252515507	150
4271510000	4271510291	4271510603	427037710633	427252515507	150
9214444769	9214444418	1761510552	921360583004	921717618649	150
9214444769	9214444418	1761510552	921360583004	921717618649	150
5408462230	5408462380	3497410863	540518543461	540716984957	150
5408462230	5408462380	3497410863	540518543461	540716984957	150
8558919078	8558919474	3418410064	855802339790	855823042196	150
8558919078	8558919474	3418410064	855802339790	855823042196	150
7381721349	7381721255	29410107	738719307678	738326694613	150
7381721349	7381721255	29410107	738719307678	738326694613	150
5100519112	5100519276	71610645	510093234820	510972219866	150
5100519112	5100519276	71610645	510093234820	510972219866	150
3647564870	3647564236	2489410744	364118714908	364582449327	150
3647564870	3647564236	2489410744	364118714908	364582449327	150
5366467478	5366467197	9076410639	536766506758	536570568205	150
5366467478	5366467197	9076410639	536766506758	536570568205	150
4565883892	4565883565	2763910000	456789636648	456861063581	150
4565883892	4565883565	2763910000	456789636648	456861063581	150
855910617	855910067	4898510955	85870695850	85412813137	150
855910617	855910067	4898510955	85870695850	85412813137	150
3870641090	3870641445	4410510039	387907998234	387459739254	150
3870641090	3870641445	4410510039	387907998234	387459739254	150
4621656858	4621656185	2744510380	462071503595	462637780994	150
4621656858	4621656185	2744510380	462071503595	462637780994	150
9138006190	9138006227	9726510253	913482289567	913721674038	150
9138006190	9138006227	9726510253	913482289567	913721674038	150

2954752815	2954752523	9168410531	295447330570	295150209880	150
2954752815	2954752523	9168410531	295447330570	295150209880	150
8785012539	8785012731	9315510055	878205544107	878214188709	150
8785012539	8785012731	9315510055	878205544107	878214188709	150
6184807560	6184807552	1427510219	618641786016	618445108286	150
6184807560	6184807552	1427510219	618641786016	618445108286	150
311610000	311610594	311610086	31389533669	31405886155	150
311610000	311610594	311610086	31389533669	31405886155	150
2639410000	2639410970	2639410267	263513488897	263453987511	150
2639410000	2639410970	2639410267	263513488897	263453987511	150
4466967988	4466967682	900510985	446292640270	446504354140	150
4466967988	4466967682	900510985	446292640270	446504354140	150
960029792	960029084	6316500995	96572964403	96595112403	150
960029792	960029084	6316500995	96572964403	96595112403	150
1127456011	1127456427	3441610391	112508598602	112507736978	150
1127456011	1127456427	3441610391	112508598602	112507736978	150
5892626763	5892626235	4654510475	589215377994	589161647596	150
5892626763	5892626235	4654510475	589215377994	589161647596	150
2463085906	2463085166	7139410223	246470516734	246431257847	150
2463085906	2463085166	7139410223	246470516734	246431257847	150
6991171173	6991171328	247510402	699897406245	699474318252	150
7551006914	7551006424	9135500163	755794992842	755006167715	150
7551006914	7551006424	9135500163	755794992842	755006167715	150
754034656	754034285	290610880	75833518057	75121376227	150
754034656	754034285	290610880	75833518057	75121376227	150
2273075581	2273075373	2357510513	227866197948	227832676030	150
2273075581	2273075373	2357510513	227866197948	227832676030	150
7783609914	7783609183	6102510897	778616671828	778907734240	150
7783609914	7783609183	6102510897	778616671828	778907734240	150
5007553934	5007553455	6806500944	500549153215	500967841182	150
5007553934	5007553455	6806500944	500549153215	500967841182	150
9161343813	9161343071	7549410362	916192642114	916755274212	150
9161343813	9161343071	7549410362	916192642114	916755274212	150
2700490432	2700490049	7972510682	270989072886	270816776471	150
2700490432	2700490049	7972510682	270989072886	270816776471	150
6785986358	6785986363	2895510952	678313876519	678712626829	150
6785986358	6785986363	2895510952	678313876519	678712626829	150
8126067700	8126067775	6831610335	812797692941	812725530487	150
8126067700	8126067775	6831610335	812797692941	812725530487	150
1676938460	1676938091	5727410208	167173676589	167039102863	150
1676938460	1676938091	5727410208	167173676589	167039102863	150
8759895438	8759895694	4288410733	875854041589	875900844738	150
8759895438	8759895694	4288410733	875854041589	875900844738	150
3827292612	3827292689	8400610014	382597575498	382674930681	150
3827292612	3827292689	8400610014	382597575498	382674930681	150
3041754410	3041754239	6750610537	304766197114	304545816493	150
3041754410	3041754239	6750610537	304766197114	304545816493	150

5423157360	5423157758	9061510489	542688472247	542546497627	150
5423157360	5423157758	9061510489	542688472247	542546497627	150
8383889219	8383889179	4876510761	838653107239	838824513014	150
8383889219	8383889179	4876510761	838653107239	838824513014	150
979237264	979237413	9206510999	97194907368	97925768387	150
979237264	979237413	9206510999	97194907368	97925768387	150
3636980459	3636980191	3978510763	363095503351	363578646386	150
3636980459	3636980191	3978510763	363095503351	363578646386	150
4166115940	4166115647	5125500060	416833551016	416958346357	150
4166115940	4166115647	5125500060	416833551016	416958346357	150
7988784892	7988784730	5566500514	798766653164	798811995123	150
7988784892	7988784730	5566500514	798766653164	798811995123	150
1011981351	1011981208	985500740	101248265276	101170049253	150
1011981351	1011981208	985500740	101248265276	101170049253	150
7255969178	7255969530	8291510808	725309553422	725624133877	150
7255969178	7255969530	8291510808	725309553422	725624133877	150
2481584947	2481584576	1277410643	248731118934	248643222243	150
2481584947	2481584576	1277410643	248731118934	248643222243	150
3850584546	3850584440	5768410586	385617418891	385189907574	150
3850584546	3850584440	5768410586	385617418891	385189907574	150
3472348084	3472348603	6294510838	347941674851	347457691498	150
3472348084	3472348603	6294510838	347941674851	347457691498	150
4765244386	4765244118	7980610857	476799808806	476648271148	150
4765244386	4765244118	7980610857	476799808806	476648271148	150
9690483314	9690483082	6613510060	969790560178	969177158666	150
9690483314	9690483082	6613510060	969790560178	969177158666	150
5153141460	5153141287	8394510850	515295853155	515503061723	150
5153141460	5153141287	8394510850	515295853155	515503061723	150
1328238137	1328238339	4178510684	132505812025	132368266704	150
1328238137	1328238339	4178510684	132505812025	132368266704	150
2616379200	2616379083	2424510143	261432451707	261703708762	150
2616379200	2616379083	2424510143	261432451707	261703708762	150
8700107915	8700107249	9444510357	870012826373	870241256665	150
8700107915	8700107249	9444510357	870012826373	870241256665	150
6669657932	6669657267	7527410188	666194232968	666218120626	150
6669657932	6669657267	7527410188	666194232968	666218120626	150
9683788762	9683788990	5570610714	968004039446	968268263435	150
9683788762	9683788990	5570610714	968004039446	968268263435	150
3479613099	3479613866	3909410001	347606546616	347899337891	150
3479613099	3479613866	3909410001	347606546616	347899337891	150
2472030245	2472030735	7819410094	247971170982	247042751184	150
2472030245	2472030735	7819410094	247971170982	247042751184	150
3402156409	3402156520	7949510468	340866825582	340845441253	150
3402156409	3402156520	7949510468	340866825582	340845441253	150
3325736365	3325736719	3577510731	332475991931	332165782043	150
3325736365	3325736719	3577510731	332475991931	332165782043	150
2113571680	2113571667	5328410152	211349256587	211109180755	150

2113571680	2113571667	5328410152	211349256587	211109180755	150
7431528861	7431528344	7149410322	743877045333	743100516486	150
7431528861	7431528344	7149410322	743877045333	743100516486	150
3489048618	3489048890	3770510662	348011234811	348764209549	150
3489048618	3489048890	3770510662	348011234811	348764209549	150
2554627899	2554627883	7635500210	255525708435	255469099067	150
2554627899	2554627883	7635500210	255525708435	255469099067	150
461107816	461107840	987410810	46988091303	46913604492	150
461107816	461107840	987410810	46988091303	46913604492	150
2484870275	2484870888	9251610475	248929622890	248903525820	150
2484870275	2484870888	9251610475	248929622890	248903525820	150
5527235480	5527235649	987510867	552146778066	552422145490	150
5527235480	5527235649	987510867	552146778066	552422145490	150
5517593346	5517593089	919410097	551436382915	551552117619	150
5517593346	5517593089	919410097	551436382915	551552117619	150
5556240662	5556240539	4235500168	555359755894	555995373809	150
5556240662	5556240539	4235500168	555359755894	555995373809	150
6395865386	6395865275	4087410725	639107710176	639370050636	150
6395865386	6395865275	4087410725	639107710176	639370050636	150
4700165712	4700165001	227410151	470846876173	470735629315	150
4700165712	4700165001	227410151	470846876173	470735629315	150
9842832612	9842832673	4219510097	984330216057	984938326490	150
9842832612	9842832673	4219510097	984330216057	984938326490	150
6261138687	6261138181	4358510508	626204311513	626370631651	150
6261138687	6261138181	4358510508	626204311513	626370631651	150
1603687221	1603687003	2707510051	160703972592	160361762778	150
1603687221	1603687003	2707510051	160703972592	160361762778	150
8196359329	8196359826	8641610415	819445573502	819696251397	150
8196359329	8196359826	8641610415	819445573502	819696251397	150
4441106678	4441106514	7388410746	444700864388	444118953677	150
4441106678	4441106514	7388410746	444700864388	444118953677	150
5367300733	5367300326	5690610924	536747928334	536669739749	150
5367300733	5367300326	5690610924	536747928334	536669739749	150
6185937891	6185937346	4755510514	618915195912	618113853997	150
6185937891	6185937346	4755510514	618915195912	618113853997	150
8949064820	8949064952	101510894	894555018712	894772340596	150
8949064820	8949064952	101510894	894555018712	894772340596	150
4418803878	4418803335	6987410816	441413662970	441904217574	150
4418803878	4418803335	6987410816	441413662970	441904217574	150
9118561750	9118561460	1079410605	911490355571	911218575767	150
9118561750	9118561460	1079410605	911490355571	911218575767	150
3722197821	3722197912	7793510872	372202961406	372576086616	150
3722197821	3722197912	7793510872	372202961406	372576086616	150
4963471027	4963471503	3968510664	496396818051	496147781185	150
4963471027	4963471503	3968510664	496396818051	496147781185	150
9840352274	9840352264	4269410528	984611603011	984451421088	150
9840352274	9840352264	4269410528	984611603011	984451421088	150

8766672033	8766672889	2917410122	876695586432	876355775954	150
8766672033	8766672889	2917410122	876695586432	876355775954	150
1901623417	1901623297	118410031	190561776134	190448551573	150
1901623417	1901623297	118410031	190561776134	190448551573	150
8202610651	8202610593	9585510828	820333098462	820026653570	150
8202610651	8202610593	9585510828	820333098462	820026653570	150
7917478128	7917478616	6458410461	791238403077	791253891856	150
7917478128	7917478616	6458410461	791238403077	791253891856	150
6008812553	6008812506	279410624	600765032662	600217253426	150
6008812553	6008812506	279410624	600765032662	600217253426	150
2460509995	2460509910	6459410451	246915694007	246535608646	150
2460509995	2460509910	6459410451	246915694007	246535608646	150
9603325805	9603325824	3027410133	960238698686	960637605460	150
9603325805	9603325824	3027410133	960238698686	960637605460	150
1186893314	1186893052	689510828	118357969260	118918838790	150
1186893314	1186893052	689510828	118357969260	118918838790	150
2457509925	2457509953	4823510179	245458732108	245234138786	150
2457509925	2457509953	4823510179	245458732108	245234138786	150
3685505684	3685505034	6596410886	368875552426	368111415362	150
3685505684	3685505034	6596410886	368875552426	368111415362	150
6226399798	6226399361	5327510213	622871395186	622847874646	150
6226399798	6226399361	5327510213	622871395186	622847874646	150
901019797	901019132	6418510121	90356737696	90257411345	150
901019797	901019132	6418510121	90356737696	90257411345	150
9611084567	9611084514	57510481	961111063920	961935339635	150
9611084567	9611084514	57510481	961111063920	961935339635	150
5207689817	5207689657	1891510861	520563715268	520873144940	150
5207689817	5207689657	1891510861	520563715268	520873144940	150
6983702586	6983702157	9577410680	698969163696	698208793251	150
6983702586	6983702157	9577410680	698969163696	698208793251	150
2625040240	2625040636	9291610874	262281008454	262913616491	150
2625040240	2625040636	9291610874	262281008454	262913616491	150
3210018226	3210018669	1047410327	321198650950	321705712782	150
3210018226	3210018669	1047410327	321198650950	321705712782	150
7291910850	7291910546	8060510500	729969877382	729086452954	150
7291910850	7291910546	8060510500	729969877382	729086452954	150
6616012373	6616012693	4496410874	661137896359	661865240247	150
6616012373	6616012693	4496410874	661137896359	661865240247	150
5036505800	5036505923	969910000	503092360736	503510403029	150
5036505800	5036505923	969910000	503092360736	503510403029	150
8091915664	8091915103	5079510673	809374804154	809074208645	150
8091915664	8091915103	5079510673	809374804154	809074208645	150
6978940638	6978940671	6033510201	697535652645	697125716915	150
6978940638	6978940671	6033510201	697535652645	697125716915	150
8796876228	8796876313	5345500277	879392445190	879221165637	150
8796876228	8796876313	5345500277	879392445190	879221165637	150
1909468571	1909468396	382510716	190007359192	190293093476	150

1909468571	1909468396	382510716	190007359192	190293093476	150
8968944292	8968944617	9226410156	896505881740	896177620175	150
8968944292	8968944617	9226410156	896505881740	896177620175	150
356993757	356993049	9985500751	35507555200	35571215376	150
356993757	356993049	9985500751	35507555200	35571215376	150
4582030350	4582030136	5517410087	458361159216	458502443469	150
4582030350	4582030136	5517410087	458361159216	458502443469	150
1200030930	1200030183	632510246	120436222885	120554219007	150
1200030930	1200030183	632510246	120436222885	120554219007	150
6876907924	6876907809	8054510417	687369181344	687987419912	150
6876907924	6876907809	8054510417	687369181344	687987419912	150
7665195965	7665195935	4629510237	766045158445	766788398232	150
7665195965	7665195935	4629510237	766045158445	766788398232	150
9582150864	9582150060	5875510748	958391119556	958934053581	150
9582150864	9582150060	5875510748	958391119556	958934053581	150
2374306628	2374306914	8529410164	237375283402	237427120202	150
2374306628	2374306914	8529410164	237375283402	237427120202	150
5169826463	5169826564	3478410653	516163024034	516295861822	150
5169826463	5169826564	3478410653	516163024034	516295861822	150
3467489268	3467489579	7468410558	346387334329	346343841741	150
3467489268	3467489579	7468410558	346387334329	346343841741	150
8590532982	8590532259	1236500180	859073121593	859758154633	150
8590532982	8590532259	1236500180	859073121593	859758154633	150
6507173292	6507173460	3085500645	650531583115	650753372238	150
6507173292	6507173460	3085500645	650531583115	650753372238	150
2426510000	2426510950	2426510215	242059051335	242450467597	150
2426510000	2426510950	2426510215	242059051335	242450467597	150
4428020784	4428020661	535500193	442227799950	442807934294	150
4428020784	4428020661	535500193	442227799950	442807934294	150
2014069564	2014069926	6893510882	201976967808	201053143853	150
355323211	355323753	1167410534	35297620835	35169504785	150
355323211	355323753	1167410534	35297620835	35169504785	150
2128961053	2128961227	3871610728	212363858897	212647933811	150
2128961053	2128961227	3871610728	212363858897	212647933811	150
5167571961	5167571498	7233500201	516325073170	516572855357	150
5167571961	5167571498	7233500201	516325073170	516572855357	150
1095580099	1095580661	8463510540	109404370869	109786140386	150
1095580099	1095580661	8463510540	109404370869	109786140386	150
9645848981	9645848605	228410138	964720338772	964806917614	150
9645848981	9645848605	228410138	964720338772	964806917614	150
1789430255	1789430448	3177510691	178003326941	178787523082	150
1789430255	1789430448	3177510691	178003326941	178787523082	150
4326939997	4326939160	9727410212	432145893308	432499097386	150
4326939997	4326939160	9727410212	432145893308	432499097386	150
7340969389	7340969727	5557410478	734285958489	734670145595	150
7340969389	7340969727	5557410478	734285958489	734670145595	150
2686043366	2686043725	3549410358	268207850448	268166297008	150

2686043366	2686043725	3549410358	268207850448	268166297008	150
3474317658	3474317646	3883510777	347609170016	347310975764	150
3474317658	3474317646	3883510777	347609170016	347310975764	150
8406305483	8406305636	1445500283	840947185424	840507633780	150
8406305483	8406305636	1445500283	840947185424	840507633780	150
7105958982	7105958335	8390610898	710386711391	710274370819	150
7105958982	7105958335	8390610898	710386711391	710274370819	150
9721546662	9721546037	1727510249	972492569303	972857246084	150
9721546662	9721546037	1727510249	972492569303	972857246084	150
8824686291	8824686433	3982510778	882885149709	882394368021	150
8824686291	8824686433	3982510778	882885149709	882394368021	150
606653839	606653173	8817410118	60373536464	60416375200	150
606653839	606653173	8817410118	60373536464	60416375200	150
8109486712	8109486267	2667410586	810270380926	810304673926	150
8109486712	8109486267	2667410586	810270380926	810304673926	150
138390290	138390532	5738510348	13040185664	13042039465	150
138390290	138390532	5738510348	13040185664	13042039465	150
4343188805	4343188929	5116410043	434630419022	434778497803	150
4343188805	4343188929	5116410043	434630419022	434778497803	150
5287368712	5287368864	9787410799	528868424509	528393371654	150
5287368712	5287368864	9787410799	528868424509	528393371654	150
1254606897	1254606080	539510322	125784913194	125861205815	150
1254606897	1254606080	539510322	125784913194	125861205815	150
837285563	837285882	2955510534	83941766276	83955927919	150
837285563	837285882	2955510534	83941766276	83955927919	150
2853207581	2853207201	6881610831	285749357659	285575006270	150
2853207581	2853207201	6881610831	285749357659	285575006270	150
7718542976	7718542412	3379410637	771059257191	771414025724	150
7718542976	7718542412	3379410637	771059257191	771414025724	150
596912131	596912579	6528410173	59909890460	59691961358	150
596912131	596912579	6528410173	59909890460	59691961358	150
5717666997	5717666700	110610076	571595683715	571883549636	150
5717666997	5717666700	110610076	571595683715	571883549636	150
3672202556	3672202457	8659510538	367543301982	367846855119	150
3672202556	3672202457	8659510538	367543301982	367846855119	150
3103066205	3103066160	2129711369	310644976661	310750633296	150
6783025132	6783025098	6287510804	678197866366	678818569564	150
6783025132	6783025098	6287510804	678197866366	678818569564	150
5772727149	5772727140	8926500157	577745245206	577210153518	150
5772727149	5772727140	8926500157	577745245206	577210153518	150
7268303348	7268303425	9028410127	726221464938	726551090801	150
7268303348	7268303425	9028410127	726221464938	726551090801	150
18311356	18311897	4780610834	1445354340	1039956455	150
18311356	18311897	4780610834	1445354340	1039956455	150
3790077792	3790077840	4101610973	379130880362	379890323671	150
3790077792	3790077840	4101610973	379130880362	379890323671	150
2145656424	2145656155	7598410866	214282432549	214295102197	150

2145656424	2145656155	7598410866	214282432549	214295102197	150
6039218534	6039218356	6537410286	603396886081	603498062752	150
6039218534	6039218356	6537410286	603396886081	603498062752	150
9436018020	9436018276	2385810848	943087312168	943458896300	150
9436018020	9436018276	2385810848	943087312168	943458896300	150
4374558931	4374558082	951510470	437364375301	437213602710	150
4374558931	4374558082	951510470	437364375301	437213602710	150
2387998316	2387998262	4070610663	238438108932	238357400049	150
2387998316	2387998262	4070610663	238438108932	238357400049	150
9710889237	9710889418	7846500346	971539187953	971682720352	150
9710889237	9710889418	7846500346	971539187953	971682720352	150
8944767079	8944767866	7135510241	894437009821	894949578466	150
8944767079	8944767866	7135510241	894437009821	894949578466	150
2591276184	2591276526	9708410000	259214316891	259610274368	150
9231010030	9231010191	2449410347	923976373208	923890865316	150
9231010030	9231010191	2449410347	923976373208	923890865316	150
4970993333	4970993568	3327410164	497373050625	497253353484	150
4970993333	4970993568	3327410164	497373050625	497253353484	150
6687155968	6685048980	5064510516	668133950831	668264600792	150
6687155968	6685048980	5064510516	668133950831	668264600792	150
3413144161	3413144342	8894510900	341913196017	341115410627	150
3413144161	3413144342	8894510900	341913196017	341115410627	150
8993308382	8993308540	3081510683	899500910773	899606700360	150
8993308382	8993308540	3081510683	899500910773	899606700360	150
2321132758	2321132392	9157410442	232853055936	232883191596	150
2321132758	2321132392	9157410442	232853055936	232883191596	150
7296150747	7296150688	3446410371	729231957572	729022809426	150
7296150747	7296150688	3446410371	729231957572	729022809426	150
5464338145	5464338080	5187410736	546651849526	546453206737	150
5464338145	5464338080	5187410736	546651849526	546453206737	150
8398221665	8398221558	5218410047	839947488582	839453826909	150
8398221665	8398221558	5218410047	839947488582	839453826909	150
1936104503	1936104243	6923510191	193490103966	193383628649	150
1936104503	1936104243	6923510191	193490103966	193383628649	150
5991539734	5996296005	3369410537	599832545040	599888183311	150
5991539734	5996296005	3369410537	599832545040	599888183311	150
4487031267	4487031394	7909510069	448931974692	448578811461	150
4487031267	4487031394	7909510069	448931974692	448578811461	150
7801893180	7806129065	5927410228	780346327744	780202336166	150
7801893180	7806129065	5927410228	780346327744	780202336166	150
7194122753	7190444825	950510481	719901372211	719283121235	150
7194122753	7190444825	950510481	719901372211	719283121235	150
4291664035	4294741238	4679910000	429379149551	429049323605	150
4291664035	4294741238	4679910000	429379149551	429049323605	150
6472119247	6477423177	4779410677	647035231228	647224075633	150
6472119247	6477423177	4779410677	647035231228	647224075633	150
5780215438	5784810203	1259910000	578818664406	578700218216	150

5780215438	5784810203	1259910000	578818664406	578700218216	150
9204127469	9202229352	9439410254	920681695042	920631830847	150
2341462163	2343398965	1460510533	234107030145	234523581409	150
2341462163	2343398965	1460510533	234107030145	234523581409	150
9778159845	9778081623	615510078	977359171324	977989494016	150
9778159845	9778081623	615510078	977359171324	977989494016	150
1199423839	1196989894	7856500446	119332847829	119206242576	150
1199423839	1196989894	7856500446	119332847829	119206242576	150
6762950280	6762914393	5047510387	676588421265	676714620232	150
2022945130	2026559726	3783510767	202308590707	202739628573	150
2022945130	2026559726	3783510767	202308590707	202739628573	150
3364515638	3363812684	5815500030	336920839278	336390063302	150
3364515638	3363812684	5815500030	336920839278	336390063302	150
6945374978	6942709779	4229910000	694154583729	694188185954	150
6945374978	6942709779	4229910000	694154583729	694188185954	150
3778973022	3777840825	6690510851	377472509796	377033095663	150
3778973022	3777840825	6690510851	377472509796	377033095663	150
3860500316	3863599613	6505510970	386125139551	386514834678	150
3860500316	3863599613	6505510970	386125139551	386514834678	150
3266756797	3264279360	1718410091	326698394486	326412660020	150
3266756797	3264279360	1718410091	326698394486	326412660020	150
6474285568	6474027676	3611610119	647473154770	647713822934	150
6474285568	6474027676	3611610119	647473154770	647713822934	150
7676080961	7677413565	9890510874	767242788262	767554487376	150
7676080961	7677413565	9890510874	767242788262	767554487376	150
700686599	701572005	8828410206	70194723640	70560706730	150
700686599	701572005	8828410206	70194723640	70560706730	150
2521102638	2520437504	4967510672	252518134674	252897674244	150
2521102638	2520437504	4967510672	252518134674	252897674244	150
4937572902	4932163028	6036410234	493505828150	493295926004	150
4937572902	4932163028	6036410234	493505828150	493295926004	150
6512200606	6513710588	7701542012	651604548361	651575411228	150
6512200606	6513710588	7701542012	651604548361	651575411228	150
8497631597	8492433863	5155510451	849850512875	849464478193	150
8497631597	8492433863	5155510451	849850512875	849464478193	150
4458134393	4455140495	818510155	445424574272	445566846902	150
4458134393	4455140495	818510155	445424574272	445566846902	150
9383699130	9383823510	1738510343	938112023928	938993696742	150
9383699130	9383823510	1738510343	938112023928	938993696742	150
7499211063	7497071492	279510688	749306129313	749613570000	150
7499211063	7497071492	279510688	749306129313	749613570000	150
305330259	300325459	830510272	30308195401	30931115391	150
305330259	300325459	830510272	30308195401	30931115391	150
9590958071	9594063967	953510483	959947622035	959649666213	150
9590958071	9594063967	953510483	959947622035	959649666213	150
6359495754	6352474866	2157510493	635532930257	635240433682	150
6359495754	6352474866	2157510493	635532930257	635240433682	150

6440637861	6447746637	3116510084	644907811740	644624744783	150
6440637861	6447746637	3116510084	644907811740	644624744783	150
1714856381	1710208477	907799912	171086064002	171418187792	150
1714856381	1710208477	907799912	171086064002	171418187792	150
7172518877	7171272659	8247410353	717004601991	717471856736	150
7172518877	7171272659	8247410353	717004601991	717471856736	150
1174123650	1173118790	8967410620	117141368240	117415022149	150
1174123650	1173118790	8967410620	117141368240	117415022149	150
1806503225	1806402325	6452510432	180031982669	180189169846	150
1806503225	1806402325	6452510432	180031982669	180189169846	150
2924599853	2922951500	6547510438	292364000334	292980397044	150
5303147999	5302713223	1559410456	530252104774	530510584011	150
5303147999	5302713223	1559410456	530252104774	530510584011	150
1041939392	1046931586	3454510454	104530005936	104908791661	150
1041939392	1046931586	3454510454	104530005936	104908791661	150
9546809030	9546968992	3096510881	954153449347	954407677007	150
9269645987	9264481459	6706410003	926781093509	926224215525	150
9269645987	9264481459	6706410003	926781093509	926224215525	150
5569508844	5568549908	3614510065	556056198412	556580089277	150
2259324010	2254982594	588410759	225850031859	225108464324	150
2259324010	2254982594	588410759	225850031859	225108464324	150
8879163277	8870423977	8319410046	887077291184	887867362904	150
8879163277	8870423977	8319410046	887077291184	887867362904	150
5761959754	5765510095	3722510157	576601665294	576075115486	150
5761959754	5765510095	3722510157	576601665294	576075115486	150
9577747001	9572531877	1018410022	957667853464	957564561643	150
9577747001	9572531877	1018410022	957667853464	957564561643	150
2400583150	2406256221	5208410946	240918128563	240301197043	150
2400583150	2406256221	5208410946	240918128563	240301197043	150
1230116283	1237432406	6349410341	123289434984	123943206971	150
1230116283	1237432406	6349410341	123289434984	123943206971	150
4741918270	4744884312	2161610558	474039828512	474071148319	150
4741918270	4744884312	2161610558	474039828512	474071148319	150
9373601049	9377942068	708510046	937473900770	937769060245	150
9373601049	9377942068	708510046	937473900770	937769060245	150
9235761502	9232993791	8460610607	923970819664	923166379721	150
9235761502	9232993791	8460610607	923970819664	923166379721	150
7610778484	7614476852	5548510428	761101933621	761378426166	150
7610778484	7614476852	5548510428	761101933621	761378426166	150
5393912911	5391110491	6921510182	539219297885	539685289263	150
5393912911	5391110491	6921510182	539219297885	539685289263	150
103871756	102193946	6261610572	10318817623	10419005876	150
103871756	102193946	6261610572	10318817623	10419005876	150
7990181748	7997676569	2195500766	799807202583	799513044976	150
7990181748	7997676569	2195500766	799807202583	799513044976	150
583837331	580307370	688410769	58704416645	58522269856	150
583837331	580307370	688410769	58704416645	58522269856	150

4125373326	4120253203	6151610463	412809367826	412313022036	150
4125373326	4120253203	6151610463	412809367826	412313022036	150
294521852	297143327	9808410010	29864279357	29086759913	150
294521852	297143327	9808410010	29864279357	29086759913	150
9117778969	9116819974	9673510662	911617842579	911332505139	150
15385825	19295912	9499410847	1742436342	1805527352	150
15385825	19295912	9499410847	1742436342	1805527352	150
1231512001	1231322675	5398410845	123463065175	123582923371	150
1231512001	1231322675	5398410845	123463065175	123582923371	150
4978412630	4970545096	2318410054	497589351830	497491418547	150
4978412630	4970545096	2318410054	497589351830	497491418547	150
4393400000	4393400258	4393400841	439508186299	439494114468	150
6457510000	6457510142	6457510527	645066526509	645672187880	150
6457510000	6457510142	6457510527	645866457971	645672187880	150
6457510000	6457510142	6457510527	645105100769	645672187880	150
5200159456	5202091185	6646400376	520794731656	520373711144	150
4393400000	4393400257	4393400841	439585708138	439494114468	150
4393400000	4393400257	4393400841	439585708138	439494114468	150
6457510000	6457510141	6457510527	645173258580	645672187880	150
6457510000	6457510141	6457510527	645173258580	645672187880	150
6457510000	6457510141	6457510527	645678562619	645672187880	150
6457510000	6457510141	6457510527	645678562619	645672187880	150
6457510000	6457510141	6457510527	645422206730	645672187880	150
5200159456	5209831098	6646400376	520064884128	520373711144	150
5200159456	5209831098	6646400376	520064884128	520373711144	150
7133864322	7135207182	3134500159	713908173578		150
7133864322	7135207182	3134500159	713907507011		150
7133864322	7138140619	3134500159	713424537206		150
7133864322	7138140619	3134500159	713316818745		150
6513700000	6513700301	6513700103	651373503899	651446079244	150
9099410000	9099410265	9099410808	909978486989	909742572570	150
9231010030	9231010315	2449410347	923142183997	923319214435	150
6513700000	6513700300	6513700103	651508675388	651446079244	150
6513700000	6513700300	6513700103	651508675388	651446079244	150
9099410000	9099410264	9099410808	909130852103	909742572570	150
9231010030	9231010191	2449410347	923605943068	923319214435	150
17410000	17410728	17410032	1825451363	1723945227	150
17410000	17410728	17410032	1216924307	1794167309	150
4927400000	4927400189	4927400238	492336613573	492918198458	150
2618299630	2618299907	842510366	261351348397	261562640447	150
17410000	17410727	17410032	1791347380	1794167309	150
17410000	17410727	17410032	1791347380	1794167309	150
17410000	17410727	17410032	1654507855	1723945227	150
17410000	17410727	17410032	1654507855	1723945227	150
4927400000	4927400188	4927400238	492572288446	492918198458	150
4927400000	4927400188	4927400238	492572288446	492918198458	150
2618299630	2618299615	842510366	261969623046	261562640447	150

2618299630	2618299615	842510366	261969623046	261562640447	150
9778159845	9779559264	615510078	977587339769	977048767056	150
9778159845	9778081623	615510078	977086347556	977048767056	150
9778159845	9778081623	615510078	977086347556	977048767056	150
175310000	175310941	175310604	17130466348	17569646562	150
7414900000	7414900037	7414900075	741869320033	741725216152	150
7414900000	7414900037	7414900075	741869320033	741725216152	150
9764478372	9764478525	4825110268	976790839708	976476508433	150
9764478372	9764478525	4825110268	976790839708	976476508433	150
175310000	175310942	175310604	17036184478	17569646562	150
7414900000	7414900038	7414900075	741112310346	741725216152	150
9764478372	9764478393	4825110268	976108951122	976476508433	150
4104900000	4104900863	4104900944	410910094769	410426373254	150
4104900000	4104900863	4104900944	410910094769	410426373254	150
4104900000	4104900864	4104900944	410051358288	410426373254	150
5993900000	5993900831	5993900925	599349965823	599425731767	150
5993900000	5993900831	5993900925	599349965823	599425731767	150
5993900000	5993900832	5993900925	599315447087	599425731767	150
6853935263	6853935037	4986059804	685119615201	685009808689	150
7847401518	7847401171	6409857011	784767812435	784922494430	150
5447935942	5447935844	9417310009	544160070353	544980286979	150
5447935942	5447935844	9417310009	544160070353	544980286979	150
7847401518	7847401474	6409857011	784709414896	784922494430	150
6853935263	6853935012	4986059804	685578654709	685009808689	150
5447935942	5447935802	9417310009	544113021499	544980286979	150
5310000	5310799	5310858	702151705	61581522	150
36500000	36500783	36500159	3940305316	3003094695	150
3500000	3500851	3500879	962695872	240132689	150
64500000	64500151	64500438	6401013394	6207791152	150
71500000	71500569	71500591	7670889478	7007331063	150
93500000	93500172	93500762	9519353376	9975115747	150
84600000	84600285	84600663	8407405152	8909469556	150
72500000	72500628	72500581	7006366611	7677917884	150
91500000	91500925	91500784	9604413901	9898639434	150
94500000	94500097	94500729	9132835749	9755660364	150
213400000	213400054	213400039	21941474871	21669332417	150
204400000	204400562	204400924	20826999076	20986569218	150
229400000	229400465	229400136	22737075935	22567717583	150
237400000	237400228	237400264	23089859560	23609633519	150
227400000	227400082	227400166	22963327249	22763875313	150
183500000	183500872	183500674	18038439437	18498985475	150
184400000	184400210	184400707	18778686457	18050348180	150
200500000	200500441	200500929	20953533591	20918190637	150
233500000	233500275	233500194	23214424921	23591606387	150
173400000	173400391	173400620	17327734534	17956703952	150
129400000	129400452	129400126	12529449892	12664345694	150
130500000	130500797	130500215	13306370572	13645195789	150

123610000	123610978	123610141	12116919466	12387383122	150
134400000	134400927	134400212	13215623399	13918241052	150
135400000	135400767	135400215	13364296253	13635334778	150
137610000	137610566	137610193	13047973296	13493094647	150
150500000	150500003	150500411	15495885670	15485069938	150
342500000	342500608	342500312	34821642716	34407343653	150
343400000	343400751	343400343	34670806205	34918953541	150
358610000	358610467	358610399	35309548893	35813060215	150
360500000	360500152	360500531	36865543379	36368783077	150
331500000	331500098	331500225	33779496682	33513476464	150
355500000	355500653	355500373	35146140018	35079965109	150
310610000	310610447	310610096	31094042567	31593732151	150
362400000	362400123	362400551	36909340265	36014845796	150
365400000	365400200	365400539	36015563063	36393109025	150
362500000	362500675	362500511	36607242519	36181100081	150
363500000	363500456	363500499	36645581188	36590505589	150
274500000	274500364	274500551	27444951670	27408307942	150
283500000	283500890	283500684	28906402111	28488447607	150
254500000	254500825	254500358	25507775201	25439829888	150
442500000	442500627	442500322	44732086996	44145112356	150
435400000	435400825	435400247	43111235193	43958237344	150
466400000	466400569	466400562	46472470114	46876515784	150
467400000	467400489	467400581	46023410638	46511759484	150
484500000	484500997	484500670	48672098370	48382548119	150
447400000	447400279	447400381	44048661988	44022439510	150
418400000	418400079	418400073	41144625873	41333445298	150
375400000	375400357	375400639	37682199176	37574569839	150
424400000	424400818	424400143	42985327546	42090596066	150
408410000	408410878	408410961	40693861228	40045508545	150
383500000	383500907	383500694	38475870696	38870412214	150
402500000	402500112	402500922	40663147418	40375311220	150
385400000	385400421	385400739	38576453659	38832028294	150
594810000	594810967	594810031	59775753039	59948524611	150
611500000	611500878	611500056	61657977827	61353187206	150
597400000	597400780	597400886	59693163604	59337906581	150
616400000	616400869	616400066	61675429685	61880505079	150
592400000	592400312	592400870	59463455240	59230869558	150
534400000	534400868	534400252	53010143268	53532272236	150
551500000	551500425	551500441	55067669644	55022267772	150
505500000	505500565	505500879	50494426076	50507566264	150
709400000	709400293	709400988	70987726688	70052186761	150
721500000	721500999	721500164	72834686647	72800692629	150
684500000	684500034	684500689	68258482167	68468758789	150
681500000	681500752	681500749	68960026188	68815178700	150
624400000	624400849	624400162	62776382382	62001111207	150
653400000	653400887	653400472	65976877247	65435108976	150
619400000	619400370	619400078	61442073627	61374164439	150

670500000	670500320	670500660	67695949500	67367855905	150
652500000	652500550	652500441	65378881969	65100258585	150
630500000	630500764	630500263	63944551035	63115740614	150
827400000	827400170	827400224	82194495326	82314674754	150
844500000	844500756	844500320	84661910624	84875394320	150
860500000	860500242	860500580	86121330730	86000853779	150
822500000	822500466	822500161	82634358759	82296814723	150
824500000	824500489	824500126	82933544298	82529857201	150
764400000	764400971	764400568	76013561325	76109357192	150
800500000	800500552	800500988	80793677710	80421025887	150
801500000	801500745	801500976	80672063627	80962050847	150
770500000	770500339	770500670	77542147273	77442510762	150
794500000	794500444	794500798	79390506221	79050321934	150
768400000	768400770	768400593	76243958366	76761083098	150
756700000	756700949	756700472	75783133080	75474173354	150
754500000	754500908	754500408	75677396501	75265492029	150
943500000	943500780	943500360	94452057570	94119186666	150
969400000	969400147	969400600	96106954136	96228709918	150
985400000	985400517	985400797	98054218762	98343780521	150
935400000	935400852	935400298	93841610123	93179532263	150
945400000	945400029	945400400	94597898144	94948797954	150
979400000	979400310	979400698	97002118704	97177539998	150
936400000	936400184	936400296	93600594286	93000401727	150
912500000	912500287	912500070	91414279892	91807454507	150
905400000	905400425	905400984	90271744548	90557963854	150
922400000	922400066	922400217	92342067227	92518526563	150
907400000	907400121	907400038	90985051047	90874807760	150
924400000	924400897	924400192	92672871634	92145061357	150
925500000	925500942	925500135	92332888190	92143737418	150
868400000	868400792	868400603	86472550803	86811864321	150
897410000	897410778	897410900	89808770143	89034818414	150
930500000	930500808	930500292	93429980511	93984515848	150
887700000	887700654	887700777	88574744953	88200648387	150
1102500000	1102500056	1102500893	110401081504	110072436126	150
1094500000	1094500099	1094500730	109255010702	109247863080	150
1096400000	1096400930	1096400837	109437772184	109567414646	150
1073400000	1073400378	1073400611	107033144164	107316801813	150
1057400000	1057400378	1057400442	105702599848	105183904983	150
1004500000	1004500362	1004500862	100807146057	100145846731	150
1008400000	1008400863	1008400935	100251864286	100247601226	150
1052400000	1052400298	1052400422	105097445873	105827564676	150
1020500000	1020500629	1020500108	102491923297	102334566250	150
1193400000	1193400218	1193400819	119106337435	119417827319	150
1193500000	1193500191	1193500774	119769573475	119718943501	150
1205500000	1205500522	1205500850	120253615669	120976660365	150
1235610000	1235610753	1235610233	123412140564	123707476866	150
1236400000	1236400070	1236400225	123742728860	123661406382	150

1214500000	1214500013	1214500975	121099019258	121147713078	150
1215500000	1215500666	1215500956	121354962943	121143662495	150
1192400000	1192400240	1192400831	119348039168	119057070833	150
1184310000	1184310412	1184310670	118307984770	118467139051	150
1184500000	1184500947	1184500643	118549436463	118780075282	150
1124400000	1124400776	1124400114	112033481407	112003264212	150
1141500000	1141500152	1141500304	114010571889	114451429545	150
1165700000	1165700776	1165700524	116031488231	116862742205	150
1132400000	1132400102	1132400238	113979799801	113893499935	150
1333500000	1333500291	1333500205	133032087631	133369293871	150
1352500000	1352500492	1352500413	135025081611	135223467113	150
1349400000	1349400859	1349400345	134756576945	134796126062	150
1328400000	1328400189	1328400164	132289976669	132999111626	150
1365700000	1365700816	1365700544	136857005114	136751214743	150
1310500000	1310500638	1310500039	131187473475	131244066536	150
1354400000	1354400748	1354400430	135327864909	135939335122	150
1324500000	1324500214	1324500078	132630747406	132231787416	150
1287400000	1287400658	1287400759	128376601777	128141914456	150
1303500000	1303500902	1303500909	130075685592	130720419390	150
1264500000	1264500192	1264500459	126348863338	126665484885	150
1265700000	1265700796	1265700534	126949346616	126385374914	150
1281500000	1281500680	1281500710	128277026012	128187533685	150
1284500000	1284500963	1284500652	128397857160	128782527509	150
1255500000	1255500639	1255500364	125386731726	125875675484	150
1273400000	1273400409	1273400631	127883171932	127168919643	150
1258400000	1258400597	1258400448	125823331531	125546634205	150
1477400000	1477400521	1477400681	147529650934	147129121122	150
1483500000	1483500929	1483500705	148980446948	148949650582	150
1442410000	1442410075	1442410360	144669650659	144251748535	150
1585400000	1585400456	1585400760	158127754019	158787249432	150
1594500000	1594500414	1594500779	159080331673	159377509747	150
1590500000	1590500618	1590500847	159293162832	159008275837	150
1512400000	1512400006	1512400079	151232305070	151810735324	150
1515500000	1515500709	1515500991	151801780073	151759359959	150
1552500000	1552500533	1552500432	155680120174	155957505719	150
1526500000	1526500708	1526500110	152313910727	152183910317	150
1553400000	1553400872	1553400463	155170916990	155845521022	150
1494800000	1494800765	1494800886	149646245461	149392404035	150
1521500000	1521500963	1521500146	152879739926	152558450280	150
1708700000	1708700939	1708700965	170959184995	170357679835	150
1724500000	1724500471	1724500117	172574616147	172626874987	150
1702400000	1702400871	1702400000	170748120857	170476462294	150
1697410000	1697410752	1697410881	169656243654	169701735748	150
1722400000	1722400035	1722400198	172930040822	172064602923	150
1734400000	1734400905	1734400273	173910599279	173418836896	150
1693500000	1693500285	1693500823	169600982806	169242166827	150
1675400000	1675400312	1675400670	167176257555	167258722634	150

1657410000	1657410403	1657410484	165733360087	165950132638	150
1665400000	1665400247	1665400570	166816292246	166610875920	150
1620500000	1620500723	1620500167	162633119391	162713408121	150
1633500000	1633500560	1633500234	163402512408	163308914896	150
1649400000	1649400844	1649400375	164957133469	164455558055	150
1626500000	1626500723	1626500120	162405503949	162574739620	150
1824400000	1824400883	1824400183	182076206845	182415366232	150
1809400000	1809400310	1809400999	180620860735	180077508786	150
1842500000	1842500401	1842500363	184287130539	184437375349	150
1815400000	1815400581	1815400082	181636273084	181390385147	150
1808410000	1808410835	1808410002	180111337532	180116785787	150
1745400000	1745400997	1745400381	174988742721	174582735813	150
1777400000	1777400574	1777400710	177756211888	177382044052	150
1795400000	1795400614	1795400878	179069519914	179963151279	150
1774400000	1774400149	1774400668	177756734924	177812902299	150
1758400000	1758400557	1758400496	175937150720	175833488818	150
1934500000	1934500688	1934500234	193746267460	193468218185	150
1965400000	1965400297	1965400600	196281791488	196238236433	150
1947400000	1947400363	1947400432	194790448928	194561527494	150
1974400000	1974400180	1974400688	197840192635	197972836296	150
1988400000	1988400077	1988400812	198157743783	198572043640	150
1914400000	1914400745	1914400095	191215201049	191970063127	150
1927400000	1927400184	1927400235	192664132893	192899468746	150
1887400000	1887400660	1887400818	188028226260	188108021456	150
1888400000	1888400060	1888400802	188221899658	188366343573	150
1895400000	1895400631	1895400888	189167308221	189777707189	150
1880500000	1880500493	1880500779	188086557117	188265939189	150
1878400000	1878400877	1878400703	187282952008	187062284857	150
1874400000	1874400165	1874400678	187676823985	187494340797	150
1910500000	1910500613	1910500098	191489625688	191740162491	150
1913700000	1913700347	1913700138	191225717385	191126028975	150
1869400000	1869400131	1869400591	186764125447	186211087968	150
1900500000	1900500568	1900500999	190167725553	190474990846	150
2093600000	2093600876	2093600770	209855875319	209584869463	150
2057410000	2057410462	2057410425	205561628097	205818762335	150
2072400000	2072400253	2072400623	207239513212	207123807736	150
2056400000	2056400404	2056400414	205118993970	205498343410	150
2105310000	2105310822	2105310870	210966098396	210176263710	150
2113500000	2113500039	2113500989	211925558396	211659023428	150
2051500000	2051500325	2051500393	205864732814	205512732142	150
2084310000	2084310394	2084310661	208564909549	208031564644	150
2054500000	2054500794	2054500341	205953255131	205371773778	150
2042500000	2042500553	2042500284	204358682487	204147336753	150
2013400000	2013400023	2013400021	201675052706	201232480128	150
2023400000	2023400183	2023400120	202726521814	202786092955	150
1990500000	1990500693	1990500887	199183875232	199328602142	150
2015400000	2015400446	2015400996	201011459657	201897023119	150

2015500000	2015500647	2015500934	201584255273	201399458977	150
2032400000	2032400088	2032400229	203429929538	203529869234	150
2004500000	2004500364	2004500863	200981337042	200738938004	150
2187410000	2187410669	2187410733	218313967305	218617066158	150
2228400000	2228400173	2228400155	222493140387	222111573636	150
2230500000	2230500816	2230500227	223779782760	223853007845	150
2224400000	2224400793	2224400125	222224775004	222774846807	150
2222400000	2222400948	2222400149	222007040106	222095137489	150
2235400000	2235400789	2235400227	223613375386	223793511428	150
2171600000	2171600218	2171600595	217460766600	217792689660	150
2172400000	2172400270	2172400634	217047723406	217846668397	150
2125400000	2125400593	2125400113	212146686959	212634367940	150
2352210000	2352210533	2352210503	235762009488	235900336457	150
2323610000	2323610017	2323610162	232498091417	232843995276	150
2334500000	2334500583	2334500176	233267182207	233375019386	150
2284310000	2284310383	2284310681	228523841101	228415614723	150
2297400000	2297400730	2297400858	229891401825	229242601245	150
2293500000	2293500211	2293500785	229700203565	229211815579	150
2294400000	2294400250	2294400818	229432041024	229541946110	150
2257400000	2257400298	2257400463	225793728803	225854368452	150
2454500000	2454500865	2454500380	245276792917	245307040704	150
2463400000	2463400285	2463400552	246263438526	246136138569	150
2464500000	2464500230	2464500480	246647293182	246578055543	150
2434500000	2434500603	2434500185	243131563153	243152485587	150
2443400000	2443400689	2443400355	244706989293	244155435762	150
2459400000	2459400976	2459400454	245745854431	245582995673	150
2413500000	2413500089	2413500019	241907344716	241995421262	150
2404400000	2404400600	2404400946	240804605312	240067910075	150
2394500000	2394500152	2394500760	239110842957	239390131679	150
2411500000	2411500850	2411500038	241825566909	241495556321	150
2424500000	2424500410	2424500089	242929767244	242887783769	150
2388400000	2388400973	2388400754	238674486178	238902912636	150
2367400000	2367400476	2367400573	236895869377	236211914522	150
2367410000	2367410521	2367410556	236975416934	236871741536	150
2374400000	2374400090	2374400629	237458130824	237262954931	150
2571500000	2571500670	2571500643	257751047755	257175029263	150
2583400000	2583400121	2583400762	258489984353	258685631284	150
2583600000	2583600771	2583600720	258614050267	258453341041	150
2606400000	2606400764	2606400968	260178025142	260865985700	150
2563500000	2563500496	2563500519	256305783594	256328336301	150
2534500000	2534500620	2534500195	253286205510	253477525333	150
2525400000	2525400660	2525400155	252016563101	252851161535	150
2505400000	2505400361	2505400947	250068213271	250189803913	150
2535400000	2535400846	2535400259	253262644661	253394938066	150
2699400000	2699400497	2699400871	269247793465	269956360565	150
2693400000	2693400298	2693400869	269786164968	269395379100	150
2677700000	2677700117	2677700661	267665005492	267646105399	150

2729400000	2729400545	2729400188	272579383486	272999762640	150
2713700000	2713700329	2713700119	271786315992	271417483544	150
2637400000	2637400161	2637400306	263216931334	263680785005	150
2650500000	2650500001	2650500464	265072181469	265610189612	150
2625500000	2625500891	2625500107	262358376449	262029980406	150
2642500000	2642500671	2642500344	264465036208	264741166187	150
2672400000	2672400839	2672400684	267414311202	267534107810	150
2852500000	2852500588	2852500463	285534331427	285581933152	150
2832400000	2832400094	2832400305	283629865496	283299167801	150
2835400000	2835400901	2835400290	283166896882	283964068811	150
2857400000	2857400399	2857400523	285447922834	285330019817	150
2832500000	2832500516	2832500264	283734591883	283809891369	150
2783400000	2783400156	2783400781	278950667920	278482786725	150
2783500000	2783500976	2783500734	278980842140	278752030107	150
2786400000	2786400885	2786400807	278713875756	278892959764	150
2759400000	2759400030	2759400482	275159633463	275406540339	150
2749400000	2749400862	2749400386	274317582378	274807378143	150
2765400000	2765400266	2765400581	276138272907	276499986396	150
2956400000	2956400553	2956400511	295590878731	295356226737	150
2972500000	2972500783	2972500674	297911629412	297551498860	150
2957410000	2957410454	2957410515	295329677870	295542113967	150
2924500000	2924500510	2924500138	292137205703	292826343091	150
2952500000	2952500606	2952500473	295434272735	295532771876	150
2931500000	2931500214	2931500285	293791222941	293381082476	150
2968400000	2968400814	2968400615	296378110547	296632090483	150
2889400000	2889400370	2889400790	288224403704	288055771211	150
3094400000	3094400218	3094400799	309103955617	309865393334	150
3097410000	3097410660	3097410824	309884511090	309596567810	150
3068400000	3068400613	3068400528	306453478831	306484708943	150
3104500000	3104500384	3104500874	310712848162	310134690256	150
3107400000	3107400003	3107400959	310340996877	310720382556	150
3070500000	3070500221	3070500603	307936656746	307643509515	150
3046400000	3046400206	3046400310	304811030981	304928554514	150
3055500000	3055500612	3055500345	305958211420	305211348181	150
3048400000	3048400386	3048400333	304219965553	304467960983	150
2984400000	2984400200	2984400788	298177841384	298943188997	150
3004400000	3004400535	3004400908	300107513567	300772165781	150
3021610000	3021610802	3021610158	302704735351	302204288407	150
3038400000	3038400318	3038400234	303667532410	303080012440	150
2991500000	2991500017	2991500874	299713540243	299789851433	150
3024500000	3024500158	3024500051	302638069167	302528550725	150
2993500000	2993500344	2993500853	299136759717	299390197828	150
3009400000	3009400182	3009400922	300859127406	300117512136	150
2997400000	2997400847	2997400926	299844398131	299896347176	150
2994500000	2994500476	2994500820	299771485820	299387060180	150
3202400000	3202400787	3202400953	320584695127	320544709834	150
3218400000	3218400052	3218400056	321936458189	321750398278	150

3221500000	3221500990	3221500118	322769484949	322441410435	150
3192500000	3192500855	3192500792	319467154562	319050771201	150
3208400000	3208400896	3208400957	320567207758	320425729215	150
3194410000	3194410107	3194410822	319273809985	319076030747	150
3197400000	3197400715	3197400850	319126828084	319869336556	150
3216400000	3216400810	3216400029	321517036551	321320848682	150
3166400000	3166400588	3166400533	316679122862	316067521300	150
3131500000	3131500067	3131500208	313400866089	313506728752	150
3138400000	3138400338	3138400244	313132526137	313333413581	150
3154400000	3154400720	3154400412	315460470093	315904855635	150
3148400000	3148400402	3148400343	314635709015	314707574147	150
3127400000	3127400069	3127400159	312801736939	312567148617	150
3316400000	3316400823	3316400039	331455170056	331279349403	150
3317400000	3317400184	3317400081	331604808859	331167270976	150
3350500000	3350500952	3350500435	335989302694	335847626908	150
3307400000	3307400032	3307400981	330948716043	330139200680	150
3326400000	3326400987	3326400138	332897497674	332634384221	150
3336400000	3336400093	3336400236	333783818866	333296396369	150
3354700000	3354700464	3354700458	335427483419	335972976719	150
3329400000	3329400488	3329400149	332832113810	332845842326	150
3300500000	3300500463	3300500942	330888473358	330536516885	150
3282400000	3282400943	3282400743	328103762216	328955071965	150
3292400000	3292400261	3292400843	329069333466	329413295397	150
3287410000	3287410688	3287410744	328401621302	328185811810	150
3287700000	3287700540	3287700720	328574236453	328072871219	150
3238400000	3238400356	3238400254	323840296606	323182295851	150
3254700000	3254700445	3254700448	325769498831	325829336797	150
3234500000	3234500567	3234500168	323565653563	323346714487	150
3293400000	3293400238	3293400830	329076439831	329553902885	150
3293500000	3293500213	3293500786	329225113370	329579215307	150
3231500000	3231500085	3231500218	323601323343	323177257750	150
3458610000	3458610359	3458610412	345602854832	345822512181	150
3468400000	3468400720	3468400566	346413892387	346668832053	150
3405400000	3405400345	3405400938	340387937835	340024537228	150
3382500000	3382500714	3382500715	338710753760	338449755425	150
3383400000	3383400088	3383400743	338787413148	338466508336	150
3387510000	3387510490	3387510811	338279509114	338986448098	150
3410500000	3410500660	3410500051	341810091387	341729685336	150
3580500000	3580500511	3580500751	358105062965	358287775575	150
3584400000	3584400274	3584400749	358784071538	358039513410	150
3574500000	3574500427	3574500584	357636800137	357515238463	150
3565400000	3565400234	3565400562	356185191846	356868202517	150
3538400000	3538400407	3538400284	353281518166	353680713406	150
3522400000	3522400001	3522400180	352276374499	352170002337	150
3508410000	3508410896	3508410974	350682562234	350713201664	150
3525500000	3525500877	3525500098	352378770387	352923458497	150
3545400000	3545400966	3545400363	354893446518	354864319553	150

3504400000	3504400614	3504400957	350995400552	350215529877	150
3713400000	3713400134	3713400092	371448201226	371113723373	150
3725400000	3725400702	3725400177	372492878042	372584764157	150
3725710000	3725710618	3725710109	372021556219	372234423160	150
3684500000	3684500040	3684500692	368239929674	368210179721	150
3704400000	3704400645	3704400977	370216490913	370628707321	150
3714400000	3714400719	3714400077	371545047592	371394985221	150
3671500000	3671500568	3671500654	367851129546	367908265809	150
3618400000	3618400116	3618400096	361148451782	361588621137	150
3653400000	3653400893	3653400475	365939244996	365788992904	150
3613400000	3613400120	3613400082	361949147570	361357663358	150
3802400000	3802400891	3802400012	380321228596	380509757764	150
3846400000	3846400370	3846400393	384713477096	384160320071	150
3854500000	3854500934	3854500421	385847964154	385252574434	150
3792500000	3792500961	3792500852	379308116350	379810758192	150
3740500000	3740500942	3740500375	374619814357	374697332565	150
3794400000	3794400338	3794400869	379900011208	379243547151	150
3950500000	3950500096	3950500494	395652877446	395967125094	150
3935400000	3935400857	3935400301	393877485283	393616558503	150
3959400000	3959400069	3959400503	395109370049	395126156435	150
3984500000	3984500087	3984500722	398658045678	398517389451	150
3982400000	3982400054	3982400813	398260293714	398500680782	150
3955700000	3955700743	3955700506	395379076236	395262056996	150
3926400000	3926400027	3926400197	392848144973	392664329250	150
3938400000	3938400472	3938400323	393855485575	393216120042	150
3904500000	3904500961	3904500947	390741633116	390963931487	150
3897700000	3897700786	3897700879	389401324381	389535510101	150
3884500000	3884500073	3884500712	388789944159	388508396005	150
3901500000	3901500764	3901500989	390666190394	390807638164	150
3891500000	3891500000	3891500865	389351679029	389480016783	150
3894500000	3894500463	3894500811	389583012502	389415179940	150
4054700000	4054700406	4054700429	405771044070	405087401453	150
4083500000	4083500860	4083500668	408898399647	408213178218	150
4042400000	4042400131	4042400326	404239438712	404625992260	150
4047400000	4047400228	4047400346	404018974985	404648779220	150
4093400000	4093400208	4093400812	409581429081	409657860389	150
4069400000	4069400086	4069400514	406250882352	406618654826	150
4094310000	4094310531	4094310762	409795751746	409776467453	150
3987410000	3987410641	3987410813	398967296380	398913851843	150
4210500000	4210500626	4210500032	421910473117	421842244364	150
4165400000	4165400173	4165400523	416417674487	416981574456	150
4164400000	4164400880	4164400512	416842400555	416526879917	150
4198400000	4198400120	4198400835	419840196708	419525249328	150
4209510000	4209510207	4209510995	420708924808	420403926538	150
4219400000	4219400316	4219400042	421725285085	421899437299	150
4173500000	4173500707	4173500581	417260753062	417285072874	150
4103400000	4103400411	4103400934	410654645938	410161253493	150

4322400000	4322400970	4322400161	432034184488	432589256706	150
4136400000	4136400060	4136400218	413690996428	413583748294	150
4123400000	4123400203	3123400131	412051983492	412804307227	150
4152410000	4152410192	4152410437	415953145667	415078548178	150
4124610000	4124610946	4124610137	412173178968	412656772574	150
4156400000	4156400424	4156400427	415824866099	415532342393	150
4309400000	4309400237	4309400953	430578558889	430003066925	150
4312400000	4312400976	3312400062	431231527492	431964788507	150
4294800000	4294800740	4294800869	429232316750	429434204630	150
4344400000	4344400003	4344400334	434018770450	434969791049	150
4301500000	4301500762	4301500930	430884876644	430237127797	150
4323700000	4323700425	4323700178	432479380757	432795330025	150
4279410000	4279410104	4279410628	427319124294	427652429222	150
4257500000	4257500331	4257500368	425734650343	425956306012	150
4259400000	4259400947	4259400437	425475336934	425274521314	150
4261500000	4261500430	4261500515	426822999732	426905121690	150
4232500000	4232500409	4232500205	423995313243	423761127004	150
4255500000	4255500643	4255500367	425588491127	425394706277	150
4253400000	4253400825	4253400436	425992361512	425008892045	150
4426500000	4426500696	4426500103	442199120242	442482214976	150
4458400000	4458400641	4458400470	445546095660	445946863680	150
4444500000	4444500694	4444500285	444000359492	444661119528	150
4431500000	4431500125	4431500238	443110067157	443351797841	150
4440500000	4440500895	4440500346	444055982410	444182033725	150
4438400000	4438400393	4438400275	443624255811	443266167150	150
4457400000	4457400334	4457400485	445244842519	445531415034	150
4391500000	4391500898	4391500816	439453973010	439995911709	150
4564400000	4564400944	4564400552	456029117178	456980280855	150
4558400000	4558400657	4558400480	455350664533	455404539732	150
4567400000	4567400514	4567400595	456559899845	456630407867	150
4568500000	4568500511	4568500516	456240114181	456039776216	150
4577400000	4577400543	4577400694	457867146923	457738377905	150
4565710000	4565710007	4565710485	456999329428	456104008250	150
4543400000	4543400711	4543400367	454967046250	454476102204	150
4587400000	4587400718	4587400792	458649367490	458489270144	150
4484310000	4484310422	4484310702	448332708048	448730154498	150
4476400000	4476400751	4476400670	447647815129	447252578084	150
4469500000	4469500678	4469500528	446185045209	446443299287	150
4494500000	4494500402	4494500772	449530908359	449298602113	150
4473400000	4473400446	4473400654	447192691117	447328907979	150
4502400000	4502400837	4502400984	450372050608	450447454077	150
4683400000	4683400140	4683400773	468997003485	468644063286	150
4710500000	4710500585	4710500081	471408965919	471553448788	150
4715400000	4715400569	4715400073	471830998828	471117673235	150
4594800000	4594800781	4594800900	459708790463	459156742550	150
4600500000	4600500512	4600500973	460318192867	460308038963	150
4615500000	4615500729	4615500006	461479872289	461906519092	150

4634400000	4634400893	4634400266	463919863408	463445611190	150
4609400000	4609400283	4609400982	460740155284	460895876904	150
4595400000	4595400585	4595400861	459554156604	459618941749	150
4607400000	4607400083	4607400012	460061615724	460128959162	150
4807400000	4807400114	4807400032	480651621551	480446840338	150
4815400000	4815400588	4815400085	481341510986	481282342653	150
4817400000	4817400029	4817400130	481438561019	481356259191	150
4834500000	4834500677	4834500227	483619917858	483665231964	150
4829400000	4829400616	4829400200	482635919455	482720029660	150
4784800000	4784800667	4784800820	478292357777	478408433183	150
4767400000	4767400548	4767400615	476203289872	476222385595	150
4719400000	4719400393	4719400092	471823975406	471029195116	150
4720500000	4720500742	4720500179	472131517824	472786694727	150
4744500000	4744500745	4744500314	474880357103	474285468059	150
4923500000	4923500224	4923500168	492425727307	492489566157	150
4929400000	4929400635	4929400209	492918729283	492025780425	150
4939400000	4939400804	4939400308	493181485396	493962260454	150
4915500000	4915500778	4915500039	491453526497	491733644845	150
4908400000	4908400003	4908400027	490391401085	490593373197	150
4934400000	4934400938	4934400294	493850050330	493653422996	150
4957400000	4957400422	4957400535	495413797425	495466347211	150
4922400000	4922400073	4922400221	492748604509	492229014053	150
4904400000	4904400679	4904400998	490087583656	490498399857	150
4882600000	4882600824	4882600758	488893412673	488431378796	150
4902400000	4902400910	4902400023	490711072987	490851617381	150
4845400000	4845400018	4845400394	484870489065	484583530120	150
4903400000	4903400011	4903400013	490102599728	490291163396	150
4844400000	4844400093	4844400384	484385797365	484904488332	150
4873400000	4873400504	4873400694	487296141753	487264236196	150
4852400000	4852400038	4852400505	485873010270	485695757070	150
5059400000	5059400913	5059400419	505394273107	505991470329	150
5062400000	5062400076	5062400526	506749010241	506584341277	150
5025400000	5025400627	5025400105	502150061773	502284943686	150
5043500000	5043500636	5043500277	504414941007	504875519104	150
5008700000	5008700826	5008700901	500132584288	500182621787	150
4989400000	4989400389	4989400802	498314622017	498978372781	150
5014500000	5014500983	5014500959	501720518336	501598135386	150
4971500000	4971500628	4971500684	497699010110	497584350986	150
4964400000	4964400028	4964400591	496111539620	496775607744	150
5194310000	5194310552	5194310773	519832990495	519683849206	150
5194500000	5194500125	5194500744	519159321418	519748216785	150
5182400000	5182400928	5182400735	518490041388	518812292445	150
5197410000	5197410681	5197410836	519887150398	519567679447	150
5157400000	5157400284	5157400456	515103720777	515108447218	150
5205310000	5205310849	5205310883	520084364208	520643423793	150
5160500000	5160500130	5160500516	516415834854	516717250049	150
5193600000	5193600901	5193600783	519998043872	519175994945	150

5152210000	5152210501	5152210486	515509277235	515186851242	150
5133400000	5133400564	5133400231	513414758093	513750816090	150
5136610000	5136610473	5136610214	513325409408	513644992550	150
5147400000	5147400247	5147400356	514694143025	514880767129	150
5094800000	5094800710	5094800851	509040006075	509844709541	150
5102500000	5102500066	5102500897	510308201840	510702559379	150
5122400000	5122400934	5122400142	512715873336	512568759820	150
5314500000	5314500039	5314500988	531597147305	531468506727	150
5325500000	5325500847	5325500080	532305694756	532275651727	150
5287510000	5287510477	5287510803	528956918563	528742445501	150
5273500000	5273500727	5273500592	527593188045	527846365528	150
5305400000	5305400330	5305400930	530150879748	530001934100	150
5211500000	5211500823	5211500021	521159122890	521310401231	150
5419400000	5419400347	5419400063	541246191626	541629865455	150
5436610000	5436610519	5436610242	543744228395	543004943110	150
5407400000	5407400051	5407400994	540506380356	540063189147	150
5406400000	5406400736	5406400951	540181411305	540697511557	150
5413400000	5413400091	5413400064	541630960772	541420439992	150
5426400000	5426400004	5426400150	542322388733	542903196682	150
5457500000	5457500368	5457500389	545014354021	545710562752	150
5339400000	5339400703	5339400250	533812717796	533972828575	150
5348400000	5348400443	5348400365	534898732501	534475243715	150
5351500000	5351500394	5351500426	535734879874	535500247353	150
5354500000	5354500854	5354500373	535159049063	535351541296	150
5334400000	5334400845	5334400237	533726751219	533106943600	150
5392600000	5392600827	5392600809	539469027005	539287274476	150
5573400000	5573400460	5573400665	557616389810	557211378841	150
5573500000	5573500779	5573500621	557383981867	557484485152	150
5544400000	5544400042	5544400355	554873446474	554240881775	150
5574400000	5574400125	5574400652	557736043490	557956858447	150
5546400000	5546400324	5546400364	554051959324	554249074458	150
5568400000	5568400742	5568400578	556779381299	556909841418	150
5534400000	5534400877	5534400257	553154411661	553515949215	150
5556400000	5556400493	5556400471	555794101863	555327456486	150
5523700000	5523700462	5523700198	552074530833	552196250608	150
5572400000	5572400829	5572400677	557674184601	557190403882	150
5505500000	5505500573	5505500884	550720674353	550842238779	150
5512500000	5512500220	5512500034	551451058241	551619235408	150
5471500000	5471500655	5471500636	547546100197	547999460133	150
5474400000	5474400109	5474400642	547497281486	547089800899	150
5492600000	5492600848	5492600819	549324253044	549164511190	150
5519400000	5519400361	5519400073	551065421403	551079018354	150
5504500000	5504500458	5504500912	550152907152	550709236338	150
5693500000	5693500291	5693500827	569705736228	569485160356	150
5627400000	5627400149	5627400209	562207360159	562166363227	150
5588400000	5588400012	5588400776	558520049784	558338940094	150
5615400000	5615400552	5615400064	561676696694	561319225236	150

5631500000	5631500167	5631500259	563188629544	563213573657	150
5644500000	5644500734	5644500305	564532412617	564036420765	150
5644700000	5644700330	5644700393	564185439412	564884996270	150
5635410000	5635410472	5635410277	563149193823	563456619109	150
5626400000	5626400033	5626400169	562273930015	562902911387	150
5799400000	5799400515	5799400884	579710893047	579827490035	150
5784500000	5784500060	5784500704	578136530031	578564260641	150
5784600000	5784600675	5784600737	578708110713	578059215135	150
5813400000	5813400154	5813400104	581202858394	581032794312	150
5794500000	5794500451	5794500803	579794672391	579857005059	150
5784400000	5784400175	5784400771	578306752677	578629451075	150
5736400000	5736400161	5736400280	573423674368	573815712822	150
5725500000	5725500915	5725500120	572010339953	572252313674	150
5728400000	5728400268	5728400206	572031931648	572262568934	150
5751500000	5751500472	5751500467	575914129576	575626725309	150
5761500000	5761500524	5761500566	576336876550	576506720571	150
5932400000	5932400116	5932400317	593898462610	593719869029	150
5894800000	5894800828	5894800934	589222726142	589619975755	150
5897410000	5897410787	5897410905	589662830208	589792764295	150
5856400000	5856400540	5856400503	585503175818	585405039014	150
5884400000	5884400188	5884400781	588719092215	588441976991	150
5837400000	5837400200	5837400327	583243046048	583305208394	150
5857500000	5857500429	5857500430	585993184790	585421068653	150
5848400000	5848400533	5848400413	584991038557	584890191506	150
6040500000	6040500833	6040500308	604698462397	604439001978	150
6026400000	6026400943	6026400111	602374065720	602210222837	150
6024500000	6024500167	6024500054	602294738702	602029452943	150
6017400000	6017400144	6017400054	601232868455	601026838878	150
6034400000	6034400921	6034400208	603175134438	603938413802	150
5995400000	5995400654	5995400901	599398666092	599006446307	150
5999400000	5999400403	5999400904	599080469901	599335669719	150
5954400000	5954400848	5954400493	595380834963	595770764642	150
5994400000	5994400373	5994400891	599866215087	599595235581	150
6010500000	6010500594	6010500014	601708578036	601093570503	150
6149400000	6149400834	6149400330	614275570019	614993040509	150
6183400000	6183400057	6183400726	618359440405	618873720121	150
6159400000	6159400933	6159400430	615202151259	615751916373	150
6143500000	6143500657	6143500288	614289582517	614514326714	150
6192600000	6192600786	6192600790	619948542599	619132704790	150
6168400000	6168400654	6168400540	616254328129	616912621826	150
6162500000	6162500651	6162500497	616102203728	616410025409	150
6169400000	6169400104	6169400526	616371444928	616364335308	150
6169500000	6169500634	6169500500	616562777029	616461506421	150
6179400000	6179400189	6179400625	617885046428	617713486643	150
6142500000	6142500581	6142500298	614488494022	614354070390	150
6111500000	6111500806	6111500012	611635797790	611801090931	150
6128400000	6128400208	6128400149	612578487355	612916284204	150

6114400000	6114400715	6114400020	611190602466	611318264804	150
6075400000	6075400322	6075400615	607958049293	607702186772	150
6119400000	6119400302	6119400034	611627412691	611303227955	150
6092600000	6092600866	6092600780	609425147938	609598220432	150
6304400000	6304400590	6304400940	630782422051	630261529044	150
6314400000	6314400751	6314400040	631824473402	631021351171	150
6314500000	6314500041	6314500989	631856701341	631256741950	150
6320500000	6320500681	6320500142	632450850859	632593717543	150
6296400000	6296400965	6296400864	629119793928	629564524098	150
6291500000	6291500999	6291500808	629903873457	629478714435	150
6245400000	6245400917	6245400336	624087050663	624608410550	150
6256400000	6256400444	6256400440	625251483777	625432226878	150
6208410000	6208410855	6208410947	620131915103	620331649383	150
6204500000	6204500407	6204500886	620291770911	620482417805	150
6244500000	6244500660	6244500268	624891408061	624448457964	150
6227400000	6227400090	6227400172	622492753532	622370605616	150
6423610000	6423610044	6423610176	642073848947	642410608456	150
6425500000	6425500866	6425500091	642521056099	642283729270	150
6392400000	6392400285	6392400856	639800744658	639724497426	150
6387410000	6387410709	6387410757	638054245812	638919203327	150
6330500000	6330500836	6330500241	633966878927	633275301016	150
6349610000	6349610304	6349610295	634356098603	634636642673	150
6373500000	6373500747	6373500603	637202051945	637749634936	150
6554500000	6554500888	6554500394	655429747881	655085101738	150
6548400000	6548400483	6548400384	654494733649	654414363185	150
6557400000	6557400353	6557400497	655652885156	655598332463	150
6558610000	6558610378	6558610425	655557700769	655329920951	150
6563400000	6563400307	6563400566	656211860295	656801573223	150
6456710000	6456710831	6456710398	645358956966	645429192308	150
6481500000	6481500727	6481500735	648729181259	648326357519	150
6486510000	6486510401	6486510824	648405233654	648388725459	150
6445400000	6445400954	6445400356	644198218505	644696014911	150
6487400000	6487400703	6487400784	648823301361	648883580450	150
6449610000	6449610320	6449610305	644677866803	644339513955	150
6649610000	6649610355	6649610325	664872782054	664223317045	150
6666400000	6666400613	6666400590	666608705933	666990305623	150
6682400000	6682400011	6682400786	668547459835	668949183121	150
6684400000	6684400159	6684400762	668444770656	668115333075	150
6678400000	6678400849	6678400689	667726421275	667805500496	150
6629400000	6629400537	6629400182	662052694308	662815706427	150
6632400000	6632400196	6632400292	663015865667	663559695278	150
6648400000	6648400500	6648400394	664685090392	664074500502	150
6654400000	6654400802	6654400465	665187408895	665772116343	150
6689400000	6689400345	6689400774	668053917358	668169371010	150
6584500000	6584500028	6584500685	658069507659	658046578366	150
6614400000	6614400707	6614400070	661845451704	661321857333	150
6614500000	6614500094	6614500016	661366973459	661016993604	150

6601500000	6601500722	6601500962	660222989588	660718744491	150
6612500000	6612500241	6612500045	661562128184	661703072022	150
6764500000	6764500292	6764500511	676700242445	676195008341	150
6793500000	6793500312	6793500838	679633345716	679380017066	150
6805500000	6805500622	6805500915	680091337310	680930564310	150
6754400000	6754400817	6754400474	675876311160	675459345065	150
6783600000	6783600823	6783600744	678459095033	678326851684	150
6772500000	6772500757	6772500658	677059463589	677600714515	150
6782500000	6782500793	6782500757	678426408232	678076578212	150
6733400000	6733400660	6733400290	673103072993	673090795204	150
6743400000	6743400744	6743400389	674206062526	674056087647	150
6723500000	6723500191	6723500150	672035288952	672339217861	150
6692400000	6692400337	6692400886	669119134384	669566858854	150
6716400000	6716400897	6716400081	671598690113	671285897514	150
6707400000	6707400103	6707400024	670105300781	670905230947	150
6913400000	6913400172	6913400114	691904255372	691736441637	150
6876400000	6876400814	6876400716	687318353812	687508239727	150
6886400000	6886400906	6886400822	688240925787	688491480670	150
6861500000	6861500545	6861500577	686746915536	686047935934	150
6844500000	6844500766	6844500326	684445560456	684055587514	150
6862400000	6862400225	6862400607	686361777674	686847943622	150
6853400000	6853400936	6853400496	685397667005	685881006373	150
6853500000	6853500375	6853500456	685541400332	685171394070	150
7015400000	7015400456	7015400002	701412670240	701004482992	150
7015500000	7015500654	7015500940	701655351351	701976280833	150
7052210000	7052210488	7052210478	705912607425	705084249861	150
7052500000	7052500446	7052500389	705865333098	705332788667	150
7024400000	7024400768	7024400110	702295274352	702276092918	150
7019400000	7019400289	7019400025	701270119940	701224227943	150
7054500000	7054500803	7054500346	705563968669	705810658340	150
6991400000	6991400918	6991400926	699015391797	699530447147	150
6987400000	6987400685	6987400833	698353049848	698089345834	150
6958400000	6958400600	6958400521	695211152553	695846786320	150
7166700000	7166700024	7166700519	716046003475	716537453613	150
7167400000	7167400456	7167400558	716671993609	716264131740	150
7125400000	7125400601	7125400118	712624053881	712219306230	150
7162400000	7162400101	7162400538	716727163763	716036551009	150
7121610000	7121610831	7121610172	712059215931	712720644761	150
7123500000	7123500087	7123500092	712059860806	712479684760	150
7115400000	7115400472	7115400012	711863778819	711099508838	150
7115500000	7115500668	7115500952	711349014512	711446003170	150
7094500000	7094500108	7094500736	709377622513	709651114951	150
7085400000	7085400384	7085400716	708779472953	708167438597	150
7292500000	7292500878	7292500806	729961537064	729898116896	150
7298400000	7298400045	7298400847	729409948039	729092381742	150
7287400000	7287400668	7287400765	728018175684	728171012384	150
7299400000	7299400443	7299400836	729888529906	729502583703	150

7246400000	7246400251	7246400336	724214850146	724262930997	150
7207400000	7207400023	7207400975	720873865891	720263974794	150
7202400000	7202400794	7202400957	720939010259	720293074991	150
7182500000	7182500824	7182500699	718614981692	718282506048	150
7208400000	7208400902	7208400961	720413074888	720713216441	150
7222610000	7222610265	7222610170	722705451070	722752175209	150
7225500000	7225500835	7225500072	722266553795	722827606671	150
7386510000	7386510385	7386510815	738876122815	738448600690	150
7421800000	7421800677	7421800122	742374634432	742601388551	150
7422500000	7422500401	7422500127	742132071801	742394360618	150
7397400000	7397400758	7397400873	739889136605	739253739945	150
7342400000	7342400186	7342400359	734352085018	734480007448	150
7332400000	7332400145	7332400264	733467943842	733592412296	150
7332500000	7332500433	7332500218	733137419208	733685372975	150
7338400000	7338400382	7338400268	733856677884	733799586145	150
7323400000	7323400240	7323400154	732620162966	732558673638	150
7352400000	7352400357	7352400458	735911577636	735971360361	150
7355500000	7355500664	7355500380	735697667739	735419141268	150
7514400000	7514400693	7514400061	751272495474	751401861494	150
7514500000	7514500077	7514500007	751571951530	751268603360	150
7450500000	7450500976	7450500449	745508944839	745619448356	150
7483400000	7483400112	7483400757	748225270682	748755877662	150
7447400000	7447400291	7447400388	744643267236	744640223128	150
7432400000	7432400160	7432400274	743543111593	743901797460	150
7475400000	7475400289	7475400656	747502385360	747727402895	150
7472400000	7472400816	7472400669	747163991541	747510879562	150
7443500000	7443500704	7443500318	744639970315	744866842840	150
7488400000	7488400000	7488400769	748454200213	748978828453	150
7625400000	7625400688	7625400170	762962000575	762750388548	150
7626500000	7626500732	7626500126	762693154570	762785631022	150
7664500000	7664500276	7664500503	766677153196	766006107379	150
7635400000	7635400875	7635400274	763444067079	763457355862	150
7628400000	7628400253	7628400198	762132915997	762962412569	150
7656400000	7656400511	7656400484	765287346536	765288588571	150
7636400000	7636400145	7636400272	763513774768	763638519889	150
7598400000	7598400101	7598400877	759151808885	759030228444	150
7604500000	7604500916	7604500923	760648391380	760805720075	150
7569400000	7569400091	7569400567	756564767309	756861889398	150
7578400000	7578400833	7578400680	757487594498	757400537891	150
7596400000	7596400017	7596400897	759239796173	759643226974	150
7579400000	7579400259	7579400665	757633579526	757061948673	150
7567410000	7567410563	7567410581	756417437101	756136356731	150
7586510000	7586510425	7586510835	758389330686	758238022752	150
7612400000	7612400036	7612400094	761799434437	761726461953	150
7603500000	7603500965	7603500945	760119450461	760339792399	150
7763500000	7763500537	7763500544	776471460868	776280649778	150
7754500000	7754500922	7754500415	775769803740	775034495795	150

7792400000	7792400354	7792400897	779622340593	779461475712	150
7741500000	7741500277	7741500368	774617738260	774089338719	150
7715500000	7715500751	7715500020	771327152869	771076626914	150
7691400000	7691400876	7691400897	769278412953	769935183860	150
7673500000	7673500800	7673500632	767381734038	767495824516	150
7875400000	7875400352	7875400696	787120649930	787843976546	150
7827610000	7827610528	7827610171	782344758060	782211950842	150
7815500000	7815500768	7815500032	781044042828	781529870797	150
7884500000	7884500079	7884500716	788589209418	788530996056	150
7834400000	7834400928	7834400289	783666350702	783509600506	150
7874600000	7874600261	7874600650	787391033990	787638495372	150
7826500000	7826500763	7826500146	782493781803	782249075978	150
7881500000	7881500895	7881500772	788168998056	788315227135	150
7814500000	7814500130	7814500036	781652861520	781747891519	150
7909400000	7909400335	7909400015	790127854661	790973388871	150
7867400000	7867400435	7867400627	786960739397	786628670523	150
7803500000	7803500999	7803500965	780562446094	780181778108	150
7804400000	7804400666	7804400991	780306661278	780732073586	150
7871500000	7871500612	7871500677	787347564005	787736163238	150
8022400000	8022400921	8022400135	802543849519	802298491084	150
8022500000	8022500322	8022500088	802502384435	802415283604	150
7960500000	7960500213	7960500597	796128247607	796544384057	150
7925400000	7925400743	7925400202	792187275495	792745792046	150
7997410000	7997410806	7997410917	799452469540	799134256743	150
7953500000	7953500392	7953500467	795962590226	795722795246	150
8039400000	8039400658	8039400223	803035727576	803257872839	150
8001500000	8001500719	8001500904	800252830363	800336333359	150
7973500000	7973500849	7973500661	797206612525	797264042343	150
7926500000	7926500777	7926500156	792904595523	792139758889	150
7974400000	7974400190	7974400694	797839218705	797099913841	150
8055500000	8055500618	8055500350	805819813826	805694484068	150
8155400000	8155400082	8155400427	815113995315	815073547407	150
8151500000	8151500357	8151500409	815545216846	815196358627	150
8134400000	8134400939	8134400220	813157782972	813293492798	150
8152500000	8152500467	8152500400	815585887282	815741503383	150
8125500000	8125500819	8125500063	812844472281	812515408079	150
8083400000	8083400044	8083400718	808234709181	808833469375	150
8142400000	8142400152	8142400340	814989638470	814514203960	150
8074500000	8074500341	8074500539	807308090919	807814987917	150
8144500000	8144500645	8144500260	814321239790	814157521516	150
8062500000	8062500632	8062500489	806177959208	806053324030	150
8136610000	8136610478	8136610217	813751815059	813995477176	150
8108700000	8108700846	8108700914	810042252358	810771605642	150
8110610000	8110610426	8110610084	811004382061	811089190600	150
8082400000	8082400917	8082400728	808096622265	808682252551	150
8082500000	8082500809	8082500690	808606057051	808895845857	150
8214400000	8214400736	8214400032	821815391648	821466460764	150

8255400000	8255400100	8255400437	825982754950	825747902115	150
8205500000	8205500531	8205500857	820143537425	820224873191	150
8222500000	8222500360	8222500108	822303471538	822210928701	150
8236610000	8236610495	8236610227	823560230578	823524052267	150
8224400000	8224400802	8224400131	822436602262	822003186567	150
8284500000	8284500977	8284500659	828408322632	828275635069	150
8174400000	8174400068	8174400615	817097603928	817546496930	150
8223400000	8223400226	8223400145	822186989280	822295305066	150
8269500000	8269500650	8269500512	826578150914	826881763016	150
8295400000	8295400540	8295400835	829964864141	829503404561	150
8413500000	8413500099	8413500025	841310213264	841151613266	150
8333400000	8333400600	8333400252	833627068390	833855898243	150
8319400000	8319400338	8319400056	831354687579	831204045125	150
8402500000	8402500128	8402500930	840632416308	840395981180	150
8335400000	8335400821	8335400245	833922040488	833125796795	150
8324610000	8324610883	8324610160	832922772421	832169144461	150
8322500000	8322500382	8322500118	832523912029	832797273925	150
8397410000	8397410716	8397410858	839512327275	839574451513	150
8384400000	8384400250	7384400734	838193647019	838753037570	150
8303400000	8303400448	8303400958	830746662901	830219725404	150
8303500000	8303500916	8303500916	830884248745	830314003946	150
8532400000	8532400180	8532400284	853913719594	853127822350	150
8430500000	8430500744	8430500251	843729052352	843456006442	150
8536610000	8536610538	8536610255	853955585579	853776614571	150
8425400000	8425400654	8425400151	842204823717	842640845800	150
8433400000	8433400617	8433400262	843134774355	843817387534	150
8521500000	8521500977	8521500153	852793758469	852296399048	150
8653500000	8653500342	8653500438	865398924962	865995570669	150
8574500000	8574500438	8574500589	857377025545	857022484412	150
8561500000	8561500491	8561500549	856176993325	856869281758	150
8594500000	8594500427	8594500786	859922679231	859391872037	150
8611500000	8611500894	8611500064	861915276169	861314866387	150
8587700000	8587700613	8587700755	858266569802	858588110181	150
8643500000	8643500741	8643500338	864898817375	864520302266	150
8684310000	8684310464	8684310726	868894666407	868079414423	150
8775400000	8775400338	8775400687	877076361296	877266497700	150
8682500000	8682500778	8682500749	868690831770	868481371365	150
8722400000	8722400048	8722400205	872481534368	872703699539	150
8693400000	8693400309	8693400875	869215900659	869487380704	150
8748400000	8748400521	8748400406	874354976601	874632687796	150
8784310000	8784310481	8784310736	878758012867	878361318384	150
8712400000	8712400053	8712400105	871807535927	871715216278	150
8755400000	8755400112	8755400487	875718702407	875994872182	150
8741500000	8741500279	8741500369	874693072104	874050732882	150
8673400000	8673400478	8673400678	867344489610	867917108934	150
8787410000	8787410782	8787410798	878520155008	878869440835	150
8832500000	8832500525	8832500270	883893559734	883654572011	150

8883600000	8883600848	8883600756	888646086475	888008011909	150
8812400000	8812400070	8812400115	881108441696	881593853847	150
8912500000	8912500304	8912500078	891325585732	891755071435	150
8802500000	8802500203	8802500969	880635355309	880366938990	150
8846400000	8846400379	8846400399	884399990100	884381156888	150
8862500000	8862500611	8862500569	886761912921	886815244212	150
8833500000	8833500606	8833500260	883832335390	883853490859	150
8821800000	8821800747	8821800168	882615903327	882357476328	150
9044400000	9044400961	9044400309	904145467785	904241760549	150
9005400000	9005400396	9005400904	900473078571	900279309464	150
8977410000	8977410647	8977410719	897954862249	897493388227	150
8947500000	8947500294	8947500342	894026831458	894540507984	150
8979400000	8979400322	8979400706	897059043967	897998763002	150
9037400000	9037400213	9037400253	903688565605	903107314241	150
9025500000	9025500803	9025500054	902696439613	902003359082	150
8972400000	8972400904	8972400719	897589851723	897213295425	150
8974500000	8974500924	8974500630	897987676205	897409179771	150
9045400000	9045400887	9045400318	904813754464	904193664603	150
9020500000	9020500643	9020500116	902680442128	902416137748	150
9006400000	9006400677	9006400915	900393076940	900414081909	150
8948400000	8948400556	8948400426	894761214510	894865355273	150
9008410000	9008410828	9008410929	900409081294	900535588592	150
8967400000	8967400452	8967400638	896319652368	896816774291	150
9055400000	9055400064	9055400419	905068712584	905446929508	150
9055500000	9055500620	9055500351	905046813523	905700590428	150
9150500000	9150500928	9150500420	915308686454	915762349325	150
9124500000	9124500190	9124500066	912250997615	912163668941	150
9101500000	9101500739	9101500915	910927289515	910227302029	150
9105400000	9105400413	9105400914	910052246600	910700127154	150
9167410000	9167410500	9167410542	916679174163	916310491417	150
9132400000	9132400115	9132400246	913544436782	913438145915	150
9124810000	9124810468	9124810189	912819755862	912124398616	150
9077400000	9077400469	9077400649	907290456295	907013458380	150
9166400000	9166400600	9166400540	916297850564	916692559170	150
9094500000	9094500112	9094500738	909428916113	909310286303	150
9272400000	9272400301	9272400651	927857276151	927025786446	150
9274500000	9274500382	9274500560	927969931767	927047104147	150
9283400000	9283400079	9283400739	928399513759	928688526645	150
9269400000	9269400124	9269400539	926423048615	926109929016	150
9176400000	9176400698	9176400646	917681087746	917495757685	150
9205400000	9205400429	9205400924	920430237465	920757614515	150
9178400000	9178400867	9178400642	917655223322	917780993100	150
9235610000	9235610765	9235610241	923772708180	923198541100	150
9264500000	9264500206	9264500467	926359439479	926134985802	150
9213400000	9213400066	9213400048	921170538968	921922227832	150
9415500000	9415500705	9415500987	941218211160	941098697730	150
9310610000	9310610462	9310610105	931641636841	931390373664	150

9379400000	9379400227	9379400648	937939336733	937447770088	150
9365400000	9365400214	9365400548	936621955152	936572743385	150
9308400000	9308400923	9308400973	930344209850	930188942499	150
9381500000	9381500715	9381500728	938236721818	938322760408	150
9325500000	9325500854	9325500084	932066766473	932532779790	150
9355400000	9355400120	9355400448	935375927849	935815412355	150
9387600000	9387600953	9387600678	938030081495	938438306718	150
9305500000	9305500550	9305500868	930051288996	930340047809	150
9356400000	9356400468	9356400454	935593941249	935200543474	150
9429400000	9429400512	9429400165	942572275895	942298342473	150
9454500000	9454500874	9454500387	945020921535	945470542838	150
9504400000	9504400624	9504400963	950459096435	950728981500	150
9521600000	9521600740	9521600135	952463809366	952310468103	150
9521800000	9521800697	9521800135	952205042468	952749741985	150
9523400000	9523400273	9523400176	952479899080	952115638743	150
9465710000	9465710997	9465710480	946847595390	946642628135	150
9523500000	9523500161	9523500133	952286411959	952508004938	150
9452400000	9452400376	9452400470	945770327292	945984873419	150
9497410000	9497410732	9497410869	949294648059	949399077029	150
9543500000	9543500726	9543500329	954805400662	954023368289	150
9499400000	9499400478	9499400858	949331730503	949222775378	150
9425500000	9425500871	9425500094	942824480064	942710543940	150
9467410000	9467410550	9467410573	946087419721	946731062421	150
9453500000	9453500306	9453500419	945129450769	945266398419	150
9441500000	9441500225	9441500342	944507478154	944352141744	150
9542400000	9542400224	9542400381	954621116208	954649295294	150
9498400000	9498400085	9498400869	949683625193	949544082173	150
9644400000	9644400065	9644400369	964690729405	964723693264	150
9615500000	9615500737	9615500011	961010402189	961111628516	150
9617400000	9617400007	9617400115	961117049975	961952066463	150
9605500000	9605500597	9605500897	960899685357	960937643831	150
9677410000	9677410604	9677410690	967894956684	967258929975	150
9637400000	9637400173	9637400313	963728507634	963240732186	150
9584310000	9584310447	9584310717	958402085913	958831081131	150
9557500000	9557500392	9557500405	955187455422	955798245846	150
9586400000	9586400868	9586400793	958614167761	958932346190	150
9657400000	9657400377	9657400510	965025832109	965059963732	150
9657410000	9657410417	9657410492	965907015112	965482411144	150
9564400000	9564400952	9564400557	956261325497	956689187777	150
9608410000	9608410815	9608410990	960462175325	960426579518	150
9696400000	9696400037	9696400910	969600764964	969533411624	150
9798400000	9798400142	9798400899	979337346835	979908135842	150
9798510000	9798510131	9798510950	979330435918	979545866427	150
9691500000	9691500971	9691500851	969594774962	969167158481	150
9708700000	9708700955	9708700973	970265377507	970957232400	150
9725400000	9725400711	9725400183	972767283856	972118466361	150
9785400000	9785400500	9785400786	978192448727	978919637397	150

9773500000	9773500818	9773500644	977027872853	977785843257	150
9771500000	9771500597	9771500669	977570019713	977010743784	150
9777410000	9777410618	9777410700	977258054316	977278903919	150
9684500000	9684500049	9684500698	968993798243	968892672726	150
9768500000	9768500499	9768500544	976027242238	976065854377	150
9714500000	9714500115	9714500028	971013240542	971156868788	150
9833400000	9833400682	9833400303	983778769431	983833011480	150
9822500000	9822500345	9822500170	982279230648	982341511218	150
9882400000	9882400048	9882400809	988248089340	988908373956	150
9840500000	9840500968	9840500391	984761540053	984623880575	150
9873500000	9873500836	9873500653	987382675414	987140997469	150
9903500000	9903500018	9903500976	990518391828	990630324061	150
9854500000	9854500132	9854500427	985513634063	985751759431	150
9883500000	9883500153	9883500751	988143232581	988571821868	150
9841500000	9841500300	9841500380	984475610019	984463167786	150
9812610000	9812610199	9812610132	981353578716	981002742591	150
9921500000	9921500045	9921500193	992130704155	992724477223	150
9898400000	9898400158	9898400909	989756775416	989483260399	150
9902500000	9902500223	9902500979	990681635949	990958543312	150
9965400000	9965400310	9965400608	996372274871	996311797478	150
9943500000	9943500796	9943500369	994131862306	994038415903	150
9980500000	9980500523	9980500796	998950607747	998079011633	150
9970500000	9970500417	9970500698	997696514400	997071055597	150
6914603845	6914603482	9739400293	691018980077	691672062019	150
1812610000	1812610278	4102400944	181155791178	181357727491	150
6961959135	6961959229	4993400900	696571525195	696711407293	150
1795631490	1795631136	5794800923	179216740157	179310744546	150
6242446723	6242446428	5444700373	624346656235	624547032326	150
5038454027	5038454430	8442400370	503102572797	503719748843	150
660321636	660321981	131800191	66128220685	66926842620	150
8916317444	8916317943	6742400398	891481249579	891554595319	150
7990492248	7990492317	1663400571	799273937221	799136991166	150
3587947405	3587947614	3877400722	358215209403	358714386665	150
7837516746	7837516070	2992910000	783680607082	783564142005	150
3108433950	3108433599	7270500627	310519218926	310389065222	150
3661423246	3661423984	9327400185	366284944283	366102295800	150
4456441102	4456441915	5638400296	445467875911	445056649892	150
1909400000	1909400205	3944400393	190257378117	190343436908	150
6822584129	6822584217	6279959514	682049844049	682612363658	150
1682572973	1682572406	9493910000	168050066682	168429609832	150
5591641389	5591641370	3500302483	559140716937	559175166481	150
5962931605	5962931645	593910000	596733351375	596557232194	150
5938040345	5938040663	4562500535	593408483595	593219520963	150
3074406251	3074406436	7493910000	307070228211	307179143568	150
3468500000	3468500482	3593910000	346018995495	346709183116	150
9714400000	9714400114	3468500504	971548925633	971678080930	150
9306853254	9306853526	4493910000	930097570782	930132868984	150

1938265261	1938265357	6983400804	193127658148	193616348458	150
7307920069	7307920637	3890500879	730513689616	730297477175	150
787379678	787379807	7494310805	78125258225	78705523576	150
6405346065	6405346140	4308700929	640286882892	640580318770	150
860681043	860681597	803400999	86393235789	86089422429	150
5323005453	5323005836	377400670	532641353166	532003258333	150
5917880508	5917880121	7427400193	591493820222	591331104936	150
3327542204	3327542864	8044500250	332929916360	332767135727	150
4756728920	4756728319	2493910000	475971160371	475175255972	150
539510000	539510348	2434400244	53855242366	53529888172	150
8923557979	8923557313	4693910000	892785107271	892877119273	150
5687410000	5687410151	5687410785	568334928351	568784716277	150
6288218585	6288218063	7212500007	628372294906	628284457243	150
6692304266	6692304267	3668500527	669863886981	669507938795	150
9396989969	9396989027	5153400427	939927930898	939667321427	150
9396562666	9396562114	2214400026	939123283195	939636263526	150
146134642	146134727	4944700421	14525313854	14024358213	150
8185050432	8185050972	9982600773	818323398852	818915662821	150
7109498414	7109498723	9714400083	710241542595	710827626938	150
301671542	301671041	5963500562	30499564228	30103884916	150
2328639796	2328639738	2256710375	232219265871	232502919669	150
8529758910	8529758833	4635610275	852328669876	852011740745	150
4705400000	4705400600	4705400969	470491342986	470034098915	150
7629452704	7629452199	7080500706	762714494999	762185644698	150
1187079622	1187079074	9444500290	118208012714	118430443336	150
4353505815	4353505369	1877700680	435000619045	435285454127	150
752065354	752065458	5433500219	75866407947	75308908238	150
886360793	886360607	9188400741	88622932963	88933946847	150
7468884616	7468884542	2344500274	746176953735	746749965668	150
1086130205	1086130270	3095400810	108406553441	108182006370	150
2132177414	2132177243	4927610178	213100190069	213010083469	150
9481447987	9481447933	7510610123	948901703414	948218089028	150
34735206	34735912	1253500391	3188812588	3410790053	150
7865020696	7865020566	3169500497	786683561151	786204705918	150
6626374750	6626374846	1915400092	662666852723	662544457989	150
3568229578	3568229410	3747400414	356154680034	356755715143	150
2554016299	2554016655	7843910000	255572476683	255506620765	150
9498972037	9498972890	806400986	949243480230	949947019518	150
7912046471	7912046920	9258400456	791300670631	791096365480	150
7260179122	7260179613	7027400153	726938965797	726330925070	150
1834329175	1834329554	9711500075	183971611971	183842888976	150
8778880435	8778880698	2622500142	877922668314	877846935793	150
3855800000	3855800216	3855800549	385179384512	385591318791	150
7469819029	7469819203	8687400806	746599559937	746098823302	150
8117793302	8117793526	7953400507	811289967086	811459066616	150
3049930228	3049930658	2429400158	304530641367	304643807358	150
3577777726	3577777537	9643400382	357245155483	357112865236	150

7184449698	7184449600	1415400038	718758919635	718236827265	150
6368406081	6368406164	9539400273	636213218101	636403536132	150
3311506353	3311506698	9825400193	331420557525	331821646406	150
7612183434	7612183130	6587510834	761288821081	761893885640	150
9008114406	9008114538	2203400942	900534599555	900652562291	150
3211105863	3211105076	7911500092	321715379248	321141575653	150
950143014	950143740	7662400588	95658427079	95687992905	150
2291500000	2291500953	2291500804	229128258781	229855819813	150
5288643217	5288643350	78400623	528154866797	528852475757	150
9558510000	9558510189	9558510533	955107627524	955550916725	150
4628244270	4628244558	5797400911	462434535350	462729620833	150
6107927501	6107927024	1005500829	610187019530	610513252199	150
6469943206	6469943971	5012400034	646521631966	646208569793	150
8243142612	8243142234	900020000	824010990520	824444528792	150
1684031363	1684031724	9341500332	168550978358	168540246558	150
4998120265	4998120178	3891400913	499002306413	499785465722	150
1992824519	1992824121	6170500616	199737062094	199892692901	150
2394063707	2394063079	3515400050	239810744379	239305996438	150
4957341734	4957341859	691500842	495821529290	495092994513	150
3772973916	3772973125	1240500323	377621481744	377636103706	150
3859477176	3859477085	583500714	385541172309	385644010591	150
4216452858	4216452024	2389400740	421990374059	421334939343	150
1187510000	1187510760	1187510789	118569544621	118157333186	150
5820974667	5820974392	3508700947	582211774902	582257419068	150
1157766387	1157766041	9853910000	115515312319	115796107555	150
1849485482	1849485080	8181600701	184699804800	184867274505	150
7431115929	7431115830	3194400809	743035484621	743909510125	150
1640594010	1640594990	8816400093	164978468522	164072518705	150
534842740	534842609	1826500140	53072902360	53432219186	150
5824683407	5824683573	9674500600	582909534203	582282483279	150
4080000202	4080000728	4678794679	408703654162	408516168229	150
2929911695	2929911944	8905500929	292945783464	292622498674	150
3225915227	3225915082	8053910000	322857271119	322964527364	150
1737703506	1737703761	494500768	173674324400	173089523908	150
860955431	860955237	3774039950	86674467508	86114440160	150
2270553440	2270553368	823400197	227365750996	227686956404	150
9028287753	9028287521	8032500189	902471862390	902481693032	150
3449423855	3449423286	5232400252	344755451309	344709674599	150
4134323945	4134323797	7683600735	413574889309	413181744024	150
8316144173	8316144982	363400540	831238428039	831111338049	150
4081909931	4081909652	8624610190	408445965746	408841376667	150
2996296758	2996296172	4225400125	299262514223	299951230020	150
295108546	295108854	5912400122	29690833036	29585170297	150
6188243181	6188243474	3788400794	618696440008	618618332451	150
2568887174	2568887102	3462400564	256553275235	256433843427	150
5389070009	5389070642	4368400557	538128350684	538822105015	150
4307296393	4307296076	7962400618	430424621242	430955409872	150

4586601540	4586601765	8782400798	458957013561	458368553503	150
7769088994	7769088125	5324500082	776912330737	776566869687	150
8334998323	8334998116	9061500500	833629937185	833300812591	150
9160911166	9160911176	6556700458	916060736447	916246668189	150
476180784	476180872	5663500532	47227273663	47643677980	150
4817274682	4817274473	3655400472	481777338955	481517701788	150
9948554350	9948554209	7594400853	994825786002	994406346668	150
2024892767	2024892065	8863500555	202909470428	202643805927	150
5458611620	5458611712	8613500045	545212148929	545798293036	150
5779713638	5779713090	2484800789	577901154204	577676882998	150
9522238445	9522238355	4023610135	952797331386	952187211405	150
5548190456	5548190941	9977510777	554985113383	554697784564	150
6155796438	6155796117	955400499	615325313482	615805029470	150
2277522194	2277522874	725500115	227630138021	227228626684	150
4695262050	4695262344	821800158	469863979995	469161006281	150
4056520460	4056520284	983400798	405055130044	405061237259	150
3340405063	3340405158	4892133075	334280989033	334236458652	150
5915862624	5915862644	1909400009	591015645117	591705725095	150
6361334332	6361334858	1974500623	636258100816	636922048701	150
8160033997	8160033027	2454400441	816980219891	816625972839	150
3602874391	3602874323	423610170	360308814596	360178087770	150
6541228863	6541228325	7196400854	654456718444	654609783852	150
3656724977	3656724214	624500106	365570093588	365042592051	150
734659440	734659113	3108400947	73663845915	73201402377	150
3045254010	3045254775	6175400625	304862722502	304680369946	150
3007400000	3007400633	3007400948	300938177890	300524794988	150
4783465768	4783465792	1503500929	478394979012	478422073248	150
3511951149	3511951858	9470500649	351057062477	351943444512	150
5343745048	5343745914	8921800179	534018436168	534816318495	150
7304414570	7304414088	3035400208	730995550533	730998319012	150
2377433853	2377433292	5088400727	237105438542	237856481730	150
609064725	609064642	1397410851	60547778328	60603071052	150
3834923739	3834923153	6998510967	383076508636	383119534884	150
4890019334	4890019176	2223610153	489468135598	489794683715	150
4023500000	4023500287	4023500079	402811380983	402025478915	150
7374500000	7374500416	7374500569	737593517670	737128432349	150
6867891671	6867891979	8192400838	686699451193	686328804367	150
8072952763	8072952965	8185400727	807657784549	807190399006	150
6272479059	6272479515	5171500606	627256693894	627164419920	150
7057055560	7057055940	1919400109	705214819993	705421293645	150
8287700000	8287700631	8287700725	828291843592	828582538695	150
9261751370	9261751905	9432500230	926161229050	926381848954	150
3160804132	3160804606	6549610315	316536577586	316196779099	150
8113621759	8113621291	2263500491	811076204414	811071401774	150
3979830186	3979830517	7642400389	397954676009	397817363306	150
7048425168	7048425451	8079400617	704144774440	704918240999	150
5830271028	5830271030	7252210498	583955291540	583616756268	150

9378302415	9378302762	6271500617	937329472192	937187676680	150
7108955975	7108955712	1203500899	710521690939	710195246861	150
1959283798	1959283544	1818400114	195443850858	195496775852	150
425978838	425978722	7603400986	42726247305	42473232975	150
5462156427	5462156978	4582500735	546662875710	546038184616	150
9940702688	9940702866	6005500834	994151313476	994058849961	150
9288558063	9288558249	8172500599	928246450783	928683473703	150
906431738	906431536	3195400820	90161521690	90190241200	150
3980884202	3980884690	790500866	398632224860	398095498439	150
323237107	323237940	3493400850	32804150803	32694170748	150
7939546319	7939546589	8117400066	793346389414	793314568620	150
5643554489	5643554431	8493910000	564614851335	564696276331	150
1103890146	1103890956	4594310812	110893936509	110995606673	150
3991492439	3991492713	4618400097	399374077891	399314638356	150
6436510000	6436510873	1092400821	643050025452	643477335738	150
321192206	321192673	7855700500	32052980705	32024093841	150
3441217956	3441217417	4067400545	344881042529	344521196790	150
4145416964	4145416919	3937400335	414853040402	414983450689	150
8411677760	8411677531	9818400122	841388112725	841231845233	150
2729936476	2729936643	3913500068	272772617737	272673324028	150
5803499606	5803499996	3813500058	580053216480	580341801217	150
5030150273	5030150183	1943400404	503704633975	503845024290	150
2995688491	2995688412	6575400665	299546656857	299172686986	150
6967251933	6967251158	8023700153	696072315640	696510719388	150
1965352289	1965352590	6280500725	196560322677	196648892952	150
4791610000	4791610483	4636610261	479887108732	479789810624	150
9607389308	9607389098	2562400573	960656513162	960710255654	150
1598098759	1598098416	664500496	159510774403	159800042418	150
5637694705	5637694764	704500926	563454365408	563974730131	150
812253912	812253230	2377410654	81151109914	81660978647	150
3291516692	3291516831	4425400147	329653081288	329457246464	150
2414408952	2414408763	6273400636	241620410990	241447966511	150
8595852788	8595852829	5983600763	859491551682	859557995915	150
119239619	119239128	4234400226	11327740909	11315118822	150
6772400000	6772400909	6772400698	677368915559	677450745505	150
4812984699	4812984807	1105500840	481289535118	481991716424	150
4855828035	4855828970	7239400242	485889592188	485534068275	150
5992956164	5992956004	742410391	599817072599	599691497785	150
1236332230	1236332927	4305500863	123921878917	123470392692	150
5854531287	5854531755	3065400512	585948610573	585946396949	150
67515789	67515924	624610182	6681251924	6176973364	150
2368195815	2368195135	9912610142	236818139615	236737940435	150
3034558502	3034558533	5081500695	303844665098	303165868359	150
3149830333	3149830304	1694810043	314202292021	314915413385	150
3201030945	3201030601	4513400073	320357528376	320769939737	150
8283391987	8283391555	2602400992	828204933299	828609974804	150
5212909773	5212909326	43400314	521862301215	521324333916	150

9896400000	9896400170	9896400932	989616480521	989731831692	150
8424314367	8424314644	5621800142	842124009551	842321585509	150
5778142309	5778142250	1028400134	577602713484	577978775242	150
672105232	672105793	6864500519	67890069666	67059335812	150
777797263	777797873	9184400716	77141221237	77378619888	150
7082181799	7082181693	4881600765	708200357615	708597653570	150
9075572637	9075572303	3524400155	907436960691	907160789002	150
8136462003	8136462139	8684500697	813652022448	813389412790	150
1069025489	1069025337	4453810511	106948004788	106831198706	150
7172189345	7172189167	3018400036	717988828496	717790151964	150
6016761163	6016761298	7484500677	601194248883	601602623879	150
7655899501	7655899638	9871600672	765964181176	765399551255	150
1657433884	1657433176	4622400191	165505217555	165021106317	150
2068810960	2068810318	8505400953	206464259050	206360441656	150
602571905	602571121	2774500603	60170421426	60018941871	150
2317506479	2317506101	6118400049	231920034548	231947278286	150
9979694066	9979694524	1577410673	997475291266	997736012132	150
7718365231	7718365647	9872400710	771573131747	771572199965	150
7331557469	7331557893	4087700702	733601148283	733461798510	150
7854967941	7854967972	4321500129	785394078003	785636402152	150
1956406870	1956406109	1805500910	195140962319	195311527592	150
2432497356	2432497767	6892500865	243520324981	243135846821	150
1173644506	1173644536	1121810167	117611272548	117378361370	150
2629398992	2629398366	6146400324	262423082801	262203303221	150
9995430890	9995430963	6391500818	999021060996	999030157783	150
7400823730	7400823777	3399400842	740929592141	740427042619	150
3445055240	3445055688	1315500967	344113719886	344226135507	150
8260506275	8260506030	8416400054	826407913440	826468131658	150
593361599	593361027	7294500755	59872538551	59349241025	150
8468196400	8468196821	4549400368	846446679102	846743703451	150
1247652036	1247652321	2484600704	124474336971	124556420120	150
9448961109	9448961496	6934310263	944316299841	944325598482	150
4484887830	4484887020	2365710464	448990711557	448055881876	150
557852882	557852916	4413700091	55416510441	55580208728	150
8773956956	8773956569	9686510847	877919122081	877975242398	150
3756677278	3756677011	1724400173	375198132775	375812900229	150
4675585833	4675585917	4838400315	467779715490	467864897991	150
5672983497	5672983484	9049400323	567583153390	567067398044	150
6185558823	6185558686	2053400414	618194278752	618781344692	150
6980206940	6980206629	6753400487	698742745859	698159357951	150
5975686716	5975686560	9774500610	597303783549	597228144839	150
7521304689	7521304097	6724500122	752264295661	752727553030	150
4829465554	4829465366	7867410610	482423089693	482124083467	150
5364202076	5364202788	1157500355	536820557622	536031949179	150
4590486798	4590486868	3537400297	459075303150	459585159645	150
4192438184	4192438983	9461500540	419252320974	419371498439	150
1439885878	1439885202	7756700479	143956328828	143452712368	150

1760536051	1760536512	2584500681	176258892147	176297263457	150
3527692440	3527692984	6428400179	352509003663	352745873750	150
3775154815	3775154592	2956700494	377697500292	377660741835	150
7736923478	7736923094	5452210516	773999346628	773974004399	150
7382297518	7382297155	7684600729	738045388987	738010900123	150
919954323	919954404	3000500912	91679109977	91419848868	150
2866033142	2866033440	4921500188	286539640131	286656102950	150
9082725958	9082725584	481600722	908660418288	908201517997	150
5470179654	5470179084	5639400279	547891000093	547847600453	150
3915450005	3915450222	7697400903	391015661801	391989939740	150
9866410437	9866410057	5427610130	986259952324	986760719471	150
6365426204	6365426058	6703500954	636192645391	636991344114	150
3969282512	3969282114	1036400205	396890289830	396506228344	150
3959393054	3959393811	1032500182	395315907593	395969581992	150
8858437578	8858437230	6509910000	885852806471	885853440075	150
6237420854	6237420804	758610439	623774966290	623728556683	150
1199630589	1199630497	5608400998	119194153550	119611432892	150
391221560	391221656	3959710427	39903893386	39451288499	150
1790458490	1790458662	942500372	179335841794	179898160866	150
1891788798	1891788763	453500410	189220992450	189434639343	150
9714461043	9714461960	9512400086	971965525942	971951895393	150
1614621879	1614621511	3493500806	161879771265	161113586921	150
2540237846	2540237147	1465710472	254548258780	254120796843	150
3497060505	3497060085	3357500377	349669961197	349602436364	150
8801303730	8801303664	3627610147	880181187994	880834782943	150
622720369	622720892	602500943	62711812904	62888087243	150
3395409960	3395409018	8793500840	339109518188	339315657828	150
416747747	416747686	3394400829	41254195867	41142291224	150
5663329285	5663329119	3735400280	566370977004	566172687902	150
9295781872	9295781907	4762500555	929392667757	929659952274	150
1376372024	1376372306	9642500351	137615168129	137131253660	150
9576571626	9576571412	4906400000	957831877035	957118832241	150
9537361969	9537361336	2654500400	953725307498	953076717130	150
9639831109	9639831640	727610154	963604675495	963482637676	150
8143137257	8143137442	5164500453	814056020884	814502975987	150
8268049761	8268049639	3996400937	826289858858	826350670204	150
170901252	170901530	8448400376	17761601358	17572225815	150
4203769051	4203769216	5385400744	420231017230	420479734697	150
2643148735	2643148361	3357400474	264194537422	264958155737	150
2893207297	2893207818	6589400764	289764081014	289776333873	150
3221201784	3221201055	7370500637	322481007204	322751113830	150
7098757588	7098757907	6702500957	709614902102	709173520217	150
4760182475	4760182894	7487700744	476119872622	476570382322	150
6831361794	6831361094	4386400766	683636995100	683289881231	150
8596701315	8596701886	5074500536	859720898419	859861829068	150
3292915577	3292915615	8581600740	329882914163	329992262790	150
1612186561	1612186681	7202500909	161598797676	161659257550	150

6746708053	6746708599	456710392	674771598978	674647457614	150
601986155	601986215	4112500994	60182730673	60340243831	150
381298561	381298002	6084500638	38005461416	38544251688	150
1689917178	1689917042	2061500493	168709134053	168647272378	150
6593118392	6593118228	6983500758	659575606302	659156133225	150
317789376	317789112	8747400419	31254310521	31025205930	150
2475415985	2475415105	6474500577	247924113233	247687649451	150
5831402813	5831402997	9243500301	583176003006	583044708544	150
3601788007	3601788030	2064400500	360888060876	360082896116	150
1260822933	1260822773	9112400048	126875169737	126289852435	150
8293378644	8293378314	7294310785	829802816369	829224074520	150
9223327335	9223327468	4220500130	922278009647	922906900694	150
7334619922	7334619595	8730500280	733052685820	733197911448	150
5055944711	5055944986	7375400646	505659088061	505673159579	150
3692409321	3692409936	9622500150	369663540634	369936235515	150
5044960703	5044960463	1114500965	504279737438	504418407570	150
4794924014	4794924767	2615400061	479352076161	479902097310	150
8769152768	8769152517	6077410628	876674523485	876889856737	150
7882719585	7882719384	6404500905	788254572442	788955520145	150
8589408230	8589408377	9574400656	858225226747	858803724044	150
4006902381	4006902375	7892400907	400733991992	400878337427	150
5660425701	5660425453	1775400680	566046209567	566325618930	150
1199666866	1199666378	2206400928	119239190846	119921333123	150
5313967552	5313967927	2325400134	531272554887	531246772314	150
9251570964	9251570431	4487510822	925772991759	925698566332	150
3736266034	3736266121	1812610124	373398855459	373027560914	150
6066582917	6066582922	9554400458	606831170019	606833464133	150
6956607408	6956607036	1524610173	695471149461	695600017197	150
3619758003	3619758154	3393500796	361067260326	361848266144	150
9702689515	9702689753	6493500809	970686825269	970711291507	150
6711602498	6711602554	6435610258	671652177146	671334915246	150
9677708679	9677708436	8315500974	967243169714	967904072597	150
6968303816	6968303757	4781500760	696195468271	696684396767	150
9397324728	9397324984	4156710367	939085213292	939145383921	150
8052082484	8052082502	126400115	805071683479	805947683181	150
7169839198	7169839720	1498400861	716321924594	716458259449	150
415671926	415671466	9237400273	41358279083	41919782784	150
5839009975	5839009799	1615500003	583525137635	583279317455	150
905973005	905973933	7977700695	90219884607	90210556854	150
3870353522	3870353827	9410610115	387931296238	387077098096	150
1754418408	1754418908	9058400437	175485880012	175507440800	150
6476482706	6476482671	6297700823	647906755740	647288133330	150
299813946	299813823	1455500384	29366835627	29064838502	150
1202091420	1202091629	9692400889	120712684920	120022031685	150
2169083837	2169083858	3472810712	216738572857	216107556471	150
5277404642	5277404965	1579400660	527460809353	527922336106	150
4021478198	4021478812	5003400925	402216503964	402478147811	150

2521993413	2521993326	6752500457	252851210129	252307436268	150
1920052532	1920052102	8598510929	192333576581	192511143035	150
2592667964	2592667668	5978400717	259777714061	259387248836	150
6486494972	6486494941	5576400682	648279315886	648597943268	150
1028493044	1028493047	1584600713	102548557919	102020082869	150
6805525905	6805525075	2315400028	680637651522	680966879767	150
3937531808	3937531464	3553810520	393501134401	393117410057	150
6279771702	6279771623	1264400519	627200021279	627282804495	150
9898647916	9898647340	7704500932	989533490872	989112790596	150
9784093578	9784093296	5870500684	978680735610	978906912904	150
2319702431	2319702802	8612610111	231184368818	231123661627	150
6665638470	6665638750	402400970	666722018647	666996415373	150
7652265810	7652265512	5356700438	765077738437	765470161998	150
1943464926	1943464666	6224810196	194426662151	194829386315	150
7073394845	7073394575	1222610164	707191927437	707870614353	150
2903670466	2903670304	8402810014	290712141163	290176161189	150
4746813363	4746813529	1292600795	474180153524	474804722419	150
9556271913	9556271234	5952400516	955118384099	955018166272	150
4206111782	4206111123	2446400350	420723827273	420585631910	150
6951266969	6951266824	7353400449	695204733631	695679803559	150
7839683285	7839683892	9304500898	783227831972	783565037910	150
1243328032	1243328967	1865400590	124273366934	124419278460	150
2212457735	2212457770	5698400885	221929351199	221913094015	150
2035716185	2035716938	8472500630	203433755265	203670527606	150
7629911440	7629911164	1942400412	762156837636	762745739098	150
4574249280	4574249446	3508400987	457269365001	457346100004	150
6318505589	6318505819	3695400870	631966793255	631363204019	150
7162901192	7162901848	1402810007	716013296545	716353396320	150
5424107592	5424107175	5905400989	542010517637	542264153702	150
458613328	458613210	3393600801	45870301703	45080539312	150
3065319771	3065319732	9086400740	306284019662	306930277733	150
6749767489	6749767298	6415400043	674656101637	674571784641	150
7901068091	7901068881	226400125	790685777732	790155596633	150
7752222700	7752222900	313500007	775500397484	775584819235	150
3134886624	3134886929	3511610109	313941355394	313585072442	150
2361653378	2361653119	284600683	236031375337	236455002865	150
556740005	556740189	755400479	55637142391	55400004321	150
7523705964	7523705963	24400104	752130957034	752709220611	150
8270828496	8270828337	4781600756	827567508162	827216700428	150
797008837	797008124	4302400964	79382190057	79465571487	150
2861354957	2861354873	1863400591	286908949629	286582041028	150
6941786504	6941786697	9923986872	694577381175	694670009441	150
7572705461	7572705109	4066700506	757887344315	757189129827	150
7604599577	7604599193	1452500423	760062487137	760465328756	150
9773546721	9773546398	2564500489	977278349733	977439076574	150
5556162457	5556162339	143400324	555650549137	555335390462	150
9320121627	9320121851	2805400977	932440209966	932504119317	150

9830514990	9830514508	3826400187	983927478585	983427112101	150
2010996471	2010996635	7584083778	201387946279	201164397856	150
8040110254	8040110003	2555400461	804327719815	804355009604	150
6527755904	6527755244	1286400752	652019734956	652283799108	150
8417938804	8417938987	6163400526	841596858861	841891384654	150
2157465171	2157465459	1262445943	215608770823	215449857783	150
2937372781	2937372130	3784500702	293002024811	293867660412	150
9221967951	9221967659	2683500725	922075280062	922656093329	150
4672578169	4672578985	964400587	467188511504	467046189551	150
9543343810	9543343896	1721800148	954101881702	954793086342	150
607440288	607440537	1587410772	60571925672	60170922742	150
5742448164	5742448536	7014400011	574238929644	574829646326	150
9901932231	9901932653	7064500445	990825114275	990568895890	150
1925871790	1925871826	8592500837	192256520335	192144947559	150
5035827896	5035827193	7021610162	503542970382	503208441859	150
4127292557	4127292010	6632500248	412258009972	412573350173	150
5669446941	5669446554	1482500723	566947368116	566117023291	150
3671305679	3671305169	2884500711	367839703284	367254918391	150
8814278626	8814278659	5610610131	881905330400	881937618141	150
2598231748	2598231682	4496400883	259919447587	259020503250	150
8224431960	8224431698	9711610134	822881361614	822004739550	150
8736470309	8736470085	9697700865	873259767880	873571358866	150
1494277598	1494277837	1035710136	149300758302	149477065162	150
6488079178	6488920206	8195400825	648221101049	648192909446	150
325460071	325510159	4497700841	32762354633	32144905885	150
9995218408	9998336958	3893400890	999340035722	999378393620	150
7997217557	7997217156	6190500813	799985069238	799321375943	150
8947540845	8947540293	2981600773	894616967092	894466292141	150
7854065303	7854065004	7634500210	785985295860	785798689379	150
9494450496	9494450865	4236500183	949164161416	949628611170	150
8963380503	8963380864	3340500335	896560315028	896164694265	150
1341233794	1345870787	3021810159	134149299678	134032727828	150
7080877032	7080877643	1593910000	708403875819	708654335098	150
1363559548	1362069451	3859710417	136099463364	136835084478	150
3273284424	3274042705	8917400144	327391529382	327756509706	150
3479591232	3473229860	9097700806	347043693277	347966756813	150
2872502750	2870079683	4364400532	287413040483	287717773981	150
4256414179	4251467050	9682600743	425310558505	425285347964	150
5703221598	5708688316	2252400443	570577378669	570956740516	150
3398833332	3392558237	9611610125	339997934774	339932102380	150
5437874690	5432013669	2591500834	543343338132	543869568488	150
2220579736	2220629574	7733500249	222060306485	222271267421	150
4323638805	4323496397	1896400923	432954893971	432149826326	150
2560142883	2566032382	7104500878	256895313916	256682298944	150
6440379371	6448796569	5393500798	644357880608	644122909970	150
6437228802	6434664072	9744700407	643834342699	643706931074	150
1883440304	1882105461	6390500832	188716221080	188433906376	150

6352372908	6356451796	6684500695	635752186528	635348991989	150
3651733632	3651453330	640500362	365387373742	365452940330	150
2016937143	2017712526	6306400942	201402817863	201779096750	150
6378052680	6371267045	6189400724	637565606605	637158180385	150
792074021	793255334	8381600720	79520834832	79150973877	150
647673209	642801535	6582400776	64088811706	64946612446	150
5372787505	5375437149	6009510977	537922769817	537387228295	150
9461085259	9461005044	4507400003	946937478692	946334778485	150
611080491	611802842	520500156	61444424005	61283105703	150
681158977	685443236	994400886	68162920537	68377910862	150
8427784452	8423639906	2495400849	842403021202	842063997959	150
3739115239	3730652373	8466400571	373287850490	373874409266	150
9021870302	9029331656	9924500145	902666100697	902901604597	150
1177550795	1179049560	7021500102	117757861936	117209520519	150
6595550681	6597129286	9392500818	659915731771	659739197520	150
693216885	698473457	763400580	69609995558	69161890935	150
1104682825	1108681680	3633400277	110861045064	110317480996	150
1740704394	1744858329	4605400959	174343761047	174784376549	150
2886752986	2881598385	4384600696	288800364207	288180771459	150
9489023164	9486423513	578400673	948026473056	948116094999	150
5219467972	5210304580	4016400010	521630941759	521819116404	150
4120623248	4124983909	5454700470	412524552981	412341127192	150
9898125792	9893189064	5505310913	989521043902	989199376625	150
9712997034	9714609284	9698510940	971204555925	971364781415	150
8090274192	8093353401	1572810720	809648950651	809850622129	150
8396062261	8391194393	3652400484	839488672355	839790581207	150
9079292021	9071385985	2394800877	907923359931	907905196280	150
2787453247	2783297836	7073500574	278669768532	278180929461	150
5310000	5310798	5310858	156393067	61581522	150
5310000	5310798	5310858	156393067	61581522	150
36500000	36500782	36500159	3901590655	3003094695	150
3500000	3500850	3500879	51114335	240132689	150
3500000	3500850	3500879	51114335	240132689	150
71500000	71500568	71500591	7459228758	7007331063	150
71500000	71500568	71500591	7459228758	7007331063	150
93500000	93500171	93500762	9149289816	9975115747	150
93500000	93500171	93500762	9149289816	9975115747	150
84600000	84600284	84600663	8376489279	8909469556	150
84600000	84600284	84600663	8376489279	8909469556	150
72500000	72500627	72500581	7516146836	7677917884	150
72500000	72500627	72500581	7516146836	7677917884	150
91500000	91500924	91500784	9559133034	9898639434	150
91500000	91500924	91500784	9559133034	9898639434	150
94500000	94500096	94500729	9408824911	9755660364	150
94500000	94500096	94500729	9408824911	9755660364	150
64500000	64500150	64500438	6666222616	6207791152	150
64500000	64500150	64500438	6666222616	6207791152	150

213400000	213400053	213400039	21055831158	21669332417	150
213400000	213400053	213400039	21055831158	21669332417	150
204400000	204400561	204400924	20627946207	20986569218	150
204400000	204400561	204400924	20627946207	20986569218	150
229400000	229400464	229400136	22656865372	22567717583	150
229400000	229400464	229400136	22656865372	22567717583	150
237400000	237400227	237400264	23984544687	23609633519	150
237400000	237400227	237400264	23984544687	23609633519	150
227400000	227400081	227400166	22033128875	22763875313	150
227400000	227400081	227400166	22033128875	22763875313	150
184400000	184400209	184400707	18124275118	18050348180	150
184400000	184400209	184400707	18124275118	18050348180	150
200500000	200500440	200500929	20874958670	20918190637	150
200500000	200500440	200500929	20874958670	20918190637	150
233500000	233500274	233500194	23683717122	23591606387	150
233500000	233500274	233500194	23683717122	23591606387	150
173400000	173400390	173400620	17453607290	17956703952	150
173400000	173400390	173400620	17453607290	17956703952	150
183500000	183500871	183500674	18981054405	18498985475	150
183500000	183500871	183500674	18981054405	18498985475	150
175310000	175310943	175310772	17481210244	17569646562	150
175310000	175310945	175310845	17987714051	17569646562	150
175310000	175310946	175310262	17044181716	17569646562	150
175310000	175310946	175310262	17044181716	17569646562	150
175310000	175310947	175310738	17666067795	17569646562	150
175310000	175310948	175310856	17570571214	17569646562	150
175310000	175310949	175310094	17719335226	17569646562	150
175310000	175310950	175310281	17719988705	17569646562	150
175310000	175310951	175310829	17279120540	17569646562	150
175310000	175310952	175310365	17951302403	17569646562	150
129400000	129400451	129400126	12048039082	12664345694	150
129400000	129400451	129400126	12048039082	12664345694	150
130500000	130500796	130500215	13162981509	13645195789	150
130500000	130500796	130500215	13162981509	13645195789	150
123610000	123610977	123610141	12148662805	12387383122	150
123610000	123610977	123610141	12148662805	12387383122	150
134400000	134400926	134400212	13465409198	13918241052	150
134400000	134400926	134400212	13465409198	13918241052	150
135400000	135400766	135400215	13881054875	13635334778	150
135400000	135400766	135400215	13881054875	13635334778	150
137610000	137610565	137610193	13066024892	13493094647	150
137610000	137610565	137610193	13066024892	13493094647	150
150500000	150500002	150500411	15803373869	15485069938	150
150500000	150500002	150500411	15803373869	15485069938	150
342500000	342500607	342500312	34679672674	34407343653	150
342500000	342500607	342500312	34679672674	34407343653	150
358610000	358610466	358610399	35810137809	35813060215	150

358610000	358610466	358610399	35810137809	35813060215	150
343400000	343400750	343400343	34644758690	34918953541	150
343400000	343400750	343400343	34644758690	34918953541	150
360500000	360500151	360500531	36204385326	36368783077	150
360500000	360500151	360500531	36204385326	36368783077	150
331500000	331500097	331500225	33149836521	33513476464	150
331500000	331500097	331500225	33149836521	33513476464	150
355500000	355500652	355500373	35838874828	35079965109	150
355500000	355500652	355500373	35838874828	35079965109	150
310610000	310610446	310610096	31658190058	31593732151	150
310610000	310610446	310610096	31658190058	31593732151	150
362400000	362400122	362400551	36069285439	36014845796	150
362400000	362400122	362400551	36069285439	36014845796	150
365400000	365400199	365400539	36070892897	36393109025	150
365400000	365400199	365400539	36070892897	36393109025	150
362500000	362500674	362500511	36480080708	36181100081	150
362500000	362500674	362500511	36480080708	36181100081	150
363500000	363500455	363500499	36469635991	36590505589	150
363500000	363500455	363500499	36469635991	36590505589	150
274500000	274500363	274500551	27975246865	27408307942	150
274500000	274500363	274500551	27975246865	27408307942	150
283500000	283500889	283500684	28246882169	28488447607	150
283500000	283500889	283500684	28246882169	28488447607	150
254500000	254500824	254500358	25528298686	25439829888	150
254500000	254500824	254500358	25528298686	25439829888	150
442500000	442500626	442500322	44544900561	44145112356	150
442500000	442500626	442500322	44544900561	44145112356	150
435400000	435400824	435400247	43272300161	43958237344	150
435400000	435400824	435400247	43272300161	43958237344	150
466400000	466400568	466400562	46748059255	46876515784	150
466400000	466400568	466400562	46748059255	46876515784	150
467400000	467400488	467400581	46456818492	46511759484	150
467400000	467400488	467400581	46456818492	46511759484	150
484500000	484500996	484500670	48628295728	48382548119	150
484500000	484500996	484500670	48628295728	48382548119	150
447400000	447400278	447400381	44617512507	44022439510	150
447400000	447400278	447400381	44617512507	44022439510	150
375400000	375400356	375400639	37830020397	37574569839	150
375400000	375400356	375400639	37830020397	37574569839	150
424400000	424400817	424400143	42172655754	42090596066	150
424400000	424400817	424400143	42172655754	42090596066	150
408410000	408410877	408410961	40772134520	40045508545	150
408410000	408410877	408410961	40772134520	40045508545	150
383500000	383500906	383500694	38738295206	38870412214	150
383500000	383500906	383500694	38738295206	38870412214	150
402500000	402500111	402500922	40661804848	40375311220	150
402500000	402500111	402500922	40661804848	40375311220	150

385400000	385400420	385400739	38883596172	38832028294	150
385400000	385400420	385400739	38883596172	38832028294	150
418400000	418400078	418400073	41306934045	41333445298	150
418400000	418400078	418400073	41306934045	41333445298	150
594810000	594810966	594810031	59559147825	59948524611	150
594810000	594810966	594810031	59559147825	59948524611	150
611500000	611500877	611500056	61351722087	61353187206	150
611500000	611500877	611500056	61351722087	61353187206	150
597400000	597400779	597400886	59422319204	59337906581	150
597400000	597400779	597400886	59422319204	59337906581	150
616400000	616400868	616400066	61911766990	61880505079	150
616400000	616400868	616400066	61911766990	61880505079	150
592400000	592400311	592400870	59027739016	59230869558	150
592400000	592400311	592400870	59027739016	59230869558	150
534400000	534400869	534400252	53650893423	53532272236	150
534400000	534400869	534400252	53650893423	53532272236	150
551500000	551500424	551500441	55608417022	55022267772	150
551500000	551500424	551500441	55608417022	55022267772	150
505500000	505500564	505500879	50711020106	50507566264	150
505500000	505500564	505500879	50711020106	50507566264	150
684500000	684500033	684500689	68900684737	68468758789	150
684500000	684500033	684500689	68900684737	68468758789	150
709400000	709400292	709400988	70394945743	70052186761	150
709400000	709400292	709400988	70394945743	70052186761	150
721500000	721500998	721500164	72876299164	72800692629	150
721500000	721500998	721500164	72876299164	72800692629	150
624400000	624400848	624400162	62591753381	62001111207	150
624400000	624400848	624400162	62591753381	62001111207	150
653400000	653400886	653400472	65639734503	65435108976	150
653400000	653400886	653400472	65639734503	65435108976	150
619400000	619400369	619400078	61783962370	61374164439	150
619400000	619400369	619400078	61783962370	61374164439	150
670500000	670500319	670500660	67571766654	67367855905	150
670500000	670500319	670500660	67571766654	67367855905	150
681500000	681500751	681500749	68976686132	68815178700	150
681500000	681500751	681500749	68976686132	68815178700	150
652500000	652500549	652500441	65587622458	65100258585	150
652500000	652500549	652500441	65587622458	65100258585	150
630500000	630500763	630500263	63554391267	63115740614	150
630500000	630500763	630500263	63554391267	63115740614	150
827400000	827400169	827400224	82228188885	82314674754	150
827400000	827400169	827400224	82228188885	82314674754	150
844500000	844500755	844500320	84979789095	84875394320	150
844500000	844500755	844500320	84979789095	84875394320	150
860500000	860500241	860500580	86009560867	86000853779	150
860500000	860500241	860500580	86009560867	86000853779	150
822500000	822500465	822500161	82407820256	82296814723	150

822500000	822500465	822500161	82407820256	82296814723	150
824500000	824500488	824500126	82543402677	82529857201	150
824500000	824500488	824500126	82543402677	82529857201	150
764400000	764400970	764400568	76628894739	76109357192	150
764400000	764400970	764400568	76628894739	76109357192	150
800500000	800500551	800500988	80356193241	80421025887	150
800500000	800500551	800500988	80356193241	80421025887	150
770500000	770500338	770500670	77611531900	77442510762	150
770500000	770500338	770500670	77611531900	77442510762	150
801500000	801500744	801500976	80710459030	80962050847	150
801500000	801500744	801500976	80710459030	80962050847	150
794500000	794500443	794500798	79623641889	79050321934	150
794500000	794500443	794500798	79623641889	79050321934	150
768400000	768400769	768400593	76463536725	76761083098	150
768400000	768400769	768400593	76463536725	76761083098	150
756700000	756700948	756700472	75951844748	75474173354	150
756700000	756700948	756700472	75951844748	75474173354	150
754500000	754500907	754500408	75596628254	75265492029	150
754500000	754500907	754500408	75596628254	75265492029	150
943500000	943500779	943500360	94091938131	94119186666	150
943500000	943500779	943500360	94091938131	94119186666	150
969400000	969400146	969400600	96012109181	96228709918	150
969400000	969400146	969400600	96012109181	96228709918	150
985400000	985400516	985400797	98156997052	98343780521	150
985400000	985400516	985400797	98156997052	98343780521	150
935400000	935400851	935400298	93800480184	93179532263	150
935400000	935400851	935400298	93800480184	93179532263	150
945400000	945400028	945400400	94735431906	94948797954	150
945400000	945400028	945400400	94735431906	94948797954	150
979400000	979400309	979400698	97815898875	97177539998	150
979400000	979400309	979400698	97815898875	97177539998	150
936400000	936400183	936400296	93540151479	93000401727	150
936400000	936400183	936400296	93540151479	93000401727	150
912500000	912500286	912500070	91781096741	91807454507	150
912500000	912500286	912500070	91781096741	91807454507	150
905400000	905400424	905400984	90558086121	90557963854	150
905400000	905400424	905400984	90558086121	90557963854	150
922400000	922400065	922400217	92486741836	92518526563	150
922400000	922400065	922400217	92486741836	92518526563	150
907400000	907400120	907400038	90708163308	90874807760	150
907400000	907400120	907400038	90708163308	90874807760	150
924400000	924400896	924400192	92134609997	92145061357	150
924400000	924400896	924400192	92134609997	92145061357	150
925500000	925500941	925500135	92519564170	92143737418	150
925500000	925500941	925500135	92519564170	92143737418	150
868400000	868400791	868400603	86913313962	86811864321	150
868400000	868400791	868400603	86913313962	86811864321	150

897410000	897410777	897410900	89567956186	89034818414	150
897410000	897410777	897410900	89567956186	89034818414	150
930500000	930500807	930500292	93903503768	93984515848	150
930500000	930500807	930500292	93903503768	93984515848	150
884800000	884800674	884800826	88685522662	88921486830	150
884800000	884800674	884800826	88685522662	88921486830	150
887700000	887700653	887700777	88135650623	88200648387	150
887700000	887700653	887700777	88135650623	88200648387	150
1102500000	1102500055	1102500893	110747236748	110072436126	150
1102500000	1102500055	1102500893	110747236748	110072436126	150
1094500000	1094500098	1094500730	109626981339	109247863080	150
1094500000	1094500098	1094500730	109626981339	109247863080	150
1096400000	1096400929	1096400837	109788776450	109567414646	150
1096400000	1096400929	1096400837	109788776450	109567414646	150
1073400000	1073400377	1073400611	107540010862	107316801813	150
1073400000	1073400377	1073400611	107540010862	107316801813	150
1057400000	1057400377	1057400442	105710419550	105183904983	150
1057400000	1057400377	1057400442	105710419550	105183904983	150
1004500000	1004500361	1004500862	100365176693	100145846731	150
1008400000	1008400862	1008400935	100921450959	100247601226	150
1008400000	1008400862	1008400935	100921450959	100247601226	150
1052400000	1052400297	1052400422	105227235318	105827564676	150
1052400000	1052400297	1052400422	105227235318	105827564676	150
1020500000	1020500628	1020500108	102440672086	102334566250	150
1020500000	1020500628	1020500108	102440672086	102334566250	150
1193400000	1193400217	1193400819	119536910673	119417827319	150
1193400000	1193400217	1193400819	119536910673	119417827319	150
1193500000	1193500190	1193500774	119745511509	119718943501	150
1193500000	1193500190	1193500774	119745511509	119718943501	150
1205500000	1205500521	1205500850	120356241033	120976660365	150
1205500000	1205500521	1205500850	120356241033	120976660365	150
1235610000	1235610752	1235610233	123783521347	123707476866	150
1235610000	1235610752	1235610233	123783521347	123707476866	150
1236400000	1236400069	1236400225	123616986802	123661406382	150
1236400000	1236400069	1236400225	123616986802	123661406382	150
1214500000	1214500012	1214500975	121830066508	121147713078	150
1214500000	1214500012	1214500975	121830066508	121147713078	150
1215500000	1215500665	1215500956	121073785922	121143662495	150
1215500000	1215500665	1215500956	121073785922	121143662495	150
1192400000	1192400239	1192400831	119103624758	119057070833	150
1192400000	1192400239	1192400831	119103624758	119057070833	150
1184310000	1184310411	1184310670	118474573722	118467139051	150
1184310000	1184310411	1184310670	118474573722	118467139051	150
1184500000	1184500946	1184500643	118139728794	118780075282	150
1184500000	1184500946	1184500643	118139728794	118780075282	150
1124400000	1124400775	1124400114	112529213937	112003264212	150
1124400000	1124400775	1124400114	112529213937	112003264212	150

1141500000	1141500151	1141500304	114082018915	114451429545	150
1141500000	1141500151	1141500304	114082018915	114451429545	150
1165700000	1165700775	1165700524	116703322122	116862742205	150
1165700000	1165700775	1165700524	116703322122	116862742205	150
1132400000	1132400101	1132400238	113138165455	113893499935	150
1132400000	1132400101	1132400238	113138165455	113893499935	150
1352500000	1352500491	1352500413	135771693457	135223467113	150
1352500000	1352500491	1352500413	135771693457	135223467113	150
1349400000	1349400858	1349400345	134112679880	134796126062	150
1349400000	1349400858	1349400345	134112679880	134796126062	150
1328400000	1328400188	1328400164	132940888004	132999111626	150
1328400000	1328400188	1328400164	132940888004	132999111626	150
1365700000	1365700815	1365700544	136325207772	136751214743	150
1365700000	1365700815	1365700544	136325207772	136751214743	150
1310500000	1310500637	1310500039	131329196416	131244066536	150
1310500000	1310500637	1310500039	131329196416	131244066536	150
1333500000	1333500290	1333500205	133777644401	133369293871	150
1333500000	1333500290	1333500205	133777644401	133369293871	150
1354400000	1354400747	1354400430	135331725926	135939335122	150
1354400000	1354400747	1354400430	135331725926	135939335122	150
1324500000	1324500213	1324500078	132609279869	132231787416	150
1324500000	1324500213	1324500078	132609279869	132231787416	150
1287400000	1287400657	1287400759	128763155376	128141914456	150
1287400000	1287400657	1287400759	128763155376	128141914456	150
1303500000	1303500901	1303500909	130222966188	130720419390	150
1303500000	1303500901	1303500909	130222966188	130720419390	150
1264500000	1264500191	1264500459	126980287462	126665484885	150
1264500000	1264500191	1264500459	126980287462	126665484885	150
1281500000	1281500679	1281500710	128754820405	128187533685	150
1281500000	1281500679	1281500710	128754820405	128187533685	150
1265700000	1265700795	1265700534	126586348017	126385374914	150
1265700000	1265700795	1265700534	126586348017	126385374914	150
1284500000	1284500962	1284500652	128766989048	128782527509	150
1284500000	1284500962	1284500652	128766989048	128782527509	150
1255500000	1255500638	1255500364	125248425375	125875675484	150
1273400000	1273400408	1273400631	127177350721	127168919643	150
1273400000	1273400408	1273400631	127177350721	127168919643	150
1258400000	1258400596	1258400448	125037766547	125546634205	150
1258400000	1258400596	1258400448	125037766547	125546634205	150
1477400000	1477400520	1477400681	147150588248	147129121122	150
1477400000	1477400520	1477400681	147150588248	147129121122	150
1483500000	1483500928	1483500705	148745009074	148949650582	150
1483500000	1483500928	1483500705	148745009074	148949650582	150
1442410000	1442410074	1442410360	144659387212	144251748535	150
1442410000	1442410074	1442410360	144659387212	144251748535	150
1585400000	1585400455	1585400760	158803601597	158787249432	150
1585400000	1585400455	1585400760	158803601597	158787249432	150

1594500000	1594500413	1594500779	159284317201	159377509747	150
1594500000	1594500413	1594500779	159284317201	159377509747	150
1590500000	1590500617	1590500847	159434690160	159008275837	150
1590500000	1590500617	1590500847	159434690160	159008275837	150
1512400000	1512400005	1512400079	151138048063	151810735324	150
1512400000	1512400005	1512400079	151138048063	151810735324	150
1515500000	1515500708	1515500991	151406771434	151759359959	150
1515500000	1515500708	1515500991	151406771434	151759359959	150
1552500000	1552500532	1552500432	155188384478	155957505719	150
1552500000	1552500532	1552500432	155188384478	155957505719	150
1526500000	1526500707	1526500110	152646381761	152183910317	150
1526500000	1526500707	1526500110	152646381761	152183910317	150
1553400000	1553400871	1553400463	155882744014	155845521022	150
1553400000	1553400871	1553400463	155882744014	155845521022	150
1494800000	1494800764	1494800886	149705241673	149392404035	150
1494800000	1494800764	1494800886	149705241673	149392404035	150
1521500000	1521500962	1521500146	152733658797	152558450280	150
1521500000	1521500962	1521500146	152733658797	152558450280	150
1708700000	1708700938	1708700965	170905914559	170357679835	150
1708700000	1708700938	1708700965	170905914559	170357679835	150
1724500000	1724500470	1724500117	172601179453	172626874987	150
1724500000	1724500470	1724500117	172601179453	172626874987	150
1702400000	1702400870	1702400000	170963831533	170476462294	150
1702400000	1702400870	1702400000	170963831533	170476462294	150
1694800000	1694800792	1694800907	169446433409	169051410668	150
1694800000	1694800792	1694800907	169446433409	169051410668	150
1697410000	1697410751	1697410881	169678552955	169701735748	150
1697410000	1697410751	1697410881	169678552955	169701735748	150
1722400000	1722400034	1722400198	172902057353	172064602923	150
1722400000	1722400034	1722400198	172902057353	172064602923	150
1734400000	1734400904	1734400273	173884132588	173418836896	150
1734400000	1734400904	1734400273	173884132588	173418836896	150
1693500000	1693500284	1693500823	169066611818	169242166827	150
1693500000	1693500284	1693500823	169066611818	169242166827	150
1675400000	1675400311	1675400670	167927365239	167258722634	150
1675400000	1675400311	1675400670	167927365239	167258722634	150
1657410000	1657410402	1657410484	165369491552	165950132638	150
1657410000	1657410402	1657410484	165369491552	165950132638	150
1665400000	1665400246	1665400570	166197204035	166610875920	150
1665400000	1665400246	1665400570	166197204035	166610875920	150
1620500000	1620500722	1620500167	162816310382	162713408121	150
1620500000	1620500722	1620500167	162816310382	162713408121	150
1633500000	1633500559	1633500234	163441703439	163308914896	150
1633500000	1633500559	1633500234	163441703439	163308914896	150
1649400000	1649400843	1649400375	164066397257	164455558055	150
1649400000	1649400843	1649400375	164066397257	164455558055	150
1626500000	1626500722	1626500120	162193865262	162574739620	150

1626500000	1626500722	1626500120	162193865262	162574739620	150
1824400000	1824400882	1824400183	182342479857	182415366232	150
1824400000	1824400882	1824400183	182342479857	182415366232	150
1809400000	1809400309	1809400999	180126813797	180077508786	150
1809400000	1809400309	1809400999	180126813797	180077508786	150
1842500000	1842500400	1842500363	184710459673	184437375349	150
1842500000	1842500400	1842500363	184710459673	184437375349	150
1815400000	1815400580	1815400082	181147550213	181390385147	150
1815400000	1815400580	1815400082	181147550213	181390385147	150
1808410000	1808410834	1808410002	180824587626	180116785787	150
1808410000	1808410834	1808410002	180824587626	180116785787	150
1745400000	1745400996	1745400381	174912518501	174582735813	150
1745400000	1745400996	1745400381	174912518501	174582735813	150
1777400000	1777400573	1777400710	177925011586	177382044052	150
1777400000	1777400573	1777400710	177925011586	177382044052	150
1795400000	1795400613	1795400878	179013362395	179963151279	150
1795400000	1795400613	1795400878	179013362395	179963151279	150
1774400000	1774400148	1774400668	177535289811	177812902299	150
1774400000	1774400148	1774400668	177535289811	177812902299	150
1758400000	1758400556	1758400496	175252229932	175833488818	150
1758400000	1758400556	1758400496	175252229932	175833488818	150
1934500000	1934500687	1934500234	193751398557	193468218185	150
1934500000	1934500687	1934500234	193751398557	193468218185	150
1965400000	1965400296	1965400600	196502263545	196238236433	150
1965400000	1965400296	1965400600	196502263545	196238236433	150
1947400000	1947400362	1947400432	194561663174	194561527494	150
1947400000	1947400362	1947400432	194561663174	194561527494	150
1974400000	1974400179	1974400688	197902666244	197972836296	150
1974400000	1974400179	1974400688	197902666244	197972836296	150
1988400000	1988400076	1988400812	198622653216	198572043640	150
1988400000	1988400076	1988400812	198622653216	198572043640	150
1914400000	1914400744	1914400095	191899289823	191970063127	150
1927400000	1927400183	1927400235	192333320764	192899468746	150
1927400000	1927400183	1927400235	192333320764	192899468746	150
1887400000	1887400659	1887400818	188890272429	188108021456	150
1887400000	1887400659	1887400818	188890272429	188108021456	150
1888400000	1888400059	1888400802	188971956755	188366343573	150
1888400000	1888400059	1888400802	188971956755	188366343573	150
1880500000	1880500492	1880500779	188168392697	188265939189	150
1880500000	1880500492	1880500779	188168392697	188265939189	150
1895400000	1895400630	1895400888	189193168638	189777707189	150
1895400000	1895400630	1895400888	189193168638	189777707189	150
1878400000	1878400876	1878400703	187110741624	187062284857	150
1878400000	1878400876	1878400703	187110741624	187062284857	150
1874400000	1874400164	1874400678	187840243080	187494340797	150
1874400000	1874400164	1874400678	187840243080	187494340797	150
1910500000	1910500612	1910500098	191523431216	191740162491	150

1910500000	1910500612	1910500098	191523431216	191740162491	150
1913700000	1913700346	1913700138	191299620701	191126028975	150
1913700000	1913700346	1913700138	191299620701	191126028975	150
1869400000	1869400130	1869400591	186222764811	186211087968	150
1869400000	1869400130	1869400591	186222764811	186211087968	150
1900500000	1900500567	1900500999	190079921466	190474990846	150
1900500000	1900500567	1900500999	190079921466	190474990846	150
2093600000	2093600875	2093600770	209315189973	209584869463	150
2093600000	2093600875	2093600770	209315189973	209584869463	150
2057410000	2057410461	2057410425	205081115779	205818762335	150
2057410000	2057410461	2057410425	205081115779	205818762335	150
2072400000	2072400252	2072400623	207031590178	207123807736	150
2072400000	2072400252	2072400623	207031590178	207123807736	150
2056400000	2056400403	2056400414	205540331960	205498343410	150
2056400000	2056400403	2056400414	205540331960	205498343410	150
2105310000	2105310821	2105310870	210270987870	210176263710	150
2105310000	2105310821	2105310870	210270987870	210176263710	150
2113500000	2113500038	2113500989	211973025577	211659023428	150
2113500000	2113500038	2113500989	211973025577	211659023428	150
2051500000	2051500324	2051500393	205377844646	205512732142	150
2051500000	2051500324	2051500393	205377844646	205512732142	150
2084310000	2084310393	2084310661	208576221523	208031564644	150
2084310000	2084310393	2084310661	208576221523	208031564644	150
2054500000	2054500793	2054500341	205283671931	205371773778	150
2054500000	2054500793	2054500341	205283671931	205371773778	150
2042500000	2042500552	2042500284	204767156184	204147336753	150
2042500000	2042500552	2042500284	204767156184	204147336753	150
2013400000	2013400022	2013400021	201369119298	201232480128	150
2013400000	2013400022	2013400021	201369119298	201232480128	150
2023400000	2023400182	2023400120	202487500429	202786092955	150
2023400000	2023400182	2023400120	202487500429	202786092955	150
1990500000	1990500692	1990500887	199177928102	199328602142	150
1990500000	1990500692	1990500887	199177928102	199328602142	150
2015400000	2015400445	2015400996	201682994162	201897023119	150
2015400000	2015400445	2015400996	201682994162	201897023119	150
2015500000	2015500646	2015500934	201811396742	201399458977	150
2015500000	2015500646	2015500934	201811396742	201399458977	150
2032400000	2032400087	2032400229	203676724501	203529869234	150
2032400000	2032400087	2032400229	203676724501	203529869234	150
2004500000	2004500363	2004500863	200738842848	200738938004	150
2004500000	2004500363	2004500863	200738842848	200738938004	150
2187410000	2187410668	2187410733	218801305573	218617066158	150
2187410000	2187410668	2187410733	218801305573	218617066158	150
2228400000	2228400172	2228400155	222925969000	222111573636	150
2228400000	2228400172	2228400155	222925969000	222111573636	150
2230500000	2230500815	2230500227	223994135730	223853007845	150
2230500000	2230500815	2230500227	223994135730	223853007845	150

2224400000	2224400792	2224400125	222597634443	222774846807	150
2224400000	2224400792	2224400125	222597634443	222774846807	150
2222400000	2222400947	2222400149	222122248217	222095137489	150
2222400000	2222400947	2222400149	222122248217	222095137489	150
2235400000	2235400788	2235400227	223243439701	223793511428	150
2235400000	2235400788	2235400227	223243439701	223793511428	150
2171600000	2171600217	2171600595	217970868648	217792689660	150
2171600000	2171600217	2171600595	217970868648	217792689660	150
2172400000	2172400269	2172400634	217507876340	217846668397	150
2172400000	2172400269	2172400634	217507876340	217846668397	150
2125400000	2125400592	2125400113	212275627553	212634367940	150
2125400000	2125400592	2125400113	212275627553	212634367940	150
2352210000	2352210532	2352210503	235784405380	235900336457	150
2352210000	2352210532	2352210503	235784405380	235900336457	150
2323610000	2323610016	2323610162	232984888705	232843995276	150
2323610000	2323610016	2323610162	232984888705	232843995276	150
2334500000	2334500582	2334500176	233332752689	233375019386	150
2334500000	2334500582	2334500176	233332752689	233375019386	150
2284310000	2284310382	2284310681	228446751941	228415614723	150
2284310000	2284310382	2284310681	228446751941	228415614723	150
2297400000	2297400729	2297400858	229511405452	229242601245	150
2297400000	2297400729	2297400858	229511405452	229242601245	150
2293500000	2293500210	2293500785	229952694132	229211815579	150
2293500000	2293500210	2293500785	229952694132	229211815579	150
2294400000	2294400249	2294400818	229598599283	229541946110	150
2294400000	2294400249	2294400818	229598599283	229541946110	150
2257400000	2257400297	2257400463	225073200033	225854368452	150
2257400000	2257400297	2257400463	225073200033	225854368452	150
2454500000	2454500864	2454500380	245008601036	245307040704	150
2454500000	2454500864	2454500380	245008601036	245307040704	150
2463400000	2463400284	2463400552	246476290907	246136138569	150
2463400000	2463400284	2463400552	246476290907	246136138569	150
2464500000	2464500229	2464500480	246214350102	246578055543	150
2464500000	2464500229	2464500480	246214350102	246578055543	150
2434500000	2434500602	2434500185	243807896436	243152485587	150
2434500000	2434500602	2434500185	243807896436	243152485587	150
2443400000	2443400688	2443400355	244854375982	244155435762	150
2443400000	2443400688	2443400355	244854375982	244155435762	150
2459400000	2459400975	2459400454	245085522036	245582995673	150
2459400000	2459400975	2459400454	245085522036	245582995673	150
2413500000	2413500088	2413500019	241140254709	241995421262	150
2413500000	2413500088	2413500019	241140254709	241995421262	150
2404400000	2404400599	2404400946	240714787570	240067910075	150
2404400000	2404400599	2404400946	240714787570	240067910075	150
2394500000	2394500151	2394500760	239528662006	239390131679	150
2394500000	2394500151	2394500760	239528662006	239390131679	150
2411500000	2411500849	2411500038	241925277695	241495556321	150

2411500000	2411500849	2411500038	241925277695	241495556321	150
2424500000	2424500409	2424500089	242208917109	242887783769	150
2424500000	2424500409	2424500089	242208917109	242887783769	150
2388400000	2388400972	2388400754	238297174677	238902912636	150
2388400000	2388400972	2388400754	238297174677	238902912636	150
2367400000	2367400475	2367400573	236868265462	236211914522	150
2367400000	2367400475	2367400573	236868265462	236211914522	150
2367410000	2367410520	2367410556	236024120352	236871741536	150
2367410000	2367410520	2367410556	236024120352	236871741536	150
2374400000	2374400089	2374400629	237959858071	237262954931	150
2374400000	2374400089	2374400629	237959858071	237262954931	150
2571500000	2571500669	2571500643	257905069985	257175029263	150
2571500000	2571500669	2571500643	257905069985	257175029263	150
2583400000	2583400120	2583400762	258221196859	258685631284	150
2583400000	2583400120	2583400762	258221196859	258685631284	150
2583600000	2583600770	2583600720	258695078788	258453341041	150
2583600000	2583600770	2583600720	258695078788	258453341041	150
2606400000	2606400763	2606400968	260626239902	260865985700	150
2606400000	2606400763	2606400968	260626239902	260865985700	150
2563500000	2563500495	2563500519	256530283245	256328336301	150
2563500000	2563500495	2563500519	256530283245	256328336301	150
2534500000	2534500619	2534500195	253395972405	253477525333	150
2534500000	2534500619	2534500195	253395972405	253477525333	150
2525400000	2525400659	2525400155	252265171061	252851161535	150
2525400000	2525400659	2525400155	252265171061	252851161535	150
2505400000	2505400360	2505400947	250860619101	250189803913	150
2505400000	2505400360	2505400947	250860619101	250189803913	150
2535400000	2535400845	2535400259	253784107574	253394938066	150
2535400000	2535400845	2535400259	253784107574	253394938066	150
2699400000	2699400496	2699400871	269899573571	269956360565	150
2699400000	2699400496	2699400871	269899573571	269956360565	150
2693400000	2693400297	2693400869	269585940141	269395379100	150
2693400000	2693400297	2693400869	269585940141	269395379100	150
2677700000	2677700116	2677700661	267040971073	267646105399	150
2677700000	2677700116	2677700661	267040971073	267646105399	150
2729400000	2729400544	2729400188	272502013660	272999762640	150
2729400000	2729400544	2729400188	272502013660	272999762640	150
2713700000	2713700328	2713700119	271152236752	271417483544	150
2637400000	2637400160	2637400306	263821506749	263680785005	150
2637400000	2637400160	2637400306	263821506749	263680785005	150
2650500000	2650500000	2650500464	265578703915	265610189612	150
2650500000	2650500000	2650500464	265578703915	265610189612	150
2625500000	2625500890	2625500107	262217811417	262029980406	150
2625500000	2625500890	2625500107	262217811417	262029980406	150
2642500000	2642500670	2642500344	264749525025	264741166187	150
2642500000	2642500670	2642500344	264749525025	264741166187	150
2672400000	2672400838	2672400684	267296917403	267534107810	150

2672400000	2672400838	2672400684	267296917403	267534107810	150
2852500000	2852500587	2852500463	285100161746	285581933152	150
2852500000	2852500587	2852500463	285100161746	285581933152	150
2832400000	2832400093	2832400305	283723800755	283299167801	150
2832400000	2832400093	2832400305	283723800755	283299167801	150
2835400000	2835400900	2835400290	283719367750	283964068811	150
2835400000	2835400900	2835400290	283719367750	283964068811	150
2857400000	2857400398	2857400523	285343856136	285330019817	150
2857400000	2857400398	2857400523	285343856136	285330019817	150
2832500000	2832500515	2832500264	283057935999	283809891369	150
2832500000	2832500515	2832500264	283057935999	283809891369	150
2783400000	2783400155	2783400781	278583663992	278482786725	150
2783400000	2783400155	2783400781	278583663992	278482786725	150
2783500000	2783500975	2783500734	278949083916	278752030107	150
2783500000	2783500975	2783500734	278949083916	278752030107	150
2786400000	2786400884	2786400807	278256807227	278892959764	150
2786400000	2786400884	2786400807	278256807227	278892959764	150
2759400000	2759400029	2759400482	275696045399	275406540339	150
2759400000	2759400029	2759400482	275696045399	275406540339	150
2749400000	2749400861	2749400386	274194228690	274807378143	150
2749400000	2749400861	2749400386	274194228690	274807378143	150
2765400000	2765400265	2765400581	276207826437	276499986396	150
2765400000	2765400265	2765400581	276207826437	276499986396	150
2956400000	2956400552	2956400511	295974256409	295356226737	150
2956400000	2956400552	2956400511	295974256409	295356226737	150
2972500000	2972500782	2972500674	297383561119	297551498860	150
2972500000	2972500782	2972500674	297383561119	297551498860	150
2957410000	2957410453	2957410515	295148195101	295542113967	150
2957410000	2957410453	2957410515	295148195101	295542113967	150
2924500000	2924500509	2924500138	292165277219	292826343091	150
2952500000	2952500605	2952500473	295154733766	295532771876	150
2952500000	2952500605	2952500473	295154733766	295532771876	150
2931500000	2931500213	2931500285	293897487359	293381082476	150
2931500000	2931500213	2931500285	293897487359	293381082476	150
2968400000	2968400813	2968400615	296414970419	296632090483	150
2968400000	2968400813	2968400615	296414970419	296632090483	150
2889400000	2889400369	2889400790	288119412911	288055771211	150
2889400000	2889400369	2889400790	288119412911	288055771211	150
3097410000	3097410659	3097410824	309546632052	309596567810	150
3097410000	3097410659	3097410824	309546632052	309596567810	150
3068400000	3068400612	3068400528	306250592613	306484708943	150
3068400000	3068400612	3068400528	306250592613	306484708943	150
3104500000	3104500383	3104500874	310479577059	310134690256	150
3104500000	3104500383	3104500874	310479577059	310134690256	150
3107400000	3107400002	3107400959	310425679009	310720382556	150
3107400000	3107400002	3107400959	310425679009	310720382556	150
3070500000	3070500220	3070500603	307677037242	307643509515	150

3070500000	3070500220	3070500603	307677037242	307643509515	150
3046400000	3046400205	3046400310	304232376988	304928554514	150
3046400000	3046400205	3046400310	304232376988	304928554514	150
3055500000	3055500611	3055500345	305641845539	305211348181	150
3055500000	3055500611	3055500345	305641845539	305211348181	150
3094400000	3094400217	3094400799	309546338998	309865393334	150
3094400000	3094400217	3094400799	309546338998	309865393334	150
3048400000	3048400385	3048400333	304018037421	304467960983	150
3048400000	3048400385	3048400333	304018037421	304467960983	150
2984400000	2984400199	2984400788	298907151902	298943188997	150
2984400000	2984400199	2984400788	298907151902	298943188997	150
3004400000	3004400534	3004400908	300284463732	300772165781	150
3004400000	3004400534	3004400908	300284463732	300772165781	150
3021610000	3021610801	3021610158	302501223892	302204288407	150
3021610000	3021610801	3021610158	302501223892	302204288407	150
3038400000	3038400317	3038400234	303901175322	303080012440	150
3038400000	3038400317	3038400234	303901175322	303080012440	150
2991500000	2991500016	2991500874	299858783571	299789851433	150
2991500000	2991500016	2991500874	299858783571	299789851433	150
3024500000	3024500157	3024500051	302491388700	302528550725	150
3024500000	3024500157	3024500051	302491388700	302528550725	150
2993500000	2993500343	2993500853	299049654707	299390197828	150
2993500000	2993500343	2993500853	299049654707	299390197828	150
3009400000	3009400181	3009400922	300905849209	300117512136	150
3009400000	3009400181	3009400922	300905849209	300117512136	150
2997400000	2997400846	2997400926	299870682993	299896347176	150
2997400000	2997400846	2997400926	299870682993	299896347176	150
2994500000	2994500475	2994500820	299152496342	299387060180	150
2994500000	2994500475	2994500820	299152496342	299387060180	150
3202400000	3202400786	3202400953	320893446991	320544709834	150
3202400000	3202400786	3202400953	320893446991	320544709834	150
3218400000	3218400051	3218400056	321124570948	321750398278	150
3218400000	3218400051	3218400056	321124570948	321750398278	150
3221500000	3221500989	3221500118	322666199144	322441410435	150
3192500000	3192500854	3192500792	319353558814	319050771201	150
3192500000	3192500854	3192500792	319353558814	319050771201	150
3208400000	3208400895	3208400957	320300142915	320425729215	150
3208400000	3208400895	3208400957	320300142915	320425729215	150
3194410000	3194410106	3194410822	319277940059	319076030747	150
3194410000	3194410106	3194410822	319277940059	319076030747	150
3197400000	3197400714	3197400850	319947150194	319869336556	150
3197400000	3197400714	3197400850	319947150194	319869336556	150
3216400000	3216400809	3216400029	321853806470	321320848682	150
3216400000	3216400809	3216400029	321853806470	321320848682	150
3166400000	3166400587	3166400533	316102091966	316067521300	150
3166400000	3166400587	3166400533	316102091966	316067521300	150
3131500000	3131500066	3131500208	313057164705	313506728752	150

3131500000	3131500066	3131500208	313057164705	313506728752	150
3138400000	3138400337	3138400244	313925759421	313333413581	150
3138400000	3138400337	3138400244	313925759421	313333413581	150
3154400000	3154400719	3154400412	315501480576	315904855635	150
3154400000	3154400719	3154400412	315501480576	315904855635	150
3148400000	3148400401	3148400343	314474158411	314707574147	150
3148400000	3148400401	3148400343	314474158411	314707574147	150
3127400000	3127400068	3127400159	312891212239	312567148617	150
3127400000	3127400068	3127400159	312891212239	312567148617	150
3316400000	3316400822	3316400039	331187997113	331279349403	150
3316400000	3316400822	3316400039	331187997113	331279349403	150
3317400000	3317400183	3317400081	331633207660	331167270976	150
3317400000	3317400183	3317400081	331633207660	331167270976	150
3350500000	3350500951	3350500435	335146777260	335847626908	150
3350500000	3350500951	3350500435	335146777260	335847626908	150
3307400000	3307400031	3307400981	330862066649	330139200680	150
3307400000	3307400031	3307400981	330862066649	330139200680	150
3326400000	3326400986	3326400138	332814917611	332634384221	150
3326400000	3326400986	3326400138	332814917611	332634384221	150
3354700000	3354700463	3354700458	335483606338	335972976719	150
3354700000	3354700463	3354700458	335483606338	335972976719	150
3336400000	3336400092	3336400236	333792757837	333296396369	150
3336400000	3336400092	3336400236	333792757837	333296396369	150
3329400000	3329400487	3329400149	332786360713	332845842326	150
3329400000	3329400487	3329400149	332786360713	332845842326	150
3300500000	3300500462	3300500942	330046658499	330536516885	150
3300500000	3300500462	3300500942	330046658499	330536516885	150
3282400000	3282400942	3282400743	328091148955	328955071965	150
3282400000	3282400942	3282400743	328091148955	328955071965	150
3292400000	3292400260	3292400843	329054603499	329413295397	150
3292400000	3292400260	3292400843	329054603499	329413295397	150
3287410000	3287410687	3287410744	328356725031	328185811810	150
3287410000	3287410687	3287410744	328356725031	328185811810	150
3287700000	3287700539	3287700720	328486428014	328072871219	150
3287700000	3287700539	3287700720	328486428014	328072871219	150
3238400000	3238400355	3238400254	323511228098	323182295851	150
3238400000	3238400355	3238400254	323511228098	323182295851	150
3254700000	3254700444	3254700448	325767270964	325829336797	150
3254700000	3254700444	3254700448	325767270964	325829336797	150
3231500000	3231500084	3231500218	323447929049	323177257750	150
3231500000	3231500084	3231500218	323447929049	323177257750	150
3293400000	3293400237	3293400830	329654935861	329553902885	150
3293400000	3293400237	3293400830	329654935861	329553902885	150
3293500000	3293500212	3293500786	329404443954	329579215307	150
3293500000	3293500212	3293500786	329404443954	329579215307	150
3234500000	3234500566	3234500168	323372608550	323346714487	150
3234500000	3234500566	3234500168	323372608550	323346714487	150

3458610000	3458610358	3458610412	345597445551	345822512181	150
3458610000	3458610358	3458610412	345597445551	345822512181	150
3468400000	3468400719	3468400566	346521598520	346668832053	150
3468400000	3468400719	3468400566	346521598520	346668832053	150
3405400000	3405400344	3405400938	340182651832	340024537228	150
3405400000	3405400344	3405400938	340182651832	340024537228	150
3382500000	3382500713	3382500715	338708045790	338449755425	150
3382500000	3382500713	3382500715	338708045790	338449755425	150
3383400000	3383400087	3383400743	338093289718	338466508336	150
3383400000	3383400087	3383400743	338093289718	338466508336	150
3387510000	3387510489	3387510811	338927044802	338986448098	150
3387510000	3387510489	3387510811	338927044802	338986448098	150
3410500000	3410500659	3410500051	341941680711	341729685336	150
3410500000	3410500659	3410500051	341941680711	341729685336	150
3580500000	3580500510	3580500751	358039418273	358287775575	150
3580500000	3580500510	3580500751	358039418273	358287775575	150
3584400000	3584400273	3584400749	358097437090	358039513410	150
3584400000	3584400273	3584400749	358097437090	358039513410	150
3574500000	3574500426	3574500584	357593594176	357515238463	150
3574500000	3574500426	3574500584	357593594176	357515238463	150
3565400000	3565400233	3565400562	356540974916	356868202517	150
3565400000	3565400233	3565400562	356540974916	356868202517	150
3538400000	3538400406	3538400284	353357276377	353680713406	150
3538400000	3538400406	3538400284	353357276377	353680713406	150
3522400000	3522400000	3522400180	352523224668	352170002337	150
3522400000	3522400000	3522400180	352523224668	352170002337	150
3508410000	3508410895	3508410974	350667183887	350713201664	150
3508410000	3508410895	3508410974	350667183887	350713201664	150
3525500000	3525500876	3525500098	352524014413	352923458497	150
3525500000	3525500876	3525500098	352524014413	352923458497	150
3545400000	3545400965	3545400363	354239725225	354864319553	150
3545400000	3545400965	3545400363	354239725225	354864319553	150
3504400000	3504400613	3504400957	350003101967	350215529877	150
3504400000	3504400613	3504400957	350003101967	350215529877	150
3713400000	3713400133	3713400092	371249332351	371113723373	150
3713400000	3713400133	3713400092	371249332351	371113723373	150
3725400000	3725400701	3725400177	372453355170	372584764157	150
3725400000	3725400701	3725400177	372453355170	372584764157	150
3725710000	3725710617	3725710109	372129729935	372234423160	150
3725710000	3725710617	3725710109	372129729935	372234423160	150
3684500000	3684500039	3684500692	368903728413	368210179721	150
3684500000	3684500039	3684500692	368903728413	368210179721	150
3704400000	3704400644	3704400977	370997563356	370628707321	150
3704400000	3704400644	3704400977	370997563356	370628707321	150
3714400000	3714400718	3714400077	371393413214	371394985221	150
3714400000	3714400718	3714400077	371393413214	371394985221	150
3671500000	3671500567	3671500654	367884462897	367908265809	150

3671500000	3671500567	3671500654	367884462897	367908265809	150
3618400000	3618400115	3618400096	361361272286	361588621137	150
3618400000	3618400115	3618400096	361361272286	361588621137	150
3653400000	3653400892	3653400475	365923243592	365788992904	150
3653400000	3653400892	3653400475	365923243592	365788992904	150
3613400000	3613400119	3613400082	361691678110	361357663358	150
3613400000	3613400119	3613400082	361691678110	361357663358	150
3802400000	3802400890	3802400012	380612015020	380509757764	150
3802400000	3802400890	3802400012	380612015020	380509757764	150
3846400000	3846400369	3846400393	384821916615	384160320071	150
3846400000	3846400369	3846400393	384821916615	384160320071	150
3854500000	3854500933	3854500421	385716364874	385252574434	150
3854500000	3854500933	3854500421	385716364874	385252574434	150
3792500000	3792500960	3792500852	379267897781	379810758192	150
3792500000	3792500960	3792500852	379267897781	379810758192	150
3740500000	3740500941	3740500375	374886360378	374697332565	150
3740500000	3740500941	3740500375	374886360378	374697332565	150
3794400000	3794400337	3794400869	379758465938	379243547151	150
3794400000	3794400337	3794400869	379758465938	379243547151	150
3950500000	3950500095	3950500494	395068944675	395967125094	150
3950500000	3950500095	3950500494	395068944675	395967125094	150
3935400000	3935400856	3935400301	393992601147	393616558503	150
3935400000	3935400856	3935400301	393992601147	393616558503	150
3959400000	3959400068	3959400503	395174153992	395126156435	150
3959400000	3959400068	3959400503	395174153992	395126156435	150
3984500000	3984500086	3984500722	398940027958	398517389451	150
3984500000	3984500086	3984500722	398940027958	398517389451	150
3982400000	3982400053	3982400813	398125693725	398500680782	150
3982400000	3982400053	3982400813	398125693725	398500680782	150
3955700000	3955700742	3955700506	395434411153	395262056996	150
3955700000	3955700742	3955700506	395434411153	395262056996	150
3926400000	3926400026	3926400197	392209602437	392664329250	150
3926400000	3926400026	3926400197	392209602437	392664329250	150
3938400000	3938400471	3938400323	393905929017	393216120042	150
3938400000	3938400471	3938400323	393905929017	393216120042	150
3904500000	3904500960	3904500947	390490158663	390963931487	150
3904500000	3904500960	3904500947	390490158663	390963931487	150
3897700000	3897700785	3897700879	389227571573	389535510101	150
3897700000	3897700785	3897700879	389227571573	389535510101	150
3884500000	3884500072	3884500712	388929939463	388508396005	150
3884500000	3884500072	3884500712	388929939463	388508396005	150
3901500000	3901500763	3901500989	390707153018	390807638164	150
3901500000	3901500763	3901500989	390707153018	390807638164	150
3891500000	3891500999	3891500865	389422942567	389480016783	150
3891500000	3891500999	3891500865	389422942567	389480016783	150
3894500000	3894500462	3894500811	389449697762	389415179940	150
3894500000	3894500462	3894500811	389449697762	389415179940	150

4083500000	4083500859	4083500668	408672201440	408213178218	150
4083500000	4083500859	4083500668	408672201440	408213178218	150
4042400000	4042400130	4042400326	404457164425	404625992260	150
4042400000	4042400130	4042400326	404457164425	404625992260	150
4047400000	4047400227	4047400346	404048469531	404648779220	150
4047400000	4047400227	4047400346	404048469531	404648779220	150
4093400000	4093400207	4093400812	409385890660	409657860389	150
4093400000	4093400207	4093400812	409385890660	409657860389	150
4069400000	4069400085	4069400514	406225794593	406618654826	150
4069400000	4069400085	4069400514	406225794593	406618654826	150
4094310000	4094310530	4094310762	409768700514	409776467453	150
4094310000	4094310530	4094310762	409768700514	409776467453	150
4054700000	4054700405	4054700429	405003886804	405087401453	150
3987410000	3987410640	3987410813	398441580712	398913851843	150
3987410000	3987410640	3987410813	398441580712	398913851843	150
4210500000	4210500625	4210500032	421943758082	421842244364	150
4210500000	4210500625	4210500032	421943758082	421842244364	150
4165400000	4165400172	4165400523	416693946212	416981574456	150
4165400000	4165400172	4165400523	416693946212	416981574456	150
4164400000	4164400879	4164400512	416681830320	416526879917	150
4164400000	4164400879	4164400512	416681830320	416526879917	150
4198400000	4198400119	4198400835	419062386924	419525249328	150
4198400000	4198400119	4198400835	419062386924	419525249328	150
4209510000	4209510206	4209510995	420994930109	420403926538	150
4209510000	4209510206	4209510995	420994930109	420403926538	150
4219400000	4219400315	4219400042	421357925465	421899437299	150
4219400000	4219400315	4219400042	421357925465	421899437299	150
4173500000	4173500706	4173500581	417298136291	417285072874	150
4173500000	4173500706	4173500581	417298136291	417285072874	150
4103400000	4103400410	4103400934	410786973436	410161253493	150
4103400000	4103400410	4103400934	410786973436	410161253493	150
4322400000	4322400969	4322400161	432167169091	432589256706	150
4322400000	4322400969	4322400161	432167169091	432589256706	150
4136400000	4136400059	4136400218	413499615776	413583748294	150
4136400000	4136400059	4136400218	413499615776	413583748294	150
4123400000	4123400202	3123400131	412782476377	412804307227	150
4123400000	4123400202	3123400131	412782476377	412804307227	150
4152410000	4152410191	4152410437	415568877601	415078548178	150
4152410000	4152410191	4152410437	415568877601	415078548178	150
4124610000	4124610945	4124610137	412299592427	412656772574	150
4124610000	4124610945	4124610137	412299592427	412656772574	150
4156400000	4156400423	4156400427	415035195216	415532342393	150
4156400000	4156400423	4156400427	415035195216	415532342393	150
4309400000	4309400236	4309400953	430983353530	430003066925	150
4309400000	4309400236	4309400953	430983353530	430003066925	150
4312400000	4312400975	3312400062	431448057559	431964788507	150
4312400000	4312400975	3312400062	431448057559	431964788507	150

4294800000	4294800739	4294800869	429397142643	429434204630	150
4294800000	4294800739	4294800869	429397142643	429434204630	150
4344400000	4344400002	4344400334	434676153795	434969791049	150
4344400000	4344400002	4344400334	434676153795	434969791049	150
4301500000	4301500761	4301500930	430832590307	430237127797	150
4301500000	4301500761	4301500930	430832590307	430237127797	150
4323700000	4323700424	4323700178	432283684856	432795330025	150
4323700000	4323700424	4323700178	432283684856	432795330025	150
4279410000	4279410103	4279410628	427169172587	427652429222	150
4279410000	4279410103	4279410628	427169172587	427652429222	150
4257500000	4257500330	4257500368	425904894148	425956306012	150
4257500000	4257500330	4257500368	425904894148	425956306012	150
4259400000	4259400946	4259400437	425807508706	425274521314	150
4259400000	4259400946	4259400437	425807508706	425274521314	150
4261500000	4261500429	4261500515	426097521571	426905121690	150
4261500000	4261500429	4261500515	426097521571	426905121690	150
4232500000	4232500408	4232500205	423521446246	423761127004	150
4232500000	4232500408	4232500205	423521446246	423761127004	150
4255500000	4255500642	4255500367	425965837246	425394706277	150
4255500000	4255500642	4255500367	425965837246	425394706277	150
4253400000	4253400824	4253400436	425856414751	425008892045	150
4253400000	4253400824	4253400436	425856414751	425008892045	150
4426500000	4426500695	4426500103	442791718337	442482214976	150
4426500000	4426500695	4426500103	442791718337	442482214976	150
4458400000	4458400640	4458400470	445958862579	445946863680	150
4458400000	4458400640	4458400470	445958862579	445946863680	150
4444500000	4444500693	4444500285	444131304200	444661119528	150
4444500000	4444500693	4444500285	444131304200	444661119528	150
4431500000	4431500124	4431500238	443654549008	443351797841	150
4431500000	4431500124	4431500238	443654549008	443351797841	150
4440500000	4440500894	4440500346	444375495699	444182033725	150
4440500000	4440500894	4440500346	444375495699	444182033725	150
4438400000	4438400392	4438400275	443129962120	443266167150	150
4438400000	4438400392	4438400275	443129962120	443266167150	150
4457400000	4457400333	4457400485	445013912767	445531415034	150
4457400000	4457400333	4457400485	445013912767	445531415034	150
4391500000	4391500897	4391500816	439029273594	439995911709	150
4391500000	4391500897	4391500816	439029273594	439995911709	150
4564400000	4564400943	4564400552	456268679043	456980280855	150
4564400000	4564400943	4564400552	456268679043	456980280855	150
4558400000	4558400656	4558400480	455615020486	455404539732	150
4558400000	4558400656	4558400480	455615020486	455404539732	150
4567400000	4567400513	4567400595	456373941761	456630407867	150
4567400000	4567400513	4567400595	456373941761	456630407867	150
4568500000	4568500510	4568500516	456342493830	456039776216	150
4568500000	4568500510	4568500516	456342493830	456039776216	150
4577400000	4577400542	4577400694	457486879928	457738377905	150

4577400000	4577400542	4577400694	457486879928	457738377905	150
4565710000	4565710006	4565710485	456934612359	456104008250	150
4565710000	4565710006	4565710485	456934612359	456104008250	150
4543400000	4543400710	4543400367	454172312087	454476102204	150
4543400000	4543400710	4543400367	454172312087	454476102204	150
4587400000	4587400717	4587400792	458485189026	458489270144	150
4587400000	4587400717	4587400792	458485189026	458489270144	150
4484310000	4484310421	4484310702	448437673888	448730154498	150
4484310000	4484310421	4484310702	448437673888	448730154498	150
4476400000	4476400750	4476400670	447830926765	447252578084	150
4476400000	4476400750	4476400670	447830926765	447252578084	150
4469500000	4469500677	4469500528	446076387098	446443299287	150
4469500000	4469500677	4469500528	446076387098	446443299287	150
4494500000	4494500401	4494500772	449103562258	449298602113	150
4494500000	4494500401	4494500772	449103562258	449298602113	150
4473400000	4473400445	4473400654	447796956117	447328907979	150
4473400000	4473400445	4473400654	447796956117	447328907979	150
4502400000	4502400836	4502400984	450363880516	450447454077	150
4502400000	4502400836	4502400984	450363880516	450447454077	150
4683400000	4683400139	4683400773	468400080047	468644063286	150
4683400000	4683400139	4683400773	468400080047	468644063286	150
4710500000	4710500584	4710500081	471504525797	471553448788	150
4710500000	4710500584	4710500081	471504525797	471553448788	150
4715400000	4715400568	4715400073	471396384383	471117673235	150
4715400000	4715400568	4715400073	471396384383	471117673235	150
4594800000	4594800780	4594800900	459306532408	459156742550	150
4594800000	4594800780	4594800900	459306532408	459156742550	150
4600500000	4600500511	4600500973	460546359172	460308038963	150
4600500000	4600500511	4600500973	460546359172	460308038963	150
4615500000	4615500728	4615500006	461867210092	461906519092	150
4615500000	4615500728	4615500006	461867210092	461906519092	150
4634400000	4634400892	4634400266	463383821436	463445611190	150
4634400000	4634400892	4634400266	463383821436	463445611190	150
4609400000	4609400282	4609400982	460878330306	460895876904	150
4609400000	4609400282	4609400982	460878330306	460895876904	150
4595400000	4595400584	4595400861	459738203465	459618941749	150
4595400000	4595400584	4595400861	459738203465	459618941749	150
4607400000	4607400082	4607400012	460582105640	460128959162	150
4607400000	4607400082	4607400012	460582105640	460128959162	150
4807400000	4807400113	4807400032	480698776171	480446840338	150
4807400000	4807400113	4807400032	480698776171	480446840338	150
4815400000	4815400587	4815400085	481338686795	481282342653	150
4815400000	4815400587	4815400085	481338686795	481282342653	150
4817400000	4817400028	4817400130	481886367291	481356259191	150
4817400000	4817400028	4817400130	481886367291	481356259191	150
4834500000	4834500676	4834500227	483424970390	483665231964	150
4834500000	4834500676	4834500227	483424970390	483665231964	150

4829400000	4829400615	4829400200	482536192395	482720029660	150
4829400000	4829400615	4829400200	482536192395	482720029660	150
4784800000	4784800666	4784800820	478885026851	478408433183	150
4784800000	4784800666	4784800820	478885026851	478408433183	150
4767400000	4767400547	4767400615	476547987223	476222385595	150
4767400000	4767400547	4767400615	476547987223	476222385595	150
4719400000	4719400392	4719400092	471065840742	471029195116	150
4719400000	4719400392	4719400092	471065840742	471029195116	150
4720500000	4720500741	4720500179	472339708508	472786694727	150
4720500000	4720500741	4720500179	472339708508	472786694727	150
4744500000	4744500744	4744500314	474663154022	474285468059	150
4744500000	4744500744	4744500314	474663154022	474285468059	150
4923500000	4923500223	4923500168	492576670468	492489566157	150
4923500000	4923500223	4923500168	492576670468	492489566157	150
4929400000	4929400634	4929400209	492579331704	492025780425	150
4929400000	4929400634	4929400209	492579331704	492025780425	150
4939400000	4939400803	4939400308	493475445654	493962260454	150
4939400000	4939400803	4939400308	493475445654	493962260454	150
4915500000	4915500777	4915500039	491520642666	491733644845	150
4915500000	4915500777	4915500039	491520642666	491733644845	150
4908400000	4908400002	4908400027	490904169432	490593373197	150
4908400000	4908400002	4908400027	490904169432	490593373197	150
4934400000	4934400937	4934400294	493183324228	493653422996	150
4934400000	4934400937	4934400294	493183324228	493653422996	150
4957400000	4957400421	4957400535	495830804175	495466347211	150
4957400000	4957400421	4957400535	495830804175	495466347211	150
4922400000	4922400072	4922400221	492613594141	492229014053	150
4922400000	4922400072	4922400221	492613594141	492229014053	150
4904400000	4904400678	4904400998	490421186360	490498399857	150
4904400000	4904400678	4904400998	490421186360	490498399857	150
4882600000	4882600823	4882600758	488376779113	488431378796	150
4882600000	4882600823	4882600758	488376779113	488431378796	150
4902400000	4902400909	4902400023	490950921071	490851617381	150
4902400000	4902400909	4902400023	490950921071	490851617381	150
4845400000	4845400017	4845400394	484439252682	484583530120	150
4845400000	4845400017	4845400394	484439252682	484583530120	150
4903400000	4903400010	4903400013	490463985820	490291163396	150
4903400000	4903400010	4903400013	490463985820	490291163396	150
4844400000	4844400092	4844400384	484533651108	484904488332	150
4844400000	4844400092	4844400384	484533651108	484904488332	150
4852400000	4852400037	4852400505	485756000224	485695757070	150
4852400000	4852400037	4852400505	485756000224	485695757070	150
4873400000	4873400503	4873400694	487188389772	487264236196	150
4873400000	4873400503	4873400694	487188389772	487264236196	150
5059400000	5059400912	5059400419	505874150911	505991470329	150
5059400000	5059400912	5059400419	505874150911	505991470329	150
5062400000	5062400075	5062400526	506638369227	506584341277	150

5062400000	5062400075	5062400526	506638369227	506584341277	150
5025400000	5025400626	5025400105	502819173345	502284943686	150
5025400000	5025400626	5025400105	502819173345	502284943686	150
5043500000	5043500635	5043500277	504707997315	504875519104	150
5043500000	5043500635	5043500277	504707997315	504875519104	150
5008700000	5008700825	5008700901	500651835996	500182621787	150
5008700000	5008700825	5008700901	500651835996	500182621787	150
4989400000	4989400388	4989400802	498642813538	498978372781	150
4989400000	4989400388	4989400802	498642813538	498978372781	150
5014500000	5014500982	5014500959	501944790751	501598135386	150
5014500000	5014500982	5014500959	501944790751	501598135386	150
4971500000	4971500627	4971500684	497610534664	497584350986	150
4971500000	4971500627	4971500684	497610534664	497584350986	150
4964400000	4964400027	4964400591	496000355397	496775607744	150
4964400000	4964400027	4964400591	496000355397	496775607744	150
5194310000	5194310551	5194310773	519449921250	519683849206	150
5194310000	5194310551	5194310773	519449921250	519683849206	150
5194500000	5194500124	5194500744	519490404795	519748216785	150
5194500000	5194500124	5194500744	519490404795	519748216785	150
5182400000	5182400927	5182400735	518489863346	518812292445	150
5182400000	5182400927	5182400735	518489863346	518812292445	150
5197410000	5197410680	5197410836	519909391058	519567679447	150
5197410000	5197410680	5197410836	519909391058	519567679447	150
5157400000	5157400283	5157400456	515620784219	515108447218	150
5157400000	5157400283	5157400456	515620784219	515108447218	150
5205310000	5205310848	5205310883	520961577989	520643423793	150
5205310000	5205310848	5205310883	520961577989	520643423793	150
5160500000	5160500129	5160500516	516112441599	516717250049	150
5160500000	5160500129	5160500516	516112441599	516717250049	150
5193600000	5193600900	5193600783	519998454738	519175994945	150
5193600000	5193600900	5193600783	519998454738	519175994945	150
5152210000	5152210500	5152210486	515023643693	515186851242	150
5152210000	5152210500	5152210486	515023643693	515186851242	150
5133400000	5133400563	5133400231	513278329272	513750816090	150
5133400000	5133400563	5133400231	513278329272	513750816090	150
5136610000	5136610472	5136610214	513353418136	513644992550	150
5136610000	5136610472	5136610214	513353418136	513644992550	150
5147400000	5147400246	5147400356	514783576451	514880767129	150
5147400000	5147400246	5147400356	514783576451	514880767129	150
5094800000	5094800709	5094800851	509672053296	509844709541	150
5094800000	5094800709	5094800851	509672053296	509844709541	150
5102500000	5102500065	5102500897	510335225680	510702559379	150
5102500000	5102500065	5102500897	510335225680	510702559379	150
5122400000	5122400933	5122400142	512944395825	512568759820	150
5122400000	5122400933	5122400142	512944395825	512568759820	150
5314500000	5314500038	5314500988	531660351254	531468506727	150
5314500000	5314500038	5314500988	531660351254	531468506727	150

5325500000	5325500846	5325500080	532864376032	532275651727	150
5325500000	5325500846	5325500080	532864376032	532275651727	150
5287510000	5287510476	5287510803	528491875304	528742445501	150
5287510000	5287510476	5287510803	528491875304	528742445501	150
5273500000	5273500726	5273500592	527596545950	527846365528	150
5273500000	5273500726	5273500592	527596545950	527846365528	150
5305400000	5305400329	5305400930	530816999709	530001934100	150
5305400000	5305400329	5305400930	530816999709	530001934100	150
5211500000	5211500822	5211500021	521937552472	521310401231	150
5211500000	5211500822	5211500021	521937552472	521310401231	150
5419400000	5419400346	5419400063	541204248850	541629865455	150
5419400000	5419400346	5419400063	541204248850	541629865455	150
5436610000	5436610518	5436610242	543692459703	543004943110	150
5436610000	5436610518	5436610242	543692459703	543004943110	150
5407400000	5407400050	5407400994	540995684708	540063189147	150
5407400000	5407400050	5407400994	540995684708	540063189147	150
5406400000	5406400735	5406400951	540285698581	540697511557	150
5406400000	5406400735	5406400951	540285698581	540697511557	150
5413400000	5413400090	5413400064	541818236297	541420439992	150
5413400000	5413400090	5413400064	541818236297	541420439992	150
5426400000	5426400003	5426400150	542278595786	542903196682	150
5426400000	5426400003	5426400150	542278595786	542903196682	150
5457500000	5457500367	5457500389	545622367102	545710562752	150
5457500000	5457500367	5457500389	545622367102	545710562752	150
5339400000	5339400702	5339400250	533507127111	533972828575	150
5339400000	5339400702	5339400250	533507127111	533972828575	150
5348400000	5348400442	5348400365	534868900713	534475243715	150
5348400000	5348400442	5348400365	534868900713	534475243715	150
5351500000	5351500393	5351500426	535176639806	535500247353	150
5351500000	5351500393	5351500426	535176639806	535500247353	150
5354500000	5354500853	5354500373	535256109532	535351541296	150
5354500000	5354500853	5354500373	535256109532	535351541296	150
5334400000	5334400844	5334400237	533226476617	533106943600	150
5334400000	5334400844	5334400237	533226476617	533106943600	150
5392600000	5392600828	5392600809	539996610216	539287274476	150
5392600000	5392600828	5392600809	539996610216	539287274476	150
5573400000	5573400459	5573400665	557640744458	557211378841	150
5573400000	5573400459	5573400665	557640744458	557211378841	150
5573500000	5573500778	5573500621	557746970756	557484485152	150
5573500000	5573500778	5573500621	557746970756	557484485152	150
5544400000	5544400041	5544400355	554610031642	554240881775	150
5544400000	5544400041	5544400355	554610031642	554240881775	150
5574400000	5574400124	5574400652	557315609590	557956858447	150
5574400000	5574400124	5574400652	557315609590	557956858447	150
5546400000	5546400323	5546400364	554884281386	554249074458	150
5546400000	5546400323	5546400364	554884281386	554249074458	150
5568400000	5568400741	5568400578	556548633647	556909841418	150

5568400000	5568400741	5568400578	556548633647	556909841418	150
5534400000	5534400876	5534400257	553905482532	553515949215	150
5534400000	5534400876	5534400257	553905482532	553515949215	150
5556400000	5556400492	5556400471	555343807940	555327456486	150
5556400000	5556400492	5556400471	555343807940	555327456486	150
5523700000	5523700461	5523700198	552801399465	552196250608	150
5572400000	5572400828	5572400677	557767626637	557190403882	150
5572400000	5572400828	5572400677	557767626637	557190403882	150
5505500000	5505500572	5505500884	550588714886	550842238779	150
5505500000	5505500572	5505500884	550588714886	550842238779	150
5512500000	5512500219	5512500034	551568880436	551619235408	150
5512500000	5512500219	5512500034	551568880436	551619235408	150
5471500000	5471500654	5471500636	547089675792	547999460133	150
5471500000	5471500654	5471500636	547089675792	547999460133	150
5474400000	5474400108	5474400642	547006837942	547089800899	150
5474400000	5474400108	5474400642	547006837942	547089800899	150
5492600000	5492600847	5492600819	549085458826	549164511190	150
5492600000	5492600847	5492600819	549085458826	549164511190	150
5519400000	5519400360	5519400073	551469752606	551079018354	150
5519400000	5519400360	5519400073	551469752606	551079018354	150
5504500000	5504500457	5504500912	550397240829	550709236338	150
5504500000	5504500457	5504500912	550397240829	550709236338	150
5693500000	5693500290	5693500827	569666939374	569485160356	150
5693500000	5693500290	5693500827	569666939374	569485160356	150
5684800000	5684800654	5684800811	568188153703	568780055282	150
5684800000	5684800654	5684800811	568188153703	568780055282	150
5627400000	5627400148	5627400209	562728368965	562166363227	150
5627400000	5627400148	5627400209	562728368965	562166363227	150
5588400000	5588400011	5588400776	558860028427	558338940094	150
5588400000	5588400011	5588400776	558860028427	558338940094	150
5615400000	5615400551	5615400064	561334843646	561319225236	150
5615400000	5615400551	5615400064	561334843646	561319225236	150
5631500000	5631500166	5631500259	563553230526	563213573657	150
5631500000	5631500166	5631500259	563553230526	563213573657	150
5644500000	5644500733	5644500305	564471748773	564036420765	150
5644500000	5644500733	5644500305	564471748773	564036420765	150
5644700000	5644700329	5644700393	564129489613	564884996270	150
5644700000	5644700329	5644700393	564129489613	564884996270	150
5626400000	5626400032	5626400169	562713489993	562902911387	150
5626400000	5626400032	5626400169	562713489993	562902911387	150
5635410000	5635410471	5635410277	563444628445	563456619109	150
5635410000	5635410471	5635410277	563444628445	563456619109	150
5799400000	5799400514	5799400884	579557580684	579827490035	150
5799400000	5799400514	5799400884	579557580684	579827490035	150
5784600000	5784600674	5784600737	578596339821	578059215135	150
5784600000	5784600674	5784600737	578596339821	578059215135	150
5813400000	5813400153	5813400104	581653638208	581032794312	150

5813400000	5813400153	5813400104	581653638208	581032794312	150
5794500000	5794500450	5794500803	579298249005	579857005059	150
5794500000	5794500450	5794500803	579298249005	579857005059	150
5784400000	5784400174	5784400771	578947358773	578629451075	150
5784400000	5784400174	5784400771	578947358773	578629451075	150
5784500000	5784500059	5784500704	578338022526	578564260641	150
5784500000	5784500059	5784500704	578338022526	578564260641	150
5736400000	5736400160	5736400280	573653029937	573815712822	150
5736400000	5736400160	5736400280	573653029937	573815712822	150
5725500000	5725500914	5725500120	572790780296	572252313674	150
5725500000	5725500914	5725500120	572790780296	572252313674	150
5728400000	5728400267	5728400206	572734186143	572262568934	150
5728400000	5728400267	5728400206	572734186143	572262568934	150
5751500000	5751500471	5751500467	575822920560	575626725309	150
5751500000	5751500471	5751500467	575822920560	575626725309	150
5761500000	5761500523	5761500566	576900501894	576506720571	150
5761500000	5761500523	5761500566	576900501894	576506720571	150
5932400000	5932400115	5932400317	593438672846	593719869029	150
5932400000	5932400115	5932400317	593438672846	593719869029	150
5894800000	5894800827	5894800934	589809546867	589619975755	150
5894800000	5894800827	5894800934	589809546867	589619975755	150
5897410000	5897410786	5897410905	589159523279	589792764295	150
5897410000	5897410786	5897410905	589159523279	589792764295	150
5856400000	5856400539	5856400503	585013376988	585405039014	150
5856400000	5856400539	5856400503	585013376988	585405039014	150
5884400000	5884400187	5884400781	588301017671	588441976991	150
5884400000	5884400187	5884400781	588301017671	588441976991	150
5837400000	5837400199	5837400327	583729450442	583305208394	150
5837400000	5837400199	5837400327	583729450442	583305208394	150
5857500000	5857500428	5857500430	585402650485	585421068653	150
5857500000	5857500428	5857500430	585402650485	585421068653	150
5848400000	5848400532	5848400413	584622414016	584890191506	150
5848400000	5848400532	5848400413	584622414016	584890191506	150
6040500000	6040500832	6040500308	604203166948	604439001978	150
6040500000	6040500832	6040500308	604203166948	604439001978	150
6026400000	6026400942	6026400111	602356279094	602210222837	150
6026400000	6026400942	6026400111	602356279094	602210222837	150
6024500000	6024500166	6024500054	602787796135	602029452943	150
6024500000	6024500166	6024500054	602787796135	602029452943	150
6034400000	6034400920	6034400208	603005449852	603938413802	150
6034400000	6034400920	6034400208	603005449852	603938413802	150
6017400000	6017400143	6017400054	601646185513	601026838878	150
6017400000	6017400143	6017400054	601646185513	601026838878	150
5995400000	5995400653	5995400901	599220071570	599006446307	150
5995400000	5995400653	5995400901	599220071570	599006446307	150
5999400000	5999400402	5999400904	599889381763	599335669719	150
5999400000	5999400402	5999400904	599889381763	599335669719	150

5954400000	5954400847	5954400493	595272859451	595770764642	150
5954400000	5954400847	5954400493	595272859451	595770764642	150
5994400000	5994400372	5994400891	599218389546	599595235581	150
5994400000	5994400372	5994400891	599218389546	599595235581	150
6010500000	6010500593	6010500014	601246752527	601093570503	150
6010500000	6010500593	6010500014	601246752527	601093570503	150
6149400000	6149400833	6149400330	614398608083	614993040509	150
6149400000	6149400833	6149400330	614398608083	614993040509	150
6183400000	6183400056	6183400726	618747795999	618873720121	150
6183400000	6183400056	6183400726	618747795999	618873720121	150
6159400000	6159400932	6159400430	615066290141	615751916373	150
6159400000	6159400932	6159400430	615066290141	615751916373	150
6143500000	6143500656	6143500288	614320570249	614514326714	150
6143500000	6143500656	6143500288	614320570249	614514326714	150
6192600000	6192600785	6192600790	619326646941	619132704790	150
6192600000	6192600785	6192600790	619326646941	619132704790	150
6168400000	6168400655	6168400540	616825907940	616912621826	150
6168400000	6168400655	6168400540	616825907940	616912621826	150
6162500000	6162500650	6162500497	616488197215	616410025409	150
6162500000	6162500650	6162500497	616488197215	616410025409	150
6169400000	6169400103	6169400526	616474505985	616364335308	150
6169400000	6169400103	6169400526	616474505985	616364335308	150
6169500000	6169500633	6169500500	616685140625	616461506421	150
6179400000	6179400188	6179400625	617697841611	617713486643	150
6179400000	6179400188	6179400625	617697841611	617713486643	150
6142500000	6142500580	6142500298	614402981523	614354070390	150
6142500000	6142500580	6142500298	614402981523	614354070390	150
6111500000	6111500805	6111500012	611753701359	611801090931	150
6111500000	6111500805	6111500012	611753701359	611801090931	150
6128400000	6128400207	6128400149	612634716828	612916284204	150
6128400000	6128400207	6128400149	612634716828	612916284204	150
6114400000	6114400714	6114400020	611622014431	611318264804	150
6114400000	6114400714	6114400020	611622014431	611318264804	150
6075400000	6075400321	6075400615	607395062623	607702186772	150
6075400000	6075400321	6075400615	607395062623	607702186772	150
6119400000	6119400301	6119400034	611293290222	611303227955	150
6119400000	6119400301	6119400034	611293290222	611303227955	150
6092600000	6092600865	6092600780	609731519556	609598220432	150
6092600000	6092600865	6092600780	609731519556	609598220432	150
6304400000	6304400589	6304400940	630327970152	630261529044	150
6304400000	6304400589	6304400940	630327970152	630261529044	150
6320500000	6320500680	6320500142	632564359084	632593717543	150
6320500000	6320500680	6320500142	632564359084	632593717543	150
6314400000	6314400750	6314400040	631288715650	631021351171	150
6314400000	6314400750	6314400040	631288715650	631021351171	150
6314500000	6314500040	6314500989	631961689508	631256741950	150
6314500000	6314500040	6314500989	631961689508	631256741950	150

6296400000	6296400964	6296400864	629256397137	629564524098	150
6296400000	6296400964	6296400864	629256397137	629564524098	150
6291500000	6291500998	6291500808	629838541070	629478714435	150
6291500000	6291500998	6291500808	629838541070	629478714435	150
6245400000	6245400916	6245400336	624558664760	624608410550	150
6245400000	6245400916	6245400336	624558664760	624608410550	150
6256400000	6256400443	6256400440	625540752567	625432226878	150
6256400000	6256400443	6256400440	625540752567	625432226878	150
6208410000	6208410854	6208410947	620063951579	620331649383	150
6208410000	6208410854	6208410947	620063951579	620331649383	150
6204500000	6204500406	6204500886	620045215820	620482417805	150
6204500000	6204500406	6204500886	620045215820	620482417805	150
6244500000	6244500659	6244500268	624964158269	624448457964	150
6244500000	6244500659	6244500268	624964158269	624448457964	150
6227400000	6227400089	6227400172	622856012046	622370605616	150
6227400000	6227400089	6227400172	622856012046	622370605616	150
6423610000	6423610043	6423610176	642512361321	642410608456	150
6423610000	6423610043	6423610176	642512361321	642410608456	150
6425500000	6425500865	6425500091	642800927232	642283729270	150
6425500000	6425500865	6425500091	642800927232	642283729270	150
6392400000	6392400284	6392400856	639146612356	639724497426	150
6392400000	6392400284	6392400856	639146612356	639724497426	150
6387410000	6387410708	6387410757	638573415895	638919203327	150
6387410000	6387410708	6387410757	638573415895	638919203327	150
6330500000	6330500835	6330500241	633555698089	633275301016	150
6330500000	6330500835	6330500241	633555698089	633275301016	150
6349610000	6349610303	6349610295	634848209912	634636642673	150
6349610000	6349610303	6349610295	634848209912	634636642673	150
6373500000	6373500746	6373500603	637647028378	637749634936	150
6373500000	6373500746	6373500603	637647028378	637749634936	150
6554500000	6554500887	6554500394	655082845966	655085101738	150
6554500000	6554500887	6554500394	655082845966	655085101738	150
6548400000	6548400482	6548400384	654025869141	654414363185	150
6548400000	6548400482	6548400384	654025869141	654414363185	150
6557400000	6557400352	6557400497	655497645883	655598332463	150
6557400000	6557400352	6557400497	655497645883	655598332463	150
6558610000	6558610377	6558610425	655525900881	655329920951	150
6558610000	6558610377	6558610425	655525900881	655329920951	150
6484800000	6484800773	6484800793	648146555594	648748960064	150
6484800000	6484800773	6484800793	648146555594	648748960064	150
6563400000	6563400306	6563400566	656985704998	656801573223	150
6563400000	6563400306	6563400566	656985704998	656801573223	150
6456710000	6456710830	6456710398	645859977349	645429192308	150
6456710000	6456710830	6456710398	645859977349	645429192308	150
6481500000	6481500726	6481500735	648730960515	648326357519	150
6481500000	6481500726	6481500735	648730960515	648326357519	150
6486510000	6486510400	6486510824	648815316174	648388725459	150

6486510000	6486510400	6486510824	648815316174	648388725459	150
6445400000	6445400953	6445400356	644256230723	644696014911	150
6445400000	6445400953	6445400356	644256230723	644696014911	150
6487400000	6487400702	6487400784	648817069746	648883580450	150
6487400000	6487400702	6487400784	648817069746	648883580450	150
6449610000	6449610319	6449610305	644276611081	644339513955	150
6449610000	6449610319	6449610305	644276611081	644339513955	150
6649610000	6649610354	6649610325	664854340557	664223317045	150
6649610000	6649610354	6649610325	664854340557	664223317045	150
6666400000	6666400612	6666400590	666556775781	666990305623	150
6666400000	6666400612	6666400590	666556775781	666990305623	150
6682400000	6682400010	6682400786	668731136507	668949183121	150
6682400000	6682400010	6682400786	668731136507	668949183121	150
6684400000	6684400158	6684400762	668786591545	668115333075	150
6684400000	6684400158	6684400762	668786591545	668115333075	150
6678400000	6678400848	6678400689	667057288724	667805500496	150
6678400000	6678400848	6678400689	667057288724	667805500496	150
6629400000	6629400536	6629400182	662087432589	662815706427	150
6629400000	6629400536	6629400182	662087432589	662815706427	150
6632400000	6632400195	6632400292	663625130196	663559695278	150
6632400000	6632400195	6632400292	663625130196	663559695278	150
6648400000	6648400499	6648400394	664605930517	664074500502	150
6648400000	6648400499	6648400394	664605930517	664074500502	150
6654400000	6654400801	6654400465	665437818681	665772116343	150
6654400000	6654400801	6654400465	665437818681	665772116343	150
6689400000	6689400344	6689400774	668367177137	668169371010	150
6689400000	6689400344	6689400774	668367177137	668169371010	150
6584500000	6584500027	6584500685	658632060801	658046578366	150
6584500000	6584500027	6584500685	658632060801	658046578366	150
6614400000	6614400706	6614400070	661514806499	661321857333	150
6614400000	6614400706	6614400070	661514806499	661321857333	150
6614500000	6614500093	6614500016	661262661246	661016993604	150
6614500000	6614500093	6614500016	661262661246	661016993604	150
6601500000	6601500721	6601500962	660678409351	660718744491	150
6601500000	6601500721	6601500962	660678409351	660718744491	150
6612500000	6612500240	6612500045	661970015760	661703072022	150
6612500000	6612500240	6612500045	661970015760	661703072022	150
6793500000	6793500311	6793500838	679369418047	679380017066	150
6793500000	6793500311	6793500838	679369418047	679380017066	150
6805500000	6805500621	6805500915	680294660235	680930564310	150
6805500000	6805500621	6805500915	680294660235	680930564310	150
6754400000	6754400816	6754400474	675664953091	675459345065	150
6754400000	6754400816	6754400474	675664953091	675459345065	150
6783600000	6783600822	6783600744	678861024107	678326851684	150
6783600000	6783600822	6783600744	678861024107	678326851684	150
6772500000	6772500756	6772500658	677738940917	677600714515	150
6772500000	6772500756	6772500658	677738940917	677600714515	150

6782500000	6782500792	6782500757	678651192655	678076578212	150
6782500000	6782500792	6782500757	678651192655	678076578212	150
6764500000	6764500291	6764500511	676045165122	676195008341	150
6764500000	6764500291	6764500511	676045165122	676195008341	150
6733400000	6733400659	6733400290	673174804430	673090795204	150
6733400000	6733400659	6733400290	673174804430	673090795204	150
6743400000	6743400743	6743400389	674583745895	674056087647	150
6743400000	6743400743	6743400389	674583745895	674056087647	150
6723500000	6723500190	6723500150	672888080088	672339217861	150
6723500000	6723500190	6723500150	672888080088	672339217861	150
6692400000	6692400336	6692400886	669518050670	669566858854	150
6692400000	6692400336	6692400886	669518050670	669566858854	150
6716400000	6716400896	6716400081	671537339195	671285897514	150
6716400000	6716400896	6716400081	671537339195	671285897514	150
6707400000	6707400102	6707400024	670964076894	670905230947	150
6707400000	6707400102	6707400024	670964076894	670905230947	150
6913400000	6913400171	6913400114	691853448913	691736441637	150
6913400000	6913400171	6913400114	691853448913	691736441637	150
6876400000	6876400813	6876400716	687146494234	687508239727	150
6876400000	6876400813	6876400716	687146494234	687508239727	150
6886400000	6886400905	6886400822	688878340144	688491480670	150
6886400000	6886400905	6886400822	688878340144	688491480670	150
6861500000	6861500544	6861500577	686404494736	686047935934	150
6861500000	6861500544	6861500577	686404494736	686047935934	150
6844500000	6844500765	6844500326	684723268648	684055587514	150
6844500000	6844500765	6844500326	684723268648	684055587514	150
6862400000	6862400224	6862400607	686163687480	686847943622	150
6862400000	6862400224	6862400607	686163687480	686847943622	150
6853400000	6853400935	6853400496	685788082387	685881006373	150
6853400000	6853400935	6853400496	685788082387	685881006373	150
6853500000	6853500374	6853500456	685343494034	685171394070	150
6853500000	6853500374	6853500456	685343494034	685171394070	150
7015400000	7015400455	7015400002	701253100020	701004482992	150
7015400000	7015400455	7015400002	701253100020	701004482992	150
7015500000	7015500653	7015500940	701394096517	701976280833	150
7015500000	7015500653	7015500940	701394096517	701976280833	150
7052210000	7052210487	7052210478	705455792127	705084249861	150
7052210000	7052210487	7052210478	705455792127	705084249861	150
7052500000	7052500445	7052500389	705165255767	705332788667	150
7052500000	7052500445	7052500389	705165255767	705332788667	150
7024400000	7024400767	7024400110	702382578474	702276092918	150
7024400000	7024400767	7024400110	702382578474	702276092918	150
7019400000	7019400288	7019400025	701381769586	701224227943	150
7019400000	7019400288	7019400025	701381769586	701224227943	150
7054500000	7054500802	7054500346	705825581653	705810658340	150
7054500000	7054500802	7054500346	705825581653	705810658340	150
6987400000	6987400684	6987400833	698769759843	698089345834	150

6987400000	6987400684	6987400833	698769759843	698089345834	150
6958400000	6958400599	6958400521	695548992954	695846786320	150
6958400000	6958400599	6958400521	695548992954	695846786320	150
6991400000	6991400917	6991400926	699068499453	699530447147	150
6991400000	6991400917	6991400926	699068499453	699530447147	150
7166700000	7166700023	7166700519	716220243790	716537453613	150
7167400000	7167400455	7167400558	716422186750	716264131740	150
7167400000	7167400455	7167400558	716422186750	716264131740	150
7125400000	7125400600	7125400118	712104100859	712219306230	150
7125400000	7125400600	7125400118	712104100859	712219306230	150
7162400000	7162400100	7162400538	716280597544	716036551009	150
7162400000	7162400100	7162400538	716280597544	716036551009	150
7121610000	7121610830	7121610172	712830155743	712720644761	150
7121610000	7121610830	7121610172	712830155743	712720644761	150
7123500000	7123500086	7123500092	712481010306	712479684760	150
7123500000	7123500086	7123500092	712481010306	712479684760	150
7115400000	7115400471	7115400012	711193499990	711099508838	150
7115400000	7115400471	7115400012	711193499990	711099508838	150
7115500000	7115500667	7115500952	711629367180	711446003170	150
7115500000	7115500667	7115500952	711629367180	711446003170	150
7094500000	7094500107	7094500736	709645285674	709651114951	150
7094500000	7094500107	7094500736	709645285674	709651114951	150
7085400000	7085400383	7085400716	708168957673	708167438597	150
7085400000	7085400383	7085400716	708168957673	708167438597	150
7298400000	7298400044	7298400847	729003545292	729092381742	150
7292500000	7292500877	7292500806	729985606044	729898116896	150
7292500000	7292500877	7292500806	729985606044	729898116896	150
7287400000	7287400667	7287400765	728423988115	728171012384	150
7287400000	7287400667	7287400765	728423988115	728171012384	150
7299400000	7299400442	7299400836	729786159171	729502583703	150
7299400000	7299400442	7299400836	729786159171	729502583703	150
7246400000	7246400250	7246400336	724432067114	724262930997	150
7246400000	7246400250	7246400336	724432067114	724262930997	150
7207400000	7207400022	7207400975	720435916701	720263974794	150
7207400000	7207400022	7207400975	720435916701	720263974794	150
7202400000	7202400793	7202400957	720251879016	720293074991	150
7202400000	7202400793	7202400957	720251879016	720293074991	150
7182500000	7182500823	7182500699	718649525863	718282506048	150
7182500000	7182500823	7182500699	718649525863	718282506048	150
7208400000	7208400901	7208400961	720467241578	720713216441	150
7208400000	7208400901	7208400961	720467241578	720713216441	150
7222610000	7222610264	7222610170	722237857433	722752175209	150
7222610000	7222610264	7222610170	722237857433	722752175209	150
7225500000	7225500834	7225500072	722847187872	722827606671	150
7225500000	7225500834	7225500072	722847187872	722827606671	150
7386510000	7386510384	7386510815	738066052755	738448600690	150
7386510000	7386510384	7386510815	738066052755	738448600690	150

7421800000	7421800676	7421800122	742570757088	742601388551	150
7421800000	7421800676	7421800122	742570757088	742601388551	150
7422500000	7422500400	7422500127	742303248300	742394360618	150
7422500000	7422500400	7422500127	742303248300	742394360618	150
7397400000	7397400757	7397400873	739064870411	739253739945	150
7397400000	7397400757	7397400873	739064870411	739253739945	150
7342400000	7342400185	7342400359	734697093373	734480007448	150
7342400000	7342400185	7342400359	734697093373	734480007448	150
7332400000	7332400144	7332400264	733600205252	733592412296	150
7332400000	7332400144	7332400264	733600205252	733592412296	150
7332500000	7332500432	7332500218	733133855916	733685372975	150
7332500000	7332500432	7332500218	733133855916	733685372975	150
7338400000	7338400381	7338400268	733284085221	733799586145	150
7338400000	7338400381	7338400268	733284085221	733799586145	150
7323400000	7323400239	7323400154	732669054885	732558673638	150
7323400000	7323400239	7323400154	732669054885	732558673638	150
7352400000	7352400356	7352400458	735382399810	735971360361	150
7352400000	7352400356	7352400458	735382399810	735971360361	150
7355500000	7355500663	7355500380	735388896975	735419141268	150
7355500000	7355500663	7355500380	735388896975	735419141268	150
7514400000	7514400692	7514400061	751221438856	751401861494	150
7514400000	7514400692	7514400061	751221438856	751401861494	150
7514500000	7514500076	7514500007	751574101116	751268603360	150
7514500000	7514500076	7514500007	751574101116	751268603360	150
7450500000	7450500975	7450500449	745123520358	745619448356	150
7450500000	7450500975	7450500449	745123520358	745619448356	150
7483400000	7483400111	7483400757	748407576563	748755877662	150
7483400000	7483400111	7483400757	748407576563	748755877662	150
7447400000	7447400290	7447400388	744683999722	744640223128	150
7447400000	7447400290	7447400388	744683999722	744640223128	150
7475400000	7475400288	7475400656	747827564045	747727402895	150
7475400000	7475400288	7475400656	747827564045	747727402895	150
7432400000	7432400159	7432400274	743607796398	743901797460	150
7432400000	7432400159	7432400274	743607796398	743901797460	150
7472400000	7472400815	7472400669	747056921815	747510879562	150
7472400000	7472400815	7472400669	747056921815	747510879562	150
7443500000	7443500703	7443500318	744743462108	744866842840	150
7443500000	7443500703	7443500318	744743462108	744866842840	150
7488400000	7488400999	7488400769	748895990606	748978828453	150
7488400000	7488400999	7488400769	748895990606	748978828453	150
7625400000	7625400687	7625400170	762439955155	762750388548	150
7625400000	7625400687	7625400170	762439955155	762750388548	150
7626500000	7626500731	7626500126	762395979060	762785631022	150
7664500000	7664500275	7664500503	766151058113	766006107379	150
7664500000	7664500275	7664500503	766151058113	766006107379	150
7628400000	7628400252	7628400198	762273203363	762962412569	150
7628400000	7628400252	7628400198	762273203363	762962412569	150

7656400000	7656400510	7656400484	765600212129	765288588571	150
7656400000	7656400510	7656400484	765600212129	765288588571	150
7636400000	7636400144	7636400272	763894246248	763638519889	150
7636400000	7636400144	7636400272	763894246248	763638519889	150
7635400000	7635400874	7635400274	763609285460	763457355862	150
7635400000	7635400874	7635400274	763609285460	763457355862	150
7598400000	7598400100	7598400877	759408539627	759030228444	150
7598400000	7598400100	7598400877	759408539627	759030228444	150
7604500000	7604500915	7604500923	760359385526	760805720075	150
7604500000	7604500915	7604500923	760359385526	760805720075	150
7569400000	7569400090	7569400567	756051760867	756861889398	150
7569400000	7569400090	7569400567	756051760867	756861889398	150
7578400000	7578400832	7578400680	757398702110	757400537891	150
7578400000	7578400832	7578400680	757398702110	757400537891	150
7596400000	7596400016	7596400897	759217738855	759643226974	150
7596400000	7596400016	7596400897	759217738855	759643226974	150
7579400000	7579400258	7579400665	757985772569	757061948673	150
7579400000	7579400258	7579400665	757985772569	757061948673	150
7567410000	7567410562	7567410581	756620546263	756136356731	150
7567410000	7567410562	7567410581	756620546263	756136356731	150
7586510000	7586510424	7586510835	758940268980	758238022752	150
7586510000	7586510424	7586510835	758940268980	758238022752	150
7612400000	7612400035	7612400094	761301061991	761726461953	150
7612400000	7612400035	7612400094	761301061991	761726461953	150
7603500000	7603500964	7603500945	760365806914	760339792399	150
7603500000	7603500964	7603500945	760365806914	760339792399	150
7584800000	7584800642	7584800804	758710436064	758051326678	150
7584800000	7584800642	7584800804	758710436064	758051326678	150
7754500000	7754500921	7754500415	775845382791	775034495795	150
7754500000	7754500921	7754500415	775845382791	775034495795	150
7792400000	7792400353	7792400897	779748928317	779461475712	150
7792400000	7792400353	7792400897	779748928317	779461475712	150
7741500000	7741500276	7741500368	774211818048	774089338719	150
7741500000	7741500276	7741500368	774211818048	774089338719	150
7763500000	7763500536	7763500544	776622775998	776280649778	150
7763500000	7763500536	7763500544	776622775998	776280649778	150
7691400000	7691400875	7691400897	769469459112	769935183860	150
7691400000	7691400875	7691400897	769469459112	769935183860	150
7673500000	7673500799	7673500632	767419517521	767495824516	150
7673500000	7673500799	7673500632	767419517521	767495824516	150
7715500000	7715500750	7715500020	771121496897	771076626914	150
7715500000	7715500750	7715500020	771121496897	771076626914	150
7875400000	7875400351	7875400696	787165823601	787843976546	150
7875400000	7875400351	7875400696	787165823601	787843976546	150
7960500000	7960500212	7960500597	796249972750	796544384057	150
7960500000	7960500212	7960500597	796249972750	796544384057	150
7827610000	7827610527	7827610171	782904711648	782211950842	150

7827610000	7827610527	7827610171	782904711648	782211950842	150
7815500000	7815500767	7815500032	781958114822	781529870797	150
7815500000	7815500767	7815500032	781958114822	781529870797	150
7884500000	7884500078	7884500716	788204482438	788530996056	150
7884500000	7884500078	7884500716	788204482438	788530996056	150
7834400000	7834400927	7834400289	783468808814	783509600506	150
7834400000	7834400927	7834400289	783468808814	783509600506	150
7874600000	7874600260	7874600650	787507389994	787638495372	150
7874600000	7874600260	7874600650	787507389994	787638495372	150
7826500000	7826500762	7826500146	782499247531	782249075978	150
7826500000	7826500762	7826500146	782499247531	782249075978	150
7881500000	7881500894	7881500772	788507633036	788315227135	150
7881500000	7881500894	7881500772	788507633036	788315227135	150
7814500000	7814500129	7814500036	781696147198	781747891519	150
7814500000	7814500129	7814500036	781696147198	781747891519	150
7909400000	7909400334	7909400015	790296409841	790973388871	150
7909400000	7909400334	7909400015	790296409841	790973388871	150
7867400000	7867400434	7867400627	786856752671	786628670523	150
7867400000	7867400434	7867400627	786856752671	786628670523	150
7803500000	7803500998	7803500965	780301006222	780181778108	150
7803500000	7803500998	7803500965	780301006222	780181778108	150
7804400000	7804400667	7804400991	780750242908	780732073586	150
7804400000	7804400667	7804400991	780750242908	780732073586	150
7871500000	7871500611	7871500677	787805673975	787736163238	150
7871500000	7871500611	7871500677	787805673975	787736163238	150
8022400000	8022400920	8022400135	802234325616	802298491084	150
8022400000	8022400920	8022400135	802234325616	802298491084	150
8022500000	8022500321	8022500088	802016758189	802415283604	150
8022500000	8022500321	8022500088	802016758189	802415283604	150
7925400000	7925400742	7925400202	792780152095	792745792046	150
7925400000	7925400742	7925400202	792780152095	792745792046	150
7997410000	7997410805	7997410917	799429996665	799134256743	150
7997410000	7997410805	7997410917	799429996665	799134256743	150
7953500000	7953500391	7953500467	795013221473	795722795246	150
7953500000	7953500391	7953500467	795013221473	795722795246	150
8039400000	8039400657	8039400223	803678717381	803257872839	150
8039400000	8039400657	8039400223	803678717381	803257872839	150
8001500000	8001500718	8001500904	800252815728	800336333359	150
8001500000	8001500718	8001500904	800252815728	800336333359	150
7973500000	7973500848	7973500661	797450570114	797264042343	150
7973500000	7973500848	7973500661	797450570114	797264042343	150
7926500000	7926500776	7926500156	792233685949	792139758889	150
7926500000	7926500776	7926500156	792233685949	792139758889	150
7974400000	7974400189	7974400694	797168340541	797099913841	150
7974400000	7974400189	7974400694	797168340541	797099913841	150
8055500000	8055500617	8055500350	805380855706	805694484068	150
8055500000	8055500617	8055500350	805380855706	805694484068	150

8155400000	8155400081	8155400427	815899842152	815073547407	150
8155400000	8155400081	8155400427	815899842152	815073547407	150
8151500000	8151500356	8151500409	815613543342	815196358627	150
8151500000	8151500356	8151500409	815613543342	815196358627	150
8134400000	8134400938	8134400220	813796693252	813293492798	150
8134400000	8134400938	8134400220	813796693252	813293492798	150
8152500000	8152500466	8152500400	815145322855	815741503383	150
8152500000	8152500466	8152500400	815145322855	815741503383	150
8125500000	8125500818	8125500063	812067032787	812515408079	150
8125500000	8125500818	8125500063	812067032787	812515408079	150
8083400000	8083400043	8083400718	808509783024	808833469375	150
8083400000	8083400043	8083400718	808509783024	808833469375	150
8142400000	8142400151	8142400340	814428538947	814514203960	150
8142400000	8142400151	8142400340	814428538947	814514203960	150
8074500000	8074500340	8074500539	807970917018	807814987917	150
8074500000	8074500340	8074500539	807970917018	807814987917	150
8144500000	8144500644	8144500260	814775930346	814157521516	150
8144500000	8144500644	8144500260	814775930346	814157521516	150
8062500000	8062500631	8062500489	806419941780	806053324030	150
8062500000	8062500631	8062500489	806419941780	806053324030	150
8136610000	8136610477	8136610217	813538039251	813995477176	150
8136610000	8136610477	8136610217	813538039251	813995477176	150
8108700000	8108700845	8108700914	810010911967	810771605642	150
8108700000	8108700845	8108700914	810010911967	810771605642	150
8110610000	8110610425	8110610084	811911178401	811089190600	150
8110610000	8110610425	8110610084	811911178401	811089190600	150
8082400000	8082400916	8082400728	808617414408	808682252551	150
8082400000	8082400916	8082400728	808617414408	808682252551	150
8082500000	8082500808	8082500690	808302938011	808895845857	150
8082500000	8082500808	8082500690	808302938011	808895845857	150
8214400000	8214400735	8214400032	821734088992	821466460764	150
8214400000	8214400735	8214400032	821734088992	821466460764	150
8255400000	8255400099	8255400437	825353474066	825747902115	150
8255400000	8255400099	8255400437	825353474066	825747902115	150
8205500000	8205500530	8205500857	820553173735	820224873191	150
8205500000	8205500530	8205500857	820553173735	820224873191	150
8222500000	8222500359	8222500108	822861930855	822210928701	150
8222500000	8222500359	8222500108	822861930855	822210928701	150
8236610000	8236610494	8236610227	823757849431	823524052267	150
8236610000	8236610494	8236610227	823757849431	823524052267	150
8224400000	8224400801	8224400131	822612155006	822003186567	150
8224400000	8224400801	8224400131	822612155006	822003186567	150
8284500000	8284500976	8284500659	828883848637	828275635069	150
8284500000	8284500976	8284500659	828883848637	828275635069	150
8174400000	8174400067	8174400615	817145936696	817546496930	150
8174400000	8174400067	8174400615	817145936696	817546496930	150
8223400000	8223400225	8223400145	822347134813	822295305066	150

8223400000	8223400225	8223400145	822347134813	822295305066	150
8269500000	8269500649	8269500512	826724790840	826881763016	150
8269500000	8269500649	8269500512	826724790840	826881763016	150
8295400000	8295400539	8295400835	829084997927	829503404561	150
8295400000	8295400539	8295400835	829084997927	829503404561	150
8324610000	8324610882	8324610160	832525437792	832169144461	150
8324610000	8324610882	8324610160	832525437792	832169144461	150
8333400000	8333400599	8333400252	833076465509	833855898243	150
8333400000	8333400599	8333400252	833076465509	833855898243	150
8319400000	8319400337	8319400056	831918458437	831204045125	150
8319400000	8319400337	8319400056	831918458437	831204045125	150
8402500000	8402500127	8402500930	840607414362	840395981180	150
8402500000	8402500127	8402500930	840607414362	840395981180	150
8335400000	8335400820	8335400245	833594388641	833125796795	150
8335400000	8335400820	8335400245	833594388641	833125796795	150
8322500000	8322500381	8322500118	832375802127	832797273925	150
8322500000	8322500381	8322500118	832375802127	832797273925	150
8397410000	8397410715	8397410858	839032133846	839574451513	150
8397410000	8397410715	8397410858	839032133846	839574451513	150
8384400000	8384400249	7384400734	838041524238	838753037570	150
8384400000	8384400249	7384400734	838041524238	838753037570	150
8413500000	8413500098	8413500025	841329919935	841151613266	150
8413500000	8413500098	8413500025	841329919935	841151613266	150
8303400000	8303400447	8303400958	830423939161	830219725404	150
8303400000	8303400447	8303400958	830423939161	830219725404	150
8303500000	8303500915	8303500916	830242235659	830314003946	150
8303500000	8303500915	8303500916	830242235659	830314003946	150
8433400000	8433400616	8433400262	843652515489	843817387534	150
8433400000	8433400616	8433400262	843652515489	843817387534	150
8532400000	8532400179	8532400284	853268076911	853127822350	150
8532400000	8532400179	8532400284	853268076911	853127822350	150
8430500000	8430500743	8430500251	843388298710	843456006442	150
8430500000	8430500743	8430500251	843388298710	843456006442	150
8536610000	8536610537	8536610255	853249181052	853776614571	150
8536610000	8536610537	8536610255	853249181052	853776614571	150
8425400000	8425400653	8425400151	842883992770	842640845800	150
8425400000	8425400653	8425400151	842883992770	842640845800	150
8521500000	8521500976	8521500153	852235824411	852296399048	150
8521500000	8521500976	8521500153	852235824411	852296399048	150
8653500000	8653500341	8653500438	865728271483	865995570669	150
8653500000	8653500341	8653500438	865728271483	865995570669	150
8574500000	8574500437	8574500589	857103264299	857022484412	150
8574500000	8574500437	8574500589	857103264299	857022484412	150
8611500000	8611500893	8611500064	861455022652	861314866387	150
8611500000	8611500893	8611500064	861455022652	861314866387	150
8561500000	8561500490	8561500549	856850964567	856869281758	150
8561500000	8561500490	8561500549	856850964567	856869281758	150

8594500000	8594500426	8594500786	859030598479	859391872037	150
8594500000	8594500426	8594500786	859030598479	859391872037	150
8587700000	8587700612	8587700755	858294787505	858588110181	150
8643500000	8643500740	8643500338	864229608080	864520302266	150
8643500000	8643500740	8643500338	864229608080	864520302266	150
8684310000	8684310463	8684310726	868674725543	868079414423	150
8684310000	8684310463	8684310726	868674725543	868079414423	150
8775400000	8775400337	8775400687	877558093112	877266497700	150
8775400000	8775400337	8775400687	877558093112	877266497700	150
8682500000	8682500777	8682500749	868981603288	868481371365	150
8682500000	8682500777	8682500749	868981603288	868481371365	150
8722400000	8722400047	8722400205	872015963806	872703699539	150
8722400000	8722400047	8722400205	872015963806	872703699539	150
8693400000	8693400308	8693400875	869444204661	869487380704	150
8693400000	8693400308	8693400875	869444204661	869487380704	150
8748400000	8748400520	8748400406	874095992286	874632687796	150
8748400000	8748400520	8748400406	874095992286	874632687796	150
8784310000	8784310480	8784310736	878301403243	878361318384	150
8784310000	8784310480	8784310736	878301403243	878361318384	150
8712400000	8712400052	8712400105	871123443361	871715216278	150
8712400000	8712400052	8712400105	871123443361	871715216278	150
8684800000	8684800657	8684800814	868781507582	868758812931	150
8684800000	8684800657	8684800814	868781507582	868758812931	150
8755400000	8755400111	8755400487	875904981028	875994872182	150
8755400000	8755400111	8755400487	875904981028	875994872182	150
8741500000	8741500278	8741500369	874955717785	874050732882	150
8741500000	8741500278	8741500369	874955717785	874050732882	150
8673400000	8673400477	8673400678	867544719539	867917108934	150
8673400000	8673400477	8673400678	867544719539	867917108934	150
8787410000	8787410781	8787410798	878525028979	878869440835	150
8787410000	8787410781	8787410798	878525028979	878869440835	150
8832500000	8832500524	8832500270	883226466903	883654572011	150
8832500000	8832500524	8832500270	883226466903	883654572011	150
8883600000	8883600847	8883600756	888210728244	888008011909	150
8883600000	8883600847	8883600756	888210728244	888008011909	150
8812400000	8812400069	8812400115	881414459679	881593853847	150
8812400000	8812400069	8812400115	881414459679	881593853847	150
8912500000	8912500303	8912500078	891507212153	891755071435	150
8912500000	8912500303	8912500078	891507212153	891755071435	150
8802500000	8802500202	8802500969	880803282385	880366938990	150
8802500000	8802500202	8802500969	880803282385	880366938990	150
8846400000	8846400378	8846400399	884330854348	884381156888	150
8846400000	8846400378	8846400399	884330854348	884381156888	150
8862500000	8862500610	8862500569	886482877296	886815244212	150
8862500000	8862500610	8862500569	886482877296	886815244212	150
8833500000	8833500605	8833500260	883244056871	883853490859	150
8833500000	8833500605	8833500260	883244056871	883853490859	150

8821800000	8821800746	8821800168	882135446691	882357476328	150
8821800000	8821800746	8821800168	882135446691	882357476328	150
9044400000	9044400960	9044400309	904020668569	904241760549	150
9044400000	9044400960	9044400309	904020668569	904241760549	150
9005400000	9005400395	9005400904	900447631317	900279309464	150
9005400000	9005400395	9005400904	900447631317	900279309464	150
8977410000	8977410646	8977410719	897622786053	897493388227	150
8977410000	8977410646	8977410719	897622786053	897493388227	150
8947500000	8947500293	8947500342	894581194027	894540507984	150
8947500000	8947500293	8947500342	894581194027	894540507984	150
8979400000	8979400321	8979400706	897834917347	897998763002	150
8979400000	8979400321	8979400706	897834917347	897998763002	150
9037400000	9037400212	9037400253	903801102985	903107314241	150
9037400000	9037400212	9037400253	903801102985	903107314241	150
9025500000	9025500802	9025500054	902381531080	902003359082	150
9025500000	9025500802	9025500054	902381531080	902003359082	150
8972400000	8972400903	8972400719	897995785959	897213295425	150
8972400000	8972400903	8972400719	897995785959	897213295425	150
8974500000	8974500923	8974500630	897940296675	897409179771	150
8974500000	8974500923	8974500630	897940296675	897409179771	150
9045400000	9045400886	9045400318	904746055588	904193664603	150
9045400000	9045400886	9045400318	904746055588	904193664603	150
9020500000	9020500642	9020500116	902417490058	902416137748	150
9020500000	9020500642	9020500116	902417490058	902416137748	150
9006400000	9006400676	9006400915	900715262846	900414081909	150
9006400000	9006400676	9006400915	900715262846	900414081909	150
8948400000	8948400555	8948400426	894975414923	894865355273	150
8948400000	8948400555	8948400426	894975414923	894865355273	150
9008410000	9008410827	9008410929	900224658011	900535588592	150
9008410000	9008410827	9008410929	900224658011	900535588592	150
8967400000	8967400451	8967400638	896653043908	896816774291	150
8967400000	8967400451	8967400638	896653043908	896816774291	150
9055400000	9055400063	9055400419	905623745111	905446929508	150
9055400000	9055400063	9055400419	905623745111	905446929508	150
9055500000	9055500619	9055500351	905094910518	905700590428	150
9055500000	9055500619	9055500351	905094910518	905700590428	150
9150500000	9150500927	9150500420	915720373473	915762349325	150
9150500000	9150500927	9150500420	915720373473	915762349325	150
9124500000	9124500189	9124500066	912520714421	912163668941	150
9124500000	9124500189	9124500066	912520714421	912163668941	150
9101500000	9101500738	9101500915	910961215495	910227302029	150
9101500000	9101500738	9101500915	910961215495	910227302029	150
9105400000	9105400412	9105400914	910464592553	910700127154	150
9105400000	9105400412	9105400914	910464592553	910700127154	150
9167410000	9167410499	9167410542	916312379017	916310491417	150
9167410000	9167410499	9167410542	916312379017	916310491417	150
9132400000	9132400114	9132400246	913893877994	913438145915	150

9132400000	9132400114	9132400246	913893877994	913438145915	150
9124810000	9124810467	9124810189	912821475877	912124398616	150
9124810000	9124810467	9124810189	912821475877	912124398616	150
9077400000	9077400468	9077400649	907847523469	907013458380	150
9077400000	9077400468	9077400649	907847523469	907013458380	150
9166400000	9166400599	9166400540	916937208938	916692559170	150
9166400000	9166400599	9166400540	916937208938	916692559170	150
9094500000	9094500111	9094500738	909860650803	909310286303	150
9094500000	9094500111	9094500738	909860650803	909310286303	150
9272400000	9272400300	9272400651	927275501915	927025786446	150
9272400000	9272400300	9272400651	927275501915	927025786446	150
9274500000	9274500381	9274500560	927879215390	927047104147	150
9274500000	9274500381	9274500560	927879215390	927047104147	150
9205400000	9205400428	9205400924	920224963348	920757614515	150
9205400000	9205400428	9205400924	920224963348	920757614515	150
9178400000	9178400866	9178400642	917925052273	917780993100	150
9178400000	9178400866	9178400642	917925052273	917780993100	150
9269400000	9269400123	9269400539	926661325549	926109929016	150
9269400000	9269400123	9269400539	926661325549	926109929016	150
9176400000	9176400697	9176400646	917112833658	917495757685	150
9176400000	9176400697	9176400646	917112833658	917495757685	150
9235610000	9235610764	9235610241	923770311360	923198541100	150
9235610000	9235610764	9235610241	923770311360	923198541100	150
9264500000	9264500205	9264500467	926840874298	926134985802	150
9264500000	9264500205	9264500467	926840874298	926134985802	150
9283400000	9283400078	9283400739	928784230233	928688526645	150
9283400000	9283400078	9283400739	928784230233	928688526645	150
9213400000	9213400065	9213400048	921397638677	921922227832	150
9213400000	9213400065	9213400048	921397638677	921922227832	150
9415500000	9415500704	9415500987	941118871282	941098697730	150
9415500000	9415500704	9415500987	941118871282	941098697730	150
9310610000	9310610461	9310610105	931588837002	931390373664	150
9310610000	9310610461	9310610105	931588837002	931390373664	150
9379400000	9379400226	9379400648	937464235555	937447770088	150
9379400000	9379400226	9379400648	937464235555	937447770088	150
9365400000	9365400213	9365400548	936620386674	936572743385	150
9365400000	9365400213	9365400548	936620386674	936572743385	150
9308400000	9308400922	9308400973	930836282309	930188942499	150
9308400000	9308400922	9308400973	930836282309	930188942499	150
9381500000	9381500714	9381500728	938566607666	938322760408	150
9381500000	9381500714	9381500728	938566607666	938322760408	150
9325500000	9325500853	9325500084	932565463587	932532779790	150
9325500000	9325500853	9325500084	932565463587	932532779790	150
9355400000	9355400119	9355400448	935187978921	935815412355	150
9355400000	9355400119	9355400448	935187978921	935815412355	150
9387600000	9387600952	9387600678	938290892910	938438306718	150
9387600000	9387600952	9387600678	938290892910	938438306718	150

9305500000	9305500549	9305500868	930517000149	930340047809	150
9305500000	9305500549	9305500868	930517000149	930340047809	150
9356400000	9356400467	9356400454	935130742992	935200543474	150
9356400000	9356400467	9356400454	935130742992	935200543474	150
9429400000	9429400511	9429400165	942183731270	942298342473	150
9429400000	9429400511	9429400165	942183731270	942298342473	150
9454500000	9454500873	9454500387	945629393829	945470542838	150
9454500000	9454500873	9454500387	945629393829	945470542838	150
9504400000	9504400623	9504400963	950530773144	950728981500	150
9504400000	9504400623	9504400963	950530773144	950728981500	150
9521600000	9521600739	9521600135	952463636578	952310468103	150
9521600000	9521600739	9521600135	952463636578	952310468103	150
9521800000	9521800696	9521800135	952016068374	952749741985	150
9521800000	9521800696	9521800135	952016068374	952749741985	150
9523400000	9523400272	9523400176	952118998212	952115638743	150
9523400000	9523400272	9523400176	952118998212	952115638743	150
9465710000	9465710996	9465710480	946423157349	946642628135	150
9465710000	9465710996	9465710480	946423157349	946642628135	150
9523500000	9523500160	9523500133	952197398174	952508004938	150
9523500000	9523500160	9523500133	952197398174	952508004938	150
9497410000	9497410731	9497410869	949283423696	949399077029	150
9497410000	9497410731	9497410869	949283423696	949399077029	150
9452400000	9452400375	9452400470	945322979178	945984873419	150
9452400000	9452400375	9452400470	945322979178	945984873419	150
9543500000	9543500725	9543500329	954969549561	954023368289	150
9543500000	9543500725	9543500329	954969549561	954023368289	150
9499400000	9499400477	9499400858	949885823010	949222775378	150
9499400000	9499400477	9499400858	949885823010	949222775378	150
9425500000	9425500870	9425500094	942792219013	942710543940	150
9425500000	9425500870	9425500094	942792219013	942710543940	150
9467410000	9467410549	9467410573	946510760275	946731062421	150
9467410000	9467410549	9467410573	946510760275	946731062421	150
9453500000	9453500305	9453500419	945008641734	945266398419	150
9453500000	9453500305	9453500419	945008641734	945266398419	150
9441500000	9441500224	9441500342	944114481817	944352141744	150
9441500000	9441500224	9441500342	944114481817	944352141744	150
9542400000	9542400223	9542400381	954379598434	954649295294	150
9542400000	9542400223	9542400381	954379598434	954649295294	150
9498400000	9498400084	9498400869	949752185229	949544082173	150
9498400000	9498400084	9498400869	949752185229	949544082173	150
9644400000	9644400064	9644400369	964574740734	964723693264	150
9644400000	9644400064	9644400369	964574740734	964723693264	150
9615500000	9615500736	9615500011	961376230338	961111628516	150
9615500000	9615500736	9615500011	961376230338	961111628516	150
9617400000	9617400006	9617400115	961817768223	961952066463	150
9617400000	9617400006	9617400115	961817768223	961952066463	150
9605500000	9605500596	9605500897	960789447628	960937643831	150

9605500000	9605500596	9605500897	960789447628	960937643831	150
9677410000	9677410603	9677410690	967863172919	967258929975	150
9677410000	9677410603	9677410690	967863172919	967258929975	150
9637400000	9637400172	9637400313	963902152380	963240732186	150
9637400000	9637400172	9637400313	963902152380	963240732186	150
9584310000	9584310446	9584310717	958233997795	958831081131	150
9584310000	9584310446	9584310717	958233997795	958831081131	150
9557500000	9557500391	9557500405	955027765435	955798245846	150
9557500000	9557500391	9557500405	955027765435	955798245846	150
9586400000	9586400867	9586400793	958626768678	958932346190	150
9586400000	9586400867	9586400793	958626768678	958932346190	150
9657400000	9657400376	9657400510	965753694822	965059963732	150
9657400000	9657400376	9657400510	965753694822	965059963732	150
9657410000	9657410416	9657410492	965524495981	965482411144	150
9657410000	9657410416	9657410492	965524495981	965482411144	150
9564400000	9564400951	9564400557	956171662550	956689187777	150
9564400000	9564400951	9564400557	956171662550	956689187777	150
9608410000	9608410814	9608410990	960484090753	960426579518	150
9608410000	9608410814	9608410990	960484090753	960426579518	150
9696400000	9696400036	9696400910	969146631175	969533411624	150
9696400000	9696400036	9696400910	969146631175	969533411624	150
9798400000	9798400141	9798400899	979426637385	979908135842	150
9798400000	9798400141	9798400899	979426637385	979908135842	150
9798510000	9798510130	9798510950	979006197438	979545866427	150
9798510000	9798510130	9798510950	979006197438	979545866427	150
9771500000	9771500596	9771500669	977604114480	977010743784	150
9771500000	9771500596	9771500669	977604114480	977010743784	150
9691500000	9691500970	9691500851	969644222065	969167158481	150
9691500000	9691500970	9691500851	969644222065	969167158481	150
9708700000	9708700954	9708700973	970580476244	970957232400	150
9708700000	9708700954	9708700973	970580476244	970957232400	150
9725400000	9725400710	9725400183	972002685892	972118466361	150
9725400000	9725400710	9725400183	972002685892	972118466361	150
9785400000	9785400499	9785400786	978009707599	978919637397	150
9785400000	9785400499	9785400786	978009707599	978919637397	150
9773500000	9773500817	9773500644	977142797946	977785843257	150
9773500000	9773500817	9773500644	977142797946	977785843257	150
9777410000	9777410617	9777410700	977399038721	977278903919	150
9777410000	9777410617	9777410700	977399038721	977278903919	150
9684500000	9684500048	9684500698	968649675370	968892672726	150
9768500000	9768500498	9768500544	976691010967	976065854377	150
9768500000	9768500498	9768500544	976691010967	976065854377	150
9714500000	9714500114	9714500028	971073454742	971156868788	150
9714500000	9714500114	9714500028	971073454742	971156868788	150
9833400000	9833400681	9833400303	983188799658	983833011480	150
9833400000	9833400681	9833400303	983188799658	983833011480	150
9822500000	9822500344	9822500170	982310577086	982341511218	150

9822500000	9822500344	9822500170	982310577086	982341511218	150
9882400000	9882400047	9882400809	988620942833	988908373956	150
9882400000	9882400047	9882400809	988620942833	988908373956	150
9840500000	9840500967	9840500391	984387233763	984623880575	150
9840500000	9840500967	9840500391	984387233763	984623880575	150
9873500000	9873500835	9873500653	987175116686	987140997469	150
9873500000	9873500835	9873500653	987175116686	987140997469	150
9903500000	9903500017	9903500976	990558066807	990630324061	150
9903500000	9903500017	9903500976	990558066807	990630324061	150
9854500000	9854500131	9854500427	985355305794	985751759431	150
9854500000	9854500131	9854500427	985355305794	985751759431	150
9883500000	9883500152	9883500751	988784497089	988571821868	150
9883500000	9883500152	9883500751	988784497089	988571821868	150
9841500000	9841500299	9841500380	984267889513	984463167786	150
9841500000	9841500299	9841500380	984267889513	984463167786	150
9812610000	9812610198	9812610132	981406533339	981002742591	150
9812610000	9812610198	9812610132	981406533339	981002742591	150
9921500000	9921500044	9921500193	992712886074	992724477223	150
9921500000	9921500044	9921500193	992712886074	992724477223	150
9898400000	9898400157	9898400909	989545384332	989483260399	150
9898400000	9898400157	9898400909	989545384332	989483260399	150
9902500000	9902500222	9902500979	990098538065	990958543312	150
9902500000	9902500222	9902500979	990098538065	990958543312	150
9965400000	9965400309	9965400608	996447218281	996311797478	150
9965400000	9965400309	9965400608	996447218281	996311797478	150
9943500000	9943500795	9943500369	994073841011	994038415903	150
9943500000	9943500795	9943500369	994073841011	994038415903	150
9980500000	9980500522	9980500796	998033631062	998079011633	150
9980500000	9980500522	9980500796	998033631062	998079011633	150
6914603845	6914603341	9739400293	691715851576	691672062019	150
6914603845	6914603341	9739400293	691715851576	691672062019	150
9970500000	9970500416	9970500698	997502556837	997071055597	150
9970500000	9970500416	9970500698	997502556837	997071055597	150
6961959135	6961959764	4993400900	696838881556	696711407293	150
6961959135	6961959764	4993400900	696838881556	696711407293	150
1812610000	1812610554	4102400944	181012162922	181357727491	150
1812610000	1812610554	4102400944	181012162922	181357727491	150
1795631490	1795631814	5794800923	179471782337	179310744546	150
1795631490	1795631814	5794800923	179471782337	179310744546	150
6242446723	6242446206	5444700373	624366008981	624547032326	150
6242446723	6242446206	5444700373	624366008981	624547032326	150
5038454027	5038454732	8442400370	503023798091	503719748843	150
5038454027	5038454732	8442400370	503023798091	503719748843	150
5591641389	5591641435	3500302483	559435160725	559175166481	150
5591641389	5591641435	3500302483	559435160725	559175166481	150
660321636	660321727	131800191	66743942347	66926842620	150
3587947405	3587947653	3877400722	358074760227	358714386665	150

3587947405	3587947653	3877400722	358074760227	358714386665	150
7990492248	7990492159	1663400571	799511457755	799136991166	150
7990492248	7990492159	1663400571	799511457755	799136991166	150
7837516746	7837516211	2992910000	783035678688	783564142005	150
7837516746	7837516211	2992910000	783035678688	783564142005	150
4456441102	4456441353	5638400296	445996767341	445056649892	150
4456441102	4456441353	5638400296	445996767341	445056649892	150
6822584129	6822584668	6279959514	682230714363	682612363658	150
6822584129	6822584668	6279959514	682230714363	682612363658	150
9714400000	9714400622	3468500504	971381880544	971678080930	150
9714400000	9714400622	3468500504	971381880544	971678080930	150
3661423246	3661423200	9327400185	366170250808	366102295800	150
1909400000	1909400640	3944400393	190408448883	190343436908	150
1909400000	1909400640	3944400393	190408448883	190343436908	150
8916317444	8916317878	6742400398	891150523691	891554595319	150
8916317444	8916317878	6742400398	891150523691	891554595319	150
3108433950	3108433190	7270500627	310770547755	310389065222	150
3108433950	3108433190	7270500627	310770547755	310389065222	150
1682572973	1682572511	9493910000	168253625711	168429609832	150
1682572973	1682572511	9493910000	168253625711	168429609832	150
9306853254	9306853222	4493910000	930602170300	930132868984	150
9306853254	9306853222	4493910000	930602170300	930132868984	150
5962931605	5962931878	593910000	596393507984	596557232194	150
5962931605	5962931878	593910000	596393507984	596557232194	150
3074406251	3074406456	7493910000	307475976174	307179143568	150
3074406251	3074406456	7493910000	307475976174	307179143568	150
5938040345	5938040211	4562500535	593044373072	593219520963	150
5938040345	5938040211	4562500535	593044373072	593219520963	150
1938265261	1938265404	6983400804	193812715290	193616348458	150
1938265261	1938265404	6983400804	193812715290	193616348458	150
3468500000	3468500163	3593910000	346114161528	346709183116	150
3468500000	3468500163	3593910000	346114161528	346709183116	150
7307920069	7307920821	3890500879	730929432557	730297477175	150
7307920069	7307920821	3890500879	730929432557	730297477175	150
860681043	860681293	803400999	86065046690	86089422429	150
860681043	860681293	803400999	86065046690	86089422429	150
5917880508	5917880706	7427400193	591952841933	591331104936	150
5917880508	5917880706	7427400193	591952841933	591331104936	150
787379678	787379792	7494310805	78316152625	78705523576	150
787379678	787379792	7494310805	78316152625	78705523576	150
6405346065	6405346512	4308700929	640855241477	640580318770	150
6405346065	6405346512	4308700929	640855241477	640580318770	150
5323005453	5323005789	377400670	532425282885	532003258333	150
5323005453	5323005789	377400670	532425282885	532003258333	150
3327542204	3327542984	8044500250	332805439090	332767135727	150
3327542204	3327542984	8044500250	332805439090	332767135727	150
4756728920	4756728791	2493910000	475557429849	475175255972	150

4756728920	4756728791	2493910000	475557429849	475175255972	150
8923557979	8923557766	4693910000	892078298596	892877119273	150
8923557979	8923557766	4693910000	892078298596	892877119273	150
539510000	539510314	2434400244	53610574942	53529888172	150
539510000	539510314	2434400244	53610574942	53529888172	150
5687410000	5687410653	5687410785	568999251184	568784716277	150
5687410000	5687410653	5687410785	568999251184	568784716277	150
6288218585	6288218240	7212500007	628632803261	628284457243	150
6288218585	6288218240	7212500007	628632803261	628284457243	150
9396562666	9396562750	2214400026	939603040886	939636263526	150
9396562666	9396562750	2214400026	939603040886	939636263526	150
6692304266	6692304386	3668500527	669991277995	669507938795	150
7109498414	7109498040	9714400083	710026666836	710827626938	150
7109498414	7109498040	9714400083	710026666836	710827626938	150
9396989969	9396989292	5153400427	939808697158	939667321427	150
9396989969	9396989292	5153400427	939808697158	939667321427	150
175310000	175310685	175310758	17549572300	17569646562	150
146134642	146134072	4944700421	14753653079	14024358213	150
146134642	146134072	4944700421	14753653079	14024358213	150
8185050432	8185050574	9982600773	818769443769	818915662821	150
8185050432	8185050574	9982600773	818769443769	818915662821	150
2328639796	2328639412	2256710375	232250937714	232502919669	150
2328639796	2328639412	2256710375	232250937714	232502919669	150
886360793	886360137	9188400741	88099421771	88933946847	150
886360793	886360137	9188400741	88099421771	88933946847	150
2554016299	2554016426	7843910000	255951862230	255506620765	150
2554016299	2554016426	7843910000	255951862230	255506620765	150
301671542	301671486	5963500562	30142130887	30103884916	150
301671542	301671486	5963500562	30142130887	30103884916	150
8529758910	8529758003	4635610275	852622370894	852011740745	150
8529758910	8529758003	4635610275	852622370894	852011740745	150
4353505815	4353505602	1877700680	435447371547	435285454127	150
4353505815	4353505602	1877700680	435447371547	435285454127	150
1187079622	1187079326	9444500290	118725953814	118430443336	150
1187079622	1187079326	9444500290	118725953814	118430443336	150
7629452704	7629452322	7080500706	762115453714	762185644698	150
7629452704	7629452322	7080500706	762115453714	762185644698	150
2132177414	2132177167	4927610178	213660562820	213010083469	150
2132177414	2132177167	4927610178	213660562820	213010083469	150
175310000	175310071	5363910000	17931526803	17569646562	150
752065354	752065250	5433500219	75583916630	75308908238	150
752065354	752065250	5433500219	75583916630	75308908238	150
1086130205	1086130908	3095400810	108016194753	108182006370	150
1086130205	1086130908	3095400810	108016194753	108182006370	150
7468884616	7468884302	2344500274	746791564751	746749965668	150
7468884616	7468884302	2344500274	746791564751	746749965668	150
4705400000	4705400103	4705400969	470637753823	470034098915	150

4705400000	4705400103	4705400969	470637753823	470034098915	150
7865020696	7865020000	3169500497	786065550792	786204705918	150
7865020696	7865020000	3169500497	786065550792	786204705918	150
9481447987	9481447323	7510610123	948653025551	948218089028	150
9481447987	9481447323	7510610123	948653025551	948218089028	150
9498972037	9498972598	806400986	949212229933	949947019518	150
9498972037	9498972598	806400986	949212229933	949947019518	150
3568229578	3568229037	3747400414	356079188137	356755715143	150
3568229578	3568229037	3747400414	356079188137	356755715143	150
34735206	34735924	1253500391	3146759031	3410790053	150
34735206	34735924	1253500391	3146759031	3410790053	150
7260179122	7260179300	7027400153	726062362676	726330925070	150
7260179122	7260179300	7027400153	726062362676	726330925070	150
6626374750	6626374198	1915400092	662263836960	662544457989	150
6626374750	6626374198	1915400092	662263836960	662544457989	150
7912046471	7912046454	9258400456	791531248848	791096365480	150
7912046471	7912046454	9258400456	791531248848	791096365480	150
1834329175	1834329125	9711500075	183467020147	183842888976	150
1834329175	1834329125	9711500075	183467020147	183842888976	150
8778880435	8778880128	2622500142	877867691376	877846935793	150
8778880435	8778880128	2622500142	877867691376	877846935793	150
3855800000	3855800386	3855800549	385107180786	385591318791	150
3855800000	3855800386	3855800549	385107180786	385591318791	150
3577777726	3577777172	9643400382	357728971710	357112865236	150
3577777726	3577777172	9643400382	357728971710	357112865236	150
3049930228	3049930884	2429400158	304557821912	304643807358	150
3049930228	3049930884	2429400158	304557821912	304643807358	150
7469819029	7469819026	8687400806	746975765568	746098823302	150
7469819029	7469819026	8687400806	746975765568	746098823302	150
7184449698	7184449376	1415400038	718556384107	718236827265	150
7184449698	7184449376	1415400038	718556384107	718236827265	150
8117793302	8117793164	7953400507	811742390514	811459066616	150
8117793302	8117793164	7953400507	811742390514	811459066616	150
6368406081	6368406125	9539400273	636207860939	636403536132	150
6368406081	6368406125	9539400273	636207860939	636403536132	150
7612183434	7612183297	6587510834	761084460737	761893885640	150
7612183434	7612183297	6587510834	761084460737	761893885640	150
9008114406	9008114667	2203400942	900036310880	900652562291	150
9008114406	9008114667	2203400942	900036310880	900652562291	150
3211105863	3211105007	7911500092	321449999877	321141575653	150
3211105863	3211105007	7911500092	321449999877	321141575653	150
950143014	950143750	7662400588	95361711258	95687992905	150
950143014	950143750	7662400588	95361711258	95687992905	150
3311506353	3311506466	9825400193	331671089222	331821646406	150
3311506353	3311506466	9825400193	331671089222	331821646406	150
2291500000	2291500802	2291500804	229485247651	229855819813	150
2291500000	2291500802	2291500804	229485247651	229855819813	150

7769088994	7769088510	5324500082	776149777051	776566869687	150
7769088994	7769088510	5324500082	776149777051	776566869687	150
5288643217	5288643411	78400623	528992732294	528852475757	150
5288643217	5288643411	78400623	528992732294	528852475757	150
6107927501	6107927587	1005500829	610349089438	610513252199	150
6469943206	6469943392	5012400034	646104861167	646208569793	150
6469943206	6469943392	5012400034	646104861167	646208569793	150
8243142612	8243142961	900020000	824495182931	824444528792	150
8243142612	8243142961	900020000	824495182931	824444528792	150
4628244270	4628244926	5797400911	462376558047	462729620833	150
4628244270	4628244926	5797400911	462376558047	462729620833	150
9558510000	9558510307	9558510533	955286813936	955550916725	150
9558510000	9558510307	9558510533	955286813936	955550916725	150
1992824519	1992824324	6170500616	199681750922	199892692901	150
1992824519	1992824324	6170500616	199681750922	199892692901	150
1684031363	1684031693	9341500332	168576198577	168540246558	150
1684031363	1684031693	9341500332	168576198577	168540246558	150
2394063707	2394063919	3515400050	239832988722	239305996438	150
2394063707	2394063919	3515400050	239832988722	239305996438	150
4216452858	4216452306	2389400740	421392516317	421334939343	150
4216452858	4216452306	2389400740	421392516317	421334939343	150
3859477176	3859477797	583500714	385450340118	385644010591	150
3859477176	3859477797	583500714	385450340118	385644010591	150
4998120265	4998120816	3891400913	499919329199	499785465722	150
4998120265	4998120816	3891400913	499919329199	499785465722	150
3772973916	3772973529	1240500323	377823711295	377636103706	150
3772973916	3772973529	1240500323	377823711295	377636103706	150
4957341734	4957341009	691500842	495250236853	495092994513	150
4957341734	4957341009	691500842	495250236853	495092994513	150
1187510000	1187510004	1187510789	118078521667	118157333186	150
1187510000	1187510004	1187510789	118078521667	118157333186	150
534842740	534842452	1826500140	53333250232	53432219186	150
534842740	534842452	1826500140	53333250232	53432219186	150
5820974667	5820974610	3508700947	582572097788	582257419068	150
5824683407	5824683495	9674500600	582233472505	582282483279	150
5824683407	5824683495	9674500600	582233472505	582282483279	150
1849485482	1849485797	8181600701	184225632843	184867274505	150
1849485482	1849485797	8181600701	184225632843	184867274505	150
7431115929	7431115079	3194400809	743294365960	743909510125	150
7431115929	7431115079	3194400809	743294365960	743909510125	150
1157766387	1157766674	9853910000	115762555940	115796107555	150
2929911695	2929911934	8905500929	292818298430	292622498674	150
2929911695	2929911934	8905500929	292818298430	292622498674	150
1737703506	1737703788	494500768	173835752102	173089523908	150
1737703506	1737703788	494500768	173835752102	173089523908	150
4080000202	4080000135	4678794679	408280849850	408516168229	150
4080000202	4080000135	4678794679	408280849850	408516168229	150

9028287753	9028287846	8032500189	902685230468	902481693032	150
9028287753	9028287846	8032500189	902685230468	902481693032	150
2270553440	2270553039	823400197	227183240640	227686956404	150
2270553440	2270553039	823400197	227183240640	227686956404	150
8316144173	8316144355	363400540	831924227595	831111338049	150
8316144173	8316144355	363400540	831924227595	831111338049	150
4081909931	4081909807	8624610190	408560587117	408841376667	150
4081909931	4081909807	8624610190	408560587117	408841376667	150
3225915227	3225915694	8053910000	322978268054	322964527364	150
3225915227	3225915694	8053910000	322978268054	322964527364	150
1640594010	1640594833	8816400093	164320398852	164072518705	150
1640594010	1640594833	8816400093	164320398852	164072518705	150
860955431	860955749	3774039950	86653768647	86114440160	150
860955431	860955749	3774039950	86653768647	86114440160	150
3449423855	3449423111	5232400252	344621014065	344709674599	150
3449423855	3449423111	5232400252	344621014065	344709674599	150
4134323945	4134323806	7683600735	413829242679	413181744024	150
4134323945	4134323806	7683600735	413829242679	413181744024	150
295108546	295108634	5912400122	29116857325	29585170297	150
295108546	295108634	5912400122	29116857325	29585170297	150
2996296758	2996296681	4225400125	299269049553	299951230020	150
2996296758	2996296681	4225400125	299269049553	299951230020	150
9160911166	9160911757	6556700458	916513086268	916246668189	150
9160911166	9160911757	6556700458	916513086268	916246668189	150
8334998323	8334998522	9061500500	833604462726	833300812591	150
8334998323	8334998522	9061500500	833604462726	833300812591	150
4586601540	4586601214	8782400798	458926058911	458368553503	150
4586601540	4586601214	8782400798	458926058911	458368553503	150
5389070009	5389070346	4368400557	538324818004	538822105015	150
5389070009	5389070346	4368400557	538324818004	538822105015	150
4817274682	4817274329	3655400472	481527514288	481517701788	150
4817274682	4817274329	3655400472	481527514288	481517701788	150
4307296393	4307296613	7962400618	430576061180	430955409872	150
4307296393	4307296613	7962400618	430576061180	430955409872	150
9948554350	9948554902	7594400853	994078807140	994406346668	150
9948554350	9948554902	7594400853	994078807140	994406346668	150
2568887174	2568887896	3462400564	256273082465	256433843427	150
2568887174	2568887896	3462400564	256273082465	256433843427	150
5458611620	5458611019	8613500045	545269261692	545798293036	150
5458611620	5458611019	8613500045	545269261692	545798293036	150
476180784	476180557	5663500532	47730062536	47643677980	150
476180784	476180557	5663500532	47730062536	47643677980	150
6188243181	6188243448	3788400794	618438943968	618618332451	150
6188243181	6188243448	3788400794	618438943968	618618332451	150
2024892767	2024892959	8863500555	202546424666	202643805927	150
2024892767	2024892959	8863500555	202546424666	202643805927	150
5548190456	5548190302	9977510777	554384080148	554697784564	150

5548190456	5548190302	9977510777	554384080148	554697784564	150
4695262050	4695262060	821800158	469190567301	469161006281	150
4695262050	4695262060	821800158	469190567301	469161006281	150
6155796438	6155796525	955400499	615427009629	615805029470	150
6155796438	6155796525	955400499	615427009629	615805029470	150
2277522194	2277522990	725500115	227481570371	227228626684	150
2277522194	2277522990	725500115	227481570371	227228626684	150
4056520460	4056520229	983400798	405373617241	405061237259	150
4056520460	4056520229	983400798	405373617241	405061237259	150
5779713638	5779713183	2484800789	577085795673	577676882998	150
5779713638	5779713183	2484800789	577085795673	577676882998	150
9522238445	9522238545	4023610135	952069985701	952187211405	150
9522238445	9522238545	4023610135	952069985701	952187211405	150
3340405063	3340405633	4892133075	334215543512	334236458652	150
3340405063	3340405633	4892133075	334215543512	334236458652	150
5915862624	5915862797	1909400009	591834825645	591705725095	150
5915862624	5915862797	1909400009	591834825645	591705725095	150
6361334332	6361334386	1974500623	636053317224	636922048701	150
6361334332	6361334386	1974500623	636053317224	636922048701	150
8160033997	8160033859	2454400441	816704533947	816625972839	150
8160033997	8160033859	2454400441	816704533947	816625972839	150
3602874391	3602874513	423610170	360508408622	360178087770	150
3602874391	3602874513	423610170	360508408622	360178087770	150
6541228863	6541228067	7196400854	654843709441	654609783852	150
6541228863	6541228067	7196400854	654843709441	654609783852	150
3007400000	3007400826	3007400948	300922352142	300524794988	150
3007400000	3007400826	3007400948	300922352142	300524794988	150
2377433853	2377433601	5088400727	237060901731	237856481730	150
2377433853	2377433601	5088400727	237060901731	237856481730	150
734659440	734659291	3108400947	73431244168	73201402377	150
734659440	734659291	3108400947	73431244168	73201402377	150
7304414570	7304414512	3035400208	730811595428	730998319012	150
7304414570	7304414512	3035400208	730811595428	730998319012	150
609064725	609064713	1397410851	60618855522	60603071052	150
609064725	609064713	1397410851	60618855522	60603071052	150
5343745048	5343745392	8921800179	534785926750	534816318495	150
5343745048	5343745392	8921800179	534785926750	534816318495	150
3511951149	3511951396	9470500649	351022250324	351943444512	150
3511951149	3511951396	9470500649	351022250324	351943444512	150
4890019334	4890019358	2223610153	489210872723	489794683715	150
4890019334	4890019358	2223610153	489210872723	489794683715	150
4783465768	4783465104	1503500929	478126956760	478422073248	150
4783465768	4783465104	1503500929	478126956760	478422073248	150
3656724977	3656724654	624500106	365793220615	365042592051	150
3656724977	3656724654	624500106	365793220615	365042592051	150
3045254010	3045254726	6175400625	304505587703	304680369946	150
3045254010	3045254726	6175400625	304505587703	304680369946	150

4023500000	4023500124	4023500079	402417488227	402025478915	150
4023500000	4023500124	4023500079	402417488227	402025478915	150
3834923739	3834923960	6998510967	383169962877	383119534884	150
3834923739	3834923960	6998510967	383169962877	383119534884	150
7374500000	7374500809	7374500569	737596271467	737128432349	150
7374500000	7374500809	7374500569	737596271467	737128432349	150
8113621759	8113621330	2263500491	811881171846	811071401774	150
8113621759	8113621330	2263500491	811881171846	811071401774	150
6867891671	6867891095	8192400838	686331173622	686328804367	150
6867891671	6867891095	8192400838	686331173622	686328804367	150
6272479059	6272479661	5171500606	627488591122	627164419920	150
6272479059	6272479661	5171500606	627488591122	627164419920	150
7057055560	7057055351	1919400109	705999747158	705421293645	150
7057055560	7057055351	1919400109	705999747158	705421293645	150
8072952763	8072952290	8185400727	807687794040	807190399006	150
8072952763	8072952290	8185400727	807687794040	807190399006	150
3160804132	3160804557	6549610315	316521114188	316196779099	150
3160804132	3160804557	6549610315	316521114188	316196779099	150
9288558063	9288558075	8172500599	928034659985	928683473703	150
9288558063	9288558075	8172500599	928034659985	928683473703	150
7048425168	7048425263	8079400617	704575801953	704918240999	150
7048425168	7048425263	8079400617	704575801953	704918240999	150
9261751370	9261751154	9432500230	926558124023	926381848954	150
9261751370	9261751154	9432500230	926558124023	926381848954	150
5830271028	5830271492	7252210498	583685877485	583616756268	150
5830271028	5830271492	7252210498	583685877485	583616756268	150
3979830186	3979830050	7642400389	397031047493	397817363306	150
3979830186	3979830050	7642400389	397031047493	397817363306	150
7108955975	7108955357	1203500899	710648536142	710195246861	150
7108955975	7108955357	1203500899	710648536142	710195246861	150
9378302415	9378302715	6271500617	937274945845	937187676680	150
9378302415	9378302715	6271500617	937274945845	937187676680	150
8287700000	8287700945	8287700725	828137083517	828582538695	150
1959283798	1959283449	1818400114	195973508556	195496775852	150
1959283798	1959283449	1818400114	195973508556	195496775852	150
321192206	321192468	7855700500	32958594442	32024093841	150
321192206	321192468	7855700500	32958594442	32024093841	150
425978838	425978348	7603400986	42675642593	42473232975	150
425978838	425978348	7603400986	42675642593	42473232975	150
9940702688	9940702557	6005500834	994982312471	994058849961	150
9940702688	9940702557	6005500834	994982312471	994058849961	150
906431738	906431491	3195400820	90941391595	90190241200	150
906431738	906431491	3195400820	90941391595	90190241200	150
5462156427	5462156388	4582500735	546792064891	546038184616	150
5462156427	5462156388	4582500735	546792064891	546038184616	150
3980884202	3980884712	790500866	398230977808	398095498439	150
3980884202	3980884712	790500866	398230977808	398095498439	150

7939546319	7939546950	8117400066	793966992165	793314568620	150
7939546319	7939546950	8117400066	793966992165	793314568620	150
323237107	323237428	3493400850	32300801379	32694170748	150
323237107	323237428	3493400850	32300801379	32694170748	150
5643554489	5643554729	8493910000	564150655015	564696276331	150
5643554489	5643554729	8493910000	564150655015	564696276331	150
3991492439	3991492672	4618400097	399705556384	399314638356	150
3991492439	3991492672	4618400097	399705556384	399314638356	150
4145416964	4145416110	3937400335	414026154334	414983450689	150
4145416964	4145416110	3937400335	414026154334	414983450689	150
8411677760	8411677937	9818400122	841797660151	841231845233	150
8411677760	8411677937	9818400122	841797660151	841231845233	150
3441217956	3441217030	4067400545	344571341564	344521196790	150
3441217956	3441217030	4067400545	344571341564	344521196790	150
6436510000	6436510831	1092400821	643000362688	643477335738	150
6436510000	6436510831	1092400821	643000362688	643477335738	150
1103890146	1103890760	4594310812	110986237697	110995606673	150
1103890146	1103890760	4594310812	110986237697	110995606673	150
2729936476	2729936228	3913500068	272372109870	272673324028	150
2729936476	2729936228	3913500068	272372109870	272673324028	150
5803499606	5803499744	3813500058	580108552395	580341801217	150
5803499606	5803499744	3813500058	580108552395	580341801217	150
1598098759	1598098363	664500496	159148121429	159800042418	150
1965352289	1965352674	6280500725	196354917940	196648892952	150
1965352289	1965352674	6280500725	196354917940	196648892952	150
2995688491	2995688526	6575400665	299104560477	299172686986	150
2995688491	2995688526	6575400665	299104560477	299172686986	150
5030150273	5030150682	1943400404	503125246884	503845024290	150
5030150273	5030150682	1943400404	503125246884	503845024290	150
6967251933	6967251268	8023700153	696323881270	696510719388	150
6967251933	6967251268	8023700153	696323881270	696510719388	150
4791610000	4791610701	4636610261	479385714973	479789810624	150
4791610000	4791610701	4636610261	479385714973	479789810624	150
9607389308	9607389152	2562400573	960117715091	960710255654	150
9607389308	9607389152	2562400573	960117715091	960710255654	150
5637694705	5637694208	704500926	563098103474	563974730131	150
5637694705	5637694208	704500926	563098103474	563974730131	150
812253912	812253409	2377410654	81348134361	81660978647	150
812253912	812253409	2377410654	81348134361	81660978647	150
3291516692	3291516431	4425400147	329593287484	329457246464	150
3291516692	3291516431	4425400147	329593287484	329457246464	150
2414408952	2414408784	6273400636	241354295893	241447966511	150
2414408952	2414408784	6273400636	241354295893	241447966511	150
8595852788	8595852278	5983600763	859018548796	859557995915	150
8595852788	8595852278	5983600763	859018548796	859557995915	150
119239619	119239188	4234400226	11649221489	11315118822	150
119239619	119239188	4234400226	11649221489	11315118822	150

6772400000	6772400166	6772400698	677634369258	677450745505	150
6772400000	6772400166	6772400698	677634369258	677450745505	150
4812984699	4812984501	1105500840	481055495737	481991716424	150
4812984699	4812984501	1105500840	481055495737	481991716424	150
4855828035	4855828522	7239400242	485878509869	485534068275	150
4855828035	4855828522	7239400242	485878509869	485534068275	150
5992956164	5992956702	742410391	599241573439	599691497785	150
5992956164	5992956702	742410391	599241573439	599691497785	150
1236332230	1236332343	4305500863	123319363553	123470392692	150
1236332230	1236332343	4305500863	123319363553	123470392692	150
5854531287	5854531600	3065400512	585901802878	585946396949	150
5854531287	5854531600	3065400512	585901802878	585946396949	150
67515789	67515439	624610182	6616633297	6176973364	150
67515789	67515439	624610182	6616633297	6176973364	150
2368195815	2368195250	9912610142	236369745627	236737940435	150
2368195815	2368195250	9912610142	236369745627	236737940435	150
3034558502	3034558370	5081500695	303318885286	303165868359	150
3034558502	3034558370	5081500695	303318885286	303165868359	150
3149830333	3149830935	1694810043	314872619008	314915413385	150
3149830333	3149830935	1694810043	314872619008	314915413385	150
3201030945	3201030461	4513400073	320726759812	320769939737	150
3201030945	3201030461	4513400073	320726759812	320769939737	150
8424314367	8424314476	5621800142	842177051705	842321585509	150
8424314367	8424314476	5621800142	842177051705	842321585509	150
9896400000	9896400737	9896400932	989756899991	989731831692	150
9896400000	9896400737	9896400932	989756899991	989731831692	150
8283391987	8283391355	2602400992	828579036072	828609974804	150
8283391987	8283391355	2602400992	828579036072	828609974804	150
5212909773	5212909198	43400314	521773179168	521324333916	150
5212909773	5212909198	43400314	521773179168	521324333916	150
672105232	672105687	6864500519	67703416954	67059335812	150
672105232	672105687	6864500519	67703416954	67059335812	150
5778142309	5778142573	1028400134	577787350936	577978775242	150
5778142309	5778142573	1028400134	577787350936	577978775242	150
777797263	777797331	9184400716	77793187904	77378619888	150
777797263	777797331	9184400716	77793187904	77378619888	150
7082181799	7082181553	4881600765	708170585297	708597653570	150
7082181799	7082181553	4881600765	708170585297	708597653570	150
9075572637	9075572702	3524400155	907006629207	907160789002	150
9075572637	9075572702	3524400155	907006629207	907160789002	150
1069025489	1069025130	4453810511	106377840826	106831198706	150
1069025489	1069025130	4453810511	106377840826	106831198706	150
2068810960	2068810146	8505400953	206857846336	206360441656	150
2068810960	2068810146	8505400953	206857846336	206360441656	150
7172189345	7172189403	3018400036	717379443176	717790151964	150
7172189345	7172189403	3018400036	717379443176	717790151964	150
6016761163	6016761926	7484500677	601996296819	601602623879	150

6016761163	6016761926	7484500677	601996296819	601602623879	150
7655899501	7655899688	9871600672	765184580167	765399551255	150
7655899501	7655899688	9871600672	765184580167	765399551255	150
8136462003	8136462751	8684500697	813433869675	813389412790	150
8136462003	8136462751	8684500697	813433869675	813389412790	150
1657433884	1657433773	4622400191	165687999477	165021106317	150
1657433884	1657433773	4622400191	165687999477	165021106317	150
9979694066	9979694803	1577410673	997982879092	997736012132	150
9979694066	9979694803	1577410673	997982879092	997736012132	150
602571905	602571907	2774500603	60086205224	60018941871	150
602571905	602571907	2774500603	60086205224	60018941871	150
7854967941	7854967890	4321500129	785495259898	785636402152	150
7854967941	7854967890	4321500129	785495259898	785636402152	150
2317506479	2317506332	6118400049	231008237500	231947278286	150
2317506479	2317506332	6118400049	231008237500	231947278286	150
7331557469	7331557777	4087700702	733415308066	733461798510	150
7331557469	7331557777	4087700702	733415308066	733461798510	150
7718365231	7718365720	9872400710	771503286071	771572199965	150
7718365231	7718365720	9872400710	771503286071	771572199965	150
593361599	593361935	7294500755	59559434759	59349241025	150
593361599	593361935	7294500755	59559434759	59349241025	150
1956406870	1956406247	1805500910	195457486254	195311527592	150
1956406870	1956406247	1805500910	195457486254	195311527592	150
2629398992	2629398841	6146400324	262012770626	262203303221	150
2629398992	2629398841	6146400324	262012770626	262203303221	150
1173644506	1173644433	1121810167	117006996027	117378361370	150
1173644506	1173644433	1121810167	117006996027	117378361370	150
9995430890	9995430394	6391500818	999859160872	999030157783	150
9995430890	9995430394	6391500818	999859160872	999030157783	150
7400823730	7400823039	3399400842	740258852151	740427042619	150
7400823730	7400823039	3399400842	740258852151	740427042619	150
2432497356	2432497595	6892500865	243287616565	243135846821	150
2432497356	2432497595	6892500865	243287616565	243135846821	150
3756677278	3756677755	1724400173	375500313491	375812900229	150
3756677278	3756677755	1724400173	375500313491	375812900229	150
1247652036	1247652593	2484600704	124705925193	124556420120	150
1247652036	1247652593	2484600704	124705925193	124556420120	150
8260506275	8260506705	8416400054	826589693911	826468131658	150
8260506275	8260506705	8416400054	826589693911	826468131658	150
9448961109	9448961861	6934310263	944215705277	944325598482	150
9448961109	9448961861	6934310263	944215705277	944325598482	150
8468196400	8468196552	4549400368	846037518476	846743703451	150
8468196400	8468196552	4549400368	846037518476	846743703451	150
4484887830	4484887769	2365710464	448869687870	448055881876	150
4484887830	4484887769	2365710464	448869687870	448055881876	150
3445055240	3445055948	1315500967	344768210922	344226135507	150
3445055240	3445055948	1315500967	344768210922	344226135507	150

7521304689	7521304922	6724500122	752532865694	752727553030	150
7521304689	7521304922	6724500122	752532865694	752727553030	150
5975686716	5975686472	9774500610	597471789893	597228144839	150
5975686716	5975686472	9774500610	597471789893	597228144839	150
8773956956	8773956049	9686510847	877028921874	877975242398	150
8773956956	8773956049	9686510847	877028921874	877975242398	150
5672983497	5672983059	9049400323	567349906184	567067398044	150
5672983497	5672983059	9049400323	567349906184	567067398044	150
4675585833	4675585356	4838400315	467174299676	467864897991	150
4675585833	4675585356	4838400315	467174299676	467864897991	150
6980206940	6980206215	6753400487	698834910611	698159357951	150
6980206940	6980206215	6753400487	698834910611	698159357951	150
6185558823	6185558069	2053400414	618540470359	618781344692	150
6185558823	6185558069	2053400414	618540470359	618781344692	150
557852882	557852000	4413700091	55467614182	55580208728	150
557852882	557852000	4413700091	55467614182	55580208728	150
4829465554	4829465260	7867410610	482093526246	482124083467	150
4829465554	4829465260	7867410610	482093526246	482124083467	150
4590486798	4590486965	3537400297	459581465524	459585159645	150
4590486798	4590486965	3537400297	459581465524	459585159645	150
3527692440	3527692549	6428400179	352507398481	352745873750	150
1760536051	1760536824	2584500681	176480711659	176297263457	150
1760536051	1760536824	2584500681	176480711659	176297263457	150
5364202076	5364202335	1157500355	536510706397	536031949179	150
5364202076	5364202335	1157500355	536510706397	536031949179	150
4192438184	4192438149	9461500540	419513784843	419371498439	150
4192438184	4192438149	9461500540	419513784843	419371498439	150
1439885878	1439885484	7756700479	143965758134	143452712368	150
1439885878	1439885484	7756700479	143965758134	143452712368	150
919954323	919954473	3000500912	91918497882	91419848868	150
919954323	919954473	3000500912	91918497882	91419848868	150
3775154815	3775154517	2956700494	377850739292	377660741835	150
3775154815	3775154517	2956700494	377850739292	377660741835	150
7382297518	7382297239	7684600729	738896794060	738010900123	150
7382297518	7382297239	7684600729	738896794060	738010900123	150
7736923478	7736923496	5452210516	773225957242	773974004399	150
7736923478	7736923496	5452210516	773225957242	773974004399	150
3969282512	3969282127	1036400205	396212485302	396506228344	150
3969282512	3969282127	1036400205	396212485302	396506228344	150
9082725958	9082725965	481600722	908769148289	908201517997	150
9082725958	9082725965	481600722	908769148289	908201517997	150
3915450005	3915450993	7697400903	391795122497	391989939740	150
3915450005	3915450993	7697400903	391795122497	391989939740	150
9866410437	9866410905	5427610130	986703517828	986760719471	150
9866410437	9866410905	5427610130	986703517828	986760719471	150
5470179654	5470179973	5639400279	547776178601	547847600453	150
5470179654	5470179973	5639400279	547776178601	547847600453	150

2866033142	2866033283	4921500188	286634638993	286656102950	150
2866033142	2866033283	4921500188	286634638993	286656102950	150
3959393054	3959393401	1032500182	395656993671	395969581992	150
3959393054	3959393401	1032500182	395656993671	395969581992	150
6365426204	6365426267	6703500954	636185799000	636991344114	150
6365426204	6365426267	6703500954	636185799000	636991344114	150
391221560	391221870	3959710427	39369368353	39451288499	150
391221560	391221870	3959710427	39369368353	39451288499	150
9662137832	9662137226	3994800942	966679082941	966121427392	150
9662137832	9662137226	3994800942	966679082941	966121427392	150
8858437578	8858437445	6509910000	885595124935	885853440075	150
8858437578	8858437445	6509910000	885595124935	885853440075	150
6237420854	6237420599	758610439	623118617321	623728556683	150
6237420854	6237420599	758610439	623118617321	623728556683	150
9714461043	9714461405	9512400086	971501538850	971951895393	150
9714461043	9714461405	9512400086	971501538850	971951895393	150
1199630589	1199630826	5608400998	119825525884	119611432892	150
1199630589	1199630826	5608400998	119825525884	119611432892	150
1790458490	1790458923	942500372	179035544734	179898160866	150
1790458490	1790458923	942500372	179035544734	179898160866	150
1614621879	1614621941	3493500806	161699139642	161113586921	150
1614621879	1614621941	3493500806	161699139642	161113586921	150
1891788798	1891788849	453500410	189345256166	189434639343	150
1891788798	1891788849	453500410	189345256166	189434639343	150
8801303730	8801303253	3627610147	880511786489	880834782943	150
8801303730	8801303253	3627610147	880511786489	880834782943	150
3497060505	3497060174	3357500377	349393274912	349602436364	150
3497060505	3497060174	3357500377	349393274912	349602436364	150
622720369	622720691	602500943	62420700741	62888087243	150
622720369	622720691	602500943	62420700741	62888087243	150
2540237846	2540237770	1465710472	254000454254	254120796843	150
2540237846	2540237770	1465710472	254000454254	254120796843	150
3395409960	3395409837	8793500840	339640166905	339315657828	150
5663329285	5663329058	3735400280	566869882326	566172687902	150
5663329285	5663329058	3735400280	566869882326	566172687902	150
9576571626	9576571878	4906400000	957077901254	957118832241	150
9576571626	9576571878	4906400000	957077901254	957118832241	150
416747747	416747667	3394400829	41807784777	41142291224	150
416747747	416747667	3394400829	41807784777	41142291224	150
4760182475	4760182090	7487700744	476158147847	476570382322	150
4760182475	4760182090	7487700744	476158147847	476570382322	150
8143137257	8143137105	5164500453	814270596015	814502975987	150
9537361969	9537361137	2654500400	953731276937	953076717130	150
9537361969	9537361137	2654500400	953731276937	953076717130	150
2893207297	2893207156	6589400764	289997126722	289776333873	150
2893207297	2893207156	6589400764	289997126722	289776333873	150
170901252	170901141	8448400376	17817661721	17572225815	150

170901252	170901141	8448400376	17817661721	17572225815	150
4203769051	4203769253	5385400744	420666820332	420479734697	150
4203769051	4203769253	5385400744	420666820332	420479734697	150
9639831109	9639831576	727610154	963929002995	963482637676	150
9639831109	9639831576	727610154	963929002995	963482637676	150
2643148735	2643148650	3357400474	264177150142	264958155737	150
2643148735	2643148650	3357400474	264177150142	264958155737	150
1376372024	1376372433	9642500351	137873221790	137131253660	150
1376372024	1376372433	9642500351	137873221790	137131253660	150
6831361794	6831361157	4386400766	683375038433	683289881231	150
6831361794	6831361157	4386400766	683375038433	683289881231	150
9295781872	9295781699	4762500555	929225333110	929659952274	150
9295781872	9295781699	4762500555	929225333110	929659952274	150
8268049761	8268049110	3996400937	826588045956	826350670204	150
8268049761	8268049110	3996400937	826588045956	826350670204	150
1612186561	1612186486	7202500909	161135434847	161659257550	150
1612186561	1612186486	7202500909	161135434847	161659257550	150
3221201784	3221201162	7370500637	322634843466	322751113830	150
3221201784	3221201162	7370500637	322634843466	322751113830	150
8596701315	8596701947	5074500536	859333081412	859861829068	150
8596701315	8596701947	5074500536	859333081412	859861829068	150
6746708053	6746708084	456710392	674242041321	674647457614	150
6746708053	6746708084	456710392	674242041321	674647457614	150
7098757588	7098757981	6702500957	709338093639	709173520217	150
7098757588	7098757981	6702500957	709338093639	709173520217	150
3292915577	3292915398	8581600740	329417051811	329992262790	150
3292915577	3292915398	8581600740	329417051811	329992262790	150
1260822933	1260822513	9112400048	126193763535	126289852435	150
1260822933	1260822513	9112400048	126193763535	126289852435	150
601986155	601986128	4112500994	60239211956	60340243831	150
601986155	601986128	4112500994	60239211956	60340243831	150
2475415985	2475415057	6474500577	247009182439	247687649451	150
2475415985	2475415057	6474500577	247009182439	247687649451	150
1689917178	1689917618	2061500493	168590161167	168647272378	150
1689917178	1689917618	2061500493	168590161167	168647272378	150
381298561	381298516	6084500638	38463608818	38544251688	150
381298561	381298516	6084500638	38463608818	38544251688	150
317789376	317789977	8747400419	31812369892	31025205930	150
317789376	317789977	8747400419	31812369892	31025205930	150
5831402813	5831402601	9243500301	583765819811	583044708544	150
5831402813	5831402601	9243500301	583765819811	583044708544	150
8769152768	8769152934	6077410628	876364285900	876889856737	150
8769152768	8769152934	6077410628	876364285900	876889856737	150
3601788007	3601788563	2064400500	360855312936	360082896116	150
3601788007	3601788563	2064400500	360855312936	360082896116	150
8293378644	8293378678	7294310785	829556975911	829224074520	150
8293378644	8293378678	7294310785	829556975911	829224074520	150

6593118392	6593118719	6983500758	659181076802	659156133225	150
6593118392	6593118719	6983500758	659181076802	659156133225	150
9702689515	9702689249	6493500809	970352867798	970711291507	150
9702689515	9702689249	6493500809	970352867798	970711291507	150
9223327335	9223327465	4220500130	922533754786	922906900694	150
9223327335	9223327465	4220500130	922533754786	922906900694	150
7882719585	7882719297	6404500905	788359574076	788955520145	150
7882719585	7882719297	6404500905	788359574076	788955520145	150
9251570964	9251570641	4487510822	925497841102	925698566332	150
9251570964	9251570641	4487510822	925497841102	925698566332	150
5313967552	5313967786	2325400134	531807344164	531246772314	150
5313967552	5313967786	2325400134	531807344164	531246772314	150
3692409321	3692409237	9622500150	369849766008	369936235515	150
3692409321	3692409237	9622500150	369849766008	369936235515	150
8589408230	8589408908	9574400656	858514688348	858803724044	150
8589408230	8589408908	9574400656	858514688348	858803724044	150
5055944711	5055944323	7375400646	505558912402	505673159579	150
5055944711	5055944323	7375400646	505558912402	505673159579	150
5660425701	5660425807	1775400680	566066168909	566325618930	150
5660425701	5660425807	1775400680	566066168909	566325618930	150
5044960703	5044960461	1114500965	504033620202	504418407570	150
5044960703	5044960461	1114500965	504033620202	504418407570	150
4794924014	4794924259	2615400061	479380925747	479902097310	150
7334619922	7334619824	8730500280	733964695540	733197911448	150
7334619922	7334619824	8730500280	733964695540	733197911448	150
3619758003	3619758045	3393500796	361747537847	361848266144	150
3619758003	3619758045	3393500796	361747537847	361848266144	150
4006902381	4006902658	7892400907	400592252156	400878337427	150
4006902381	4006902658	7892400907	400592252156	400878337427	150
6066582917	6066582123	9554400458	606861084877	606833464133	150
6066582917	6066582123	9554400458	606861084877	606833464133	150
8052082484	8052082241	126400115	805560402310	805947683181	150
8052082484	8052082241	126400115	805560402310	805947683181	150
6956607408	6956607380	1524610173	695180966747	695600017197	150
6956607408	6956607380	1524610173	695180966747	695600017197	150
3736266034	3736266163	1812610124	373380265461	373027560914	150
3736266034	3736266163	1812610124	373380265461	373027560914	150
6711602498	6711602512	6435610258	671394048463	671334915246	150
6711602498	6711602512	6435610258	671394048463	671334915246	150
6968303816	6968303276	4781500760	696475369827	696684396767	150
6968303816	6968303276	4781500760	696475369827	696684396767	150
1199666866	1199666823	2206400928	119289590521	119921333123	150
1199666866	1199666823	2206400928	119289590521	119921333123	150
9677708679	9677708181	8315500974	967554458710	967904072597	150
9677708679	9677708181	8315500974	967554458710	967904072597	150
9397324728	9397324520	4156710367	939639422157	939145383921	150
9397324728	9397324520	4156710367	939639422157	939145383921	150

7169839198	7169839357	1498400861	716821183958	716458259449	150
7169839198	7169839357	1498400861	716821183958	716458259449	150
1754418408	1754418356	9058400437	175514036418	175507440800	150
1754418408	1754418356	9058400437	175514036418	175507440800	150
415671926	415671487	9237400273	41529480406	41919782784	150
415671926	415671487	9237400273	41529480406	41919782784	150
299813946	299813561	1455500384	29060256529	29064838502	150
2169083837	2169083637	3472810712	216903153195	216107556471	150
2169083837	2169083637	3472810712	216903153195	216107556471	150
1202091420	1202091419	9692400889	120232044572	120022031685	150
1202091420	1202091419	9692400889	120232044572	120022031685	150
5277404642	5277404928	1579400660	527049851063	527922336106	150
5277404642	5277404928	1579400660	527049851063	527922336106	150
5839009975	5839009520	1615500003	583257958184	583279317455	150
5839009975	5839009520	1615500003	583257958184	583279317455	150
3870353522	3870353740	9410610115	387801336776	387077098096	150
3870353522	3870353740	9410610115	387801336776	387077098096	150
905973005	905973363	7977700695	90115101552	90210556854	150
905973005	905973363	7977700695	90115101552	90210556854	150
6476482706	6476482963	6297700823	647956953327	647288133330	150
6476482706	6476482963	6297700823	647956953327	647288133330	150
2592667964	2592667503	5978400717	259939313339	259387248836	150
2592667964	2592667503	5978400717	259939313339	259387248836	150
6279771702	6279771430	1264400519	627149421287	627282804495	150
6279771702	6279771430	1264400519	627149421287	627282804495	150
2521993413	2521993512	6752500457	252132407938	252307436268	150
2521993413	2521993512	6752500457	252132407938	252307436268	150
9784093578	9784093031	5870500684	978874652188	978906912904	150
9784093578	9784093031	5870500684	978874652188	978906912904	150
3937531808	3937531987	3553810520	393463293325	393117410057	150
3937531808	3937531987	3553810520	393463293325	393117410057	150
6805525905	6805525480	2315400028	680875645072	680966879767	150
6805525905	6805525480	2315400028	680875645072	680966879767	150
6486494972	6486494800	5576400682	648929343467	648597943268	150
6486494972	6486494800	5576400682	648929343467	648597943268	150
1028493044	1028493406	1584600713	102967268803	102020082869	150
1028493044	1028493406	1584600713	102967268803	102020082869	150
1920052532	1920052528	8598510929	192798017440	192511143035	150
1920052532	1920052528	8598510929	192798017440	192511143035	150
9898647916	9898647350	7704500932	989075981781	989112790596	150
9898647916	9898647350	7704500932	989075981781	989112790596	150
4021478198	4021478631	5003400925	402763084653	402478147811	150
4021478198	4021478631	5003400925	402763084653	402478147811	150
6951266969	6951266478	7353400449	695179869710	695679803559	150
6951266969	6951266478	7353400449	695179869710	695679803559	150
2212457735	2212457247	5698400885	221489976337	221913094015	150
2212457735	2212457247	5698400885	221489976337	221913094015	150

9556271913	9556271842	5952400516	955586121711	955018166272	150
9556271913	9556271842	5952400516	955586121711	955018166272	150
1943464926	1943464993	6224810196	194287828993	194829386315	150
1943464926	1943464993	6224810196	194287828993	194829386315	150
6665638470	6665638925	402400970	666772806794	666996415373	150
6665638470	6665638925	402400970	666772806794	666996415373	150
7652265810	7652265489	5356700438	765321840775	765470161998	150
7652265810	7652265489	5356700438	765321840775	765470161998	150
7073394845	7073394251	1222610164	707567635188	707870614353	150
7073394845	7073394251	1222610164	707567635188	707870614353	150
2903670466	2903670723	8402810014	290012565369	290176161189	150
2319702431	2319702732	8612610111	231603494125	231123661627	150
2319702431	2319702732	8612610111	231603494125	231123661627	150
4746813363	4746813096	1292600795	474695048158	474804722419	150
4746813363	4746813096	1292600795	474695048158	474804722419	150
9773546721	9773546272	2564500489	977252930377	977439076574	150
9773546721	9773546272	2564500489	977252930377	977439076574	150
7752222700	7752222824	313500007	775591630069	775584819235	150
7752222700	7752222824	313500007	775591630069	775584819235	150
2035716185	2035716505	8472500630	203534666800	203670527606	150
2035716185	2035716505	8472500630	203534666800	203670527606	150
7629911440	7629911694	1942400412	762215196726	762745739098	150
7629911440	7629911694	1942400412	762215196726	762745739098	150
5424107592	5424107738	5905400989	542127419111	542264153702	150
5424107592	5424107738	5905400989	542127419111	542264153702	150
4574249280	4574249394	3508400987	457226194298	457346100004	150
4574249280	4574249394	3508400987	457226194298	457346100004	150
7162901192	7162901999	1402810007	716640433643	716353396320	150
7162901192	7162901999	1402810007	716640433643	716353396320	150
6318505589	6318505577	3695400870	631671224179	631363204019	150
6318505589	6318505577	3695400870	631671224179	631363204019	150
458613328	458613985	3393600801	45509832433	45080539312	150
458613328	458613985	3393600801	45509832433	45080539312	150
4206111782	4206111434	2446400350	420150522950	420585631910	150
4206111782	4206111434	2446400350	420150522950	420585631910	150
7839683285	7839683290	9304500898	783046314480	783565037910	150
7839683285	7839683290	9304500898	783046314480	783565037910	150
6749767489	6749767452	6415400043	674877956743	674571784641	150
6749767489	6749767452	6415400043	674877956743	674571784641	150
7901068091	7901068517	226400125	790702723095	790155596633	150
7901068091	7901068517	226400125	790702723095	790155596633	150
3065319771	3065319716	9086400740	306942250785	306930277733	150
3065319771	3065319716	9086400740	306942250785	306930277733	150
3134886624	3134886632	3511610109	313007640331	313585072442	150
3134886624	3134886632	3511610109	313007640331	313585072442	150
1243328032	1243328808	1865400590	124606739315	124419278460	150
1243328032	1243328808	1865400590	124606739315	124419278460	150

9320121627	9320121316	2805400977	932323825817	932504119317	150
9320121627	9320121316	2805400977	932323825817	932504119317	150
2157465171	2157465766	1262445943	215910636639	215449857783	150
2157465171	2157465766	1262445943	215910636639	215449857783	150
2861354957	2861354458	1863400591	286189868975	286582041028	150
2861354957	2861354458	1863400591	286189868975	286582041028	150
6941786504	6941786108	9923986872	694076966841	694670009441	150
6941786504	6941786108	9923986872	694076966841	694670009441	150
7604599577	7604599702	1452500423	760571915272	760465328756	150
7572705461	7572705325	4066700506	757128783374	757189129827	150
7572705461	7572705325	4066700506	757128783374	757189129827	150
4386414823	4386414240	9884800835	438040622109	438922249869	150
4386414823	4386414240	9884800835	438040622109	438922249869	150
797008837	797008405	4302400964	79542817475	79465571487	150
797008837	797008405	4302400964	79542817475	79465571487	150
2361653378	2361653208	284600683	236947554195	236455002865	150
2361653378	2361653208	284600683	236947554195	236455002865	150
5556162457	5556162858	143400324	555467969879	555335390462	150
5556162457	5556162858	143400324	555467969879	555335390462	150
8270828496	8270828740	4781600756	827262893668	827216700428	150
8270828496	8270828740	4781600756	827262893668	827216700428	150
556740005	556740008	755400479	55613183323	55400004321	150
556740005	556740008	755400479	55613183323	55400004321	150
7523705964	7523705479	24400104	752397894052	752709220611	150
7523705964	7523705479	24400104	752397894052	752709220611	150
9830514990	9830514671	3826400187	983499479339	983427112101	150
9830514990	9830514671	3826400187	983499479339	983427112101	150
2937372781	2937372059	3784500702	293320333207	293867660412	150
2937372781	2937372059	3784500702	293320333207	293867660412	150
8224431960	8224431059	9711610134	822569321815	822004739550	150
8224431960	8224431059	9711610134	822569321815	822004739550	150
8947540845	8947540691	2981600773	894701379575	894466292141	150
8947540845	8947540691	2981600773	894701379575	894466292141	150
8040110254	8040110539	2555400461	804128760241	804355009604	150
8040110254	8040110539	2555400461	804128760241	804355009604	150
1925871790	1925871807	8592500837	192813858406	192144947559	150
1925871790	1925871807	8592500837	192813858406	192144947559	150
9543343810	9543343333	1721800148	954680890320	954793086342	150
9543343810	9543343333	1721800148	954680890320	954793086342	150
9221967951	9221967047	2683500725	922784177229	922656093329	150
9221967951	9221967047	2683500725	922784177229	922656093329	150
5742448164	5742448962	7014400011	574687773061	574829646326	150
5742448164	5742448962	7014400011	574687773061	574829646326	150
4672578169	4672578173	964400587	467679823859	467046189551	150
4672578169	4672578173	964400587	467679823859	467046189551	150
5035827896	5035827473	7021610162	503073182543	503208441859	150
5035827896	5035827473	7021610162	503073182543	503208441859	150

3671305679	3671305917	2884500711	367996798952	367254918391	150
3671305679	3671305917	2884500711	367996798952	367254918391	150
9901932231	9901932267	7064500445	990501688228	990568895890	150
9901932231	9901932267	7064500445	990501688228	990568895890	150
4127292557	4127292904	6632500248	412382870591	412573350173	150
4127292557	4127292904	6632500248	412382870591	412573350173	150
8417938804	8417938542	6163400526	841971453219	841891384654	150
8417938804	8417938542	6163400526	841971453219	841891384654	150
607440288	607440007	1587410772	60779778291	60170922742	150
607440288	607440007	1587410772	60779778291	60170922742	150
8814278626	8814278502	5610610131	881166186101	881937618141	150
8814278626	8814278502	5610610131	881166186101	881937618141	150
1494277598	1494277272	1035710136	149308609776	149477065162	150
1494277598	1494277272	1035710136	149308609776	149477065162	150
8736470309	8736470226	9697700865	873758548458	873571358866	150
8736470309	8736470226	9697700865	873758548458	873571358866	150
5669446941	5669446616	1482500723	566631778127	566117023291	150
5669446941	5669446616	1482500723	566631778127	566117023291	150
6527755904	6527755784	1286400752	652838980798	652283799108	150
6527755904	6527755784	1286400752	652838980798	652283799108	150
2598231748	2598231699	4496400883	259417464083	259020503250	150
2598231748	2598231699	4496400883	259417464083	259020503250	150
2010996471	2010996698	7584083778	201087899234	201164397856	150
2010996471	2010996698	7584083778	201087899234	201164397856	150
2872502750	2878906108	4364400532	287080505871	287717773981	150
2872502750	2878906108	4364400532	287080505871	287717773981	150
7997217557	7997217567	6190500813	799374934058	799321375943	150
7997217557	7997217567	6190500813	799374934058	799321375943	150
7854065303	7854065876	7634500210	785556385244	785798689379	150
7854065303	7854065876	7634500210	785556385244	785798689379	150
9494450496	9494450677	4236500183	949917679327	949628611170	150
7080877032	7080877045	1593910000	708559019718	708654335098	150
7080877032	7080877045	1593910000	708559019718	708654335098	150
8963380503	8963380942	3340500335	896166821408	896164694265	150
8963380503	8963380942	3340500335	896166821408	896164694265	150
1363559548	1363559270	3859710417	136210249764	136835084478	150
1363559548	1363559270	3859710417	136210249764	136835084478	150
5703221598	5707418346	2252400443	570896564691	570956740516	150
4256414179	4256414260	9682600743	425681685256	425285347964	150
4256414179	4256414260	9682600743	425681685256	425285347964	150
325460071	329748833	4497700841	32524929587	32144905885	150
325460071	329748833	4497700841	32524929587	32144905885	150
3479591232	3479591903	9097700806	347589033055	347966756813	150
3273284424	3273284911	8917400144	327108671599	327756509706	150
3273284424	3273284911	8917400144	327108671599	327756509706	150
3398833332	3391623085	9611610125	339814585796	339932102380	150
3398833332	3391623085	9611610125	339814585796	339932102380	150

9995218408	9998223430	3893400890	999313837600	999378393620	150
9995218408	9998223430	3893400890	999313837600	999378393620	150
6488079178	6484875283	8195400825	648200619231	648192909446	150
6488079178	6484875283	8195400825	648200619231	648192909446	150
1341233794	1346114487	3021810159	134399614716	134032727828	150
1341233794	1346114487	3021810159	134399614716	134032727828	150
9021870302	9024199059	9924500145	902521617872	902901604597	150
9021870302	9024199059	9924500145	902521617872	902901604597	150
2016937143	2016308220	6306400942	201579735738	201779096750	150
2016937143	2016308220	6306400942	201579735738	201779096750	150
1740704394	1740561796	4605400959	174255581658	174784376549	150
1740704394	1740561796	4605400959	174255581658	174784376549	150
3739115239	3733947271	8466400571	373459602762	373874409266	150
3739115239	3733947271	8466400571	373459602762	373874409266	150
6440379371	6444547943	5393500798	644738307130	644122909970	150
6440379371	6444547943	5393500798	644738307130	644122909970	150
5437874690	5431067470	2591500834	543708700916	543869568488	150
5437874690	5431067470	2591500834	543708700916	543869568488	150
6437228802	6439184395	9744700407	643361521736	643706931074	150
6437228802	6439184395	9744700407	643361521736	643706931074	150
9461085259	9460933029	4507400003	946097027323	946334778485	150
9461085259	9460933029	4507400003	946097027323	946334778485	150
6378052680	6374103353	6189400724	637667363695	637158180385	150
6378052680	6374103353	6189400724	637667363695	637158180385	150
2560142883	2561028218	7104500878	256417131923	256682298944	150
2560142883	2561028218	7104500878	256417131923	256682298944	150
5372787505	5373882458	6009510977	537974618478	537387228295	150
5372787505	5373882458	6009510977	537974618478	537387228295	150
1883440304	1889777912	6390500832	188911939474	188433906376	150
1883440304	1889777912	6390500832	188911939474	188433906376	150
611080491	616357255	520500156	61025527301	61283105703	150
611080491	616357255	520500156	61025527301	61283105703	150
3651733632	3650051501	640500362	365017397159	365452940330	150
3651733632	3650051501	640500362	365017397159	365452940330	150
4323638805	4326639956	1896400923	432563893151	432149826326	150
4323638805	4326639956	1896400923	432563893151	432149826326	150
681158977	685620748	994400886	68407080801	68377910862	150
681158977	685620748	994400886	68407080801	68377910862	150
2220579736	2222923850	7733500249	222893628270	222271267421	150
2220579736	2222923850	7733500249	222893628270	222271267421	150
8427784452	8422094858	2495400849	842809608191	842063997959	150
8427784452	8422094858	2495400849	842809608191	842063997959	150
647673209	640035982	6582400776	64817705437	64946612446	150
647673209	640035982	6582400776	64817705437	64946612446	150
792074021	795121635	8381600720	79090485516	79150973877	150
792074021	795121635	8381600720	79090485516	79150973877	150
6352372908	6357593480	6684500695	635431050282	635348991989	150

6352372908	6357593480	6684500695	635431050282	635348991989	150
9898125792	9898289488	5505310913	989199262242	989199376625	150
9898125792	9898289488	5505310913	989199262242	989199376625	150
9712997034	9710259567	9698510940	971677070417	971364781415	150
9712997034	9710259567	9698510940	971677070417	971364781415	150
5219467972	5217248955	4016400010	521722807121	521819116404	150
5219467972	5217248955	4016400010	521722807121	521819116404	150
1177550795	1176259434	7021500102	117606996761	117209520519	150
1177550795	1176259434	7021500102	117606996761	117209520519	150
8396062261	8395066075	3652400484	839219171158	839790581207	150
8396062261	8395066075	3652400484	839219171158	839790581207	150
6595550681	6598104487	9392500818	659602754629	659739197520	150
6595550681	6598104487	9392500818	659602754629	659739197520	150
1104682825	1108512497	3633400277	110931502869	110317480996	150
1104682825	1108512497	3633400277	110931502869	110317480996	150
4120623248	4123394585	5454700470	412489382341	412341127192	150
693216885	694514300	763400580	69392804404	69161890935	150
693216885	694514300	763400580	69392804404	69161890935	150
2886752986	2882475616	4384600696	288284982981	288180771459	150
2886752986	2882475616	4384600696	288284982981	288180771459	150
9489023164	9480343271	578400673	948748266842	948116094999	150
9489023164	9480343271	578400673	948748266842	948116094999	150
9079292021	9071668135	2394800877	907055236591	907905196280	150
9079292021	9071668135	2394800877	907055236591	907905196280	150
8090274192	8095765967	1572810720	809444965626	809850622129	150
8090274192	8095765967	1572810720	809444965626	809850622129	150
2787453247	2780259137	7073500574	278357863361	278180929461	150
2787453247	2780259137	7073500574	278357863361	278180929461	150
614900000	614900055	614900088	61151822134	61899001831	150
614900000	614900055	614900088	61151822134	61899001831	150
1241900000	1241900560	1241900413	124806489911	124750006398	150
1241900000	1241900560	1241900413	124806489911	124750006398	150
1514110000	1514110435	1514110133	151458214242	151585495370	150
1514110000	1514110435	1514110133	151458214242	151585495370	150
2560500000	2560500193	2560500553	256647249270	256817282986	150
2560500000	2560500193	2560500553	256647249270	256817282986	150
5041900000	5041900534	5041900397	504248033438	504407401052	150
5041900000	5041900534	5041900397	504248033438	504407401052	150
5314110000	5314110409	5314110117	531655508764	531508969465	150
5314110000	5314110409	5314110117	531655508764	531508969465	150
5324900000	5324900162	5324900160	532971356111	532381435720	150
5324900000	5324900162	5324900160	532971356111	532381435720	150
5404900000	5404900915	5404900974	540432496749	540442044660	150
5404900000	5404900915	5404900974	540432496749	540442044660	150
5904900000	5904900964	5904900023	590553405297	590640149144	150
5904900000	5904900964	5904900023	590553405297	590640149144	150
6544010000	6544010183	6544010284	654697876446	654678023845	150

6544010000	6544010183	6544010284	654697876446	654678023845	150
7304900000	7304900903	7304900966	730762518976	730342947924	150
7304900000	7304900903	7304900966	730762518976	730342947924	150
7604900000	7604900924	7604900995	760284784358	760234457111	150
7604900000	7604900924	7604900995	760284784358	760234457111	150
8644010000	8644010210	8644010296	864721894303	864092986369	150
8644010000	8644010210	8644010296	864721894303	864092986369	150
9914900000	9914900109	9914900126	991652248527	991367096790	150
9914900000	9914900109	9914900126	991652248527	991367096790	150
5371759447	5371759838	5493900878	537188423838	537661465375	150
7675665270	7675665657	9665910000	767021044436	767069752626	150
7675665270	7675665657	9665910000	767021044436	767069752626	150
7464310401	7464310584	9793900909	746149147512	746949956534	150
7464310401	7464310584	9793900909	746149147512	746949956534	150
4140184111	4140184140	5614110147	414935681159	414427185308	150
4140184111	4140184140	5614110147	414935681159	414427185308	150
9915280978	9915280346	124900137	991216634398	991970255623	150
9915280978	9915280346	124900137	991216634398	991970255623	150
9615012481	9615012293	3944010321	961655422334	961651333162	150
9615012481	9615012293	3944010321	961655422334	961651333162	150
1813320622	1813320792	2214900050	181824269152	181462654735	150
4382412734	4382412129	204900949	438495569280	438699835788	150
4382412734	4382412129	204900949	438495569280	438699835788	150
1758724772	1758724063	3693900895	175761795433	175378348727	150
1758724772	1758724063	3693900895	175761795433	175378348727	150
8894220566	8894220831	8744010306	889296393369	889316652280	150
4227868769	4227868049	6593900889	422595514006	422122831779	150
4227868769	4227868049	6593900889	422595514006	422122831779	150
8029250276	8020045713	1904900019	802408372977	802633318346	150
8029250276	8020045713	1904900019	802408372977	802633318346	150
787849915	784106145	7893900917	78364264946	78004986928	150
787849915	784106145	7893900917	78364264946	78004986928	150
6149000000	614900056	614900088	61148941269	61899001831	150
1241900000	1241900561	1241900413	124161617441	124750006398	150
1514110000	1514110436	1514110133	151486236802	151585495370	150
2560500000	2560500194	2560500553	256109670229	256817282986	150
5041900000	5041900535	5041900397	504508767904	504407401052	150
5314110000	5314110410	5314110117	531657479465	531508969465	150
5324900000	5324900163	5324900160	532701188995	532381435720	150
5404900000	5404900916	5404900974	540395160703	540442044660	150
5904900000	5904900965	5904900023	590223066609	590640149144	150
6544010000	6544010184	6544010284	654620812916	654678023845	150
7304900000	7304900904	7304900966	730170992808	730342947924	150
7604900000	7604900925	7604900995	760920240072	760234457111	150
8644010000	8644010211	8644010296	864517256531	864092986369	150
9914900000	9914900110	9914900126	991489021369	991367096790	150
5371759447	5371759351	5493900878	537053207375	537661465375	150

7675665270	7675665982	9665910000	767249400534	767069752626	150
7464310401	7464310263	9793900909	746064865891	746949956534	150
9915280978	9915280595	124900137	991126030052	991970255623	150
4140184111	4140184993	5614110147	414094207567	414427185308	150
9615012481	9615012996	3944010321	961563685155	961651333162	150
1813320622	1813320051	2214900050	181250903285	181462654735	150
4382412734	4382412566	204900949	438215658989	438699835788	150
8894220566	8894220841	8744010306	889962521888	889316652280	150
4227868769	4227868203	6593900889	422909781510	422122831779	150
1758724772	1758724084	3693900895	175023853877	175378348727	150
8029250276	8025399442	1904900019	802029875280	802633318346	150
787849915	789484593	7893900917	78244380895	78004986928	150
4996310000	4996310143	4996310860	499373051962	499731198800	150
4996310000	4996310143	4996310860	499373051962	499731198800	150
4996310000	4996310144	4996310860	499475061919	499731198800	150
2223700000	2223700404	2223700167	222726043086	222763529665	150
2815500000	2815500760	2815500026	281198991759	281504677039	150
4395400000	4395400551	4395400841	439069748702	439545617240	150
5209400000	5209400221	5209400944	520679411369	520500121503	150
5412500000	5412500198	5412500025	541284412967	541225446923	150
5372500000	5372500692	5372500617	537151190161	537880459443	150
7244400000	7244400991	7244400327	724034580405	724346230489	150
7509400000	7509400273	7509400975	750402399022	750704357445	150
9563500000	9563500507	9563500526	956621217726	956622453638	150
9657500000	9657500407	9657500414	965571141297	965998173028	150
2223700000	2223700403	2223700167	222173186284	222763529665	150
2223700000	2223700403	2223700167	222173186284	222763529665	150
2815500000	2815500759	2815500026	281172895475	281504677039	150
2815500000	2815500759	2815500026	281172895475	281504677039	150
4395400000	4395400550	4395400841	439422616108	439545617240	150
4395400000	4395400550	4395400841	439422616108	439545617240	150
5209400000	5209400220	5209400944	520024942573	520500121503	150
5209400000	5209400220	5209400944	520024942573	520500121503	150
5412500000	5412500197	5412500025	541509103347	541225446923	150
5412500000	5412500197	5412500025	541509103347	541225446923	150
5372500000	5372500691	5372500617	537388332720	537880459443	150
5372500000	5372500691	5372500617	537388332720	537880459443	150
7244400000	7244400990	7244400327	724292620546	724346230489	150
7244400000	7244400990	7244400327	724292620546	724346230489	150
7509400000	7509400272	7509400975	750976994494	750704357445	150
7509400000	7509400272	7509400975	750976994494	750704357445	150
9563500000	9563500506	9563500526	956541159142	956622453638	150
9563500000	9563500506	9563500526	956541159142	956622453638	150
9657500000	9657500406	9657500414	965606603198	965998173028	150
9657500000	9657500406	9657500414	965606603198	965998173028	150
4996310000	4996310130	4996310883	499547313857	499731198800	150
4996310000	4996310132	4996310896	499137743840	499731198800	150

4996310000	4996310136	4996310933	499895681463	499731198800	150
4996310000	4996310136	4996310933	499895681463	499731198800	150
4996310000	4996310138	4996310943	499260346838	499731198800	150
4996310000	4996310140	4996310957	499583814300	499731198800	150
4996310000	4996310140	4996310957	499583814300	499731198800	150
4996310000	4996310145	4996310869	499553393273	499731198800	150
4996310000	4996310145	4996310869	499553393273	499731198800	150
4996310000	4996310147	4996310429	499711137833	499731198800	150
4996310000	4996310131	4996310883	499992022225	499731198800	150
4996310000	4996310133	4996310896	499014498423	499731198800	150
4996310000	4996310137	4996310933	499917323162	499731198800	150
4996310000	4996310139	4996310943	499122587108	499731198800	150
4996310000	4996310141	4996310957	499472275854	499731198800	150
4996310000	4996310146	4996310869	499454191692	499731198800	150
4996310000	4996310134	4996310910	499791900396	499731198800	150
4996310000	4996310135	4996310920	499889294594	499731198800	150
85400000	85400373	85400709	8892597450	8219208061	150
85400000	85400373	85400709	8276300949	8219208061	150
85400000	85400373	85400709	8440905006	8219208061	150
3987700000	3987700677	3987700790	398772507380	398760776939	150
4456700000	4456700903	4456700446	445553930916	445921799718	150
4456700000	4456700903	4456700446	445429915008	445921799718	150
4456700000	4456700903	4456700446	445096324099	445921799718	150
5662500000	5662500570	5662500546	566113660759	566643136023	150
5662500000	5662500570	5662500546	566865651793	566643136023	150
5662500000	5662500570	5662500546	566671558017	566643136023	150
9798510000	9798510131	9798510950	979718317897	979195568335	150
2109740012	2109276029	5780500773	210747298886	210246836478	150
2109740012	2109276029	5780500773	210810749748	210246836478	150
2109740012	2109276029	5780500773	210413896198	210246836478	150
9344815273	9345292852	5272500607	934094590306	934614930044	150
85400000	85400372	85400709	8792299106	8219208061	150
85400000	85400372	85400709	8726395801	8219208061	150
85400000	85400372	85400709	8726395801	8219208061	150
85400000	85400372	85400709	8716519515	8219208061	150
3987700000	3987700676	3987700790	398620728290	398760776939	150
4456700000	4456700902	4456700446	445142673513	445921799718	150
4456700000	4456700902	4456700446	445142673513	445921799718	150
4456700000	4456700902	4456700446	445666586427	445921799718	150
4456700000	4456700902	4456700446	445666586427	445921799718	150
4456700000	4456700902	4456700446	445153079204	445921799718	150
5662500000	5662500571	5662500546	566429690853	566643136023	150
5662500000	5662500571	5662500546	566785415121	566643136023	150
5662500000	5662500571	5662500546	566785415121	566643136023	150
5662500000	5662500571	5662500546	566226586418	566643136023	150
9798510000	9798510130	9798510950	979567668815	979195568335	150
9861700000	9861700969	9861700206	986435012308	986841310957	150

9861700000	9861700971	9861700481	986891723572	986841310957	150
9861700000	9861700973	9861700498	986816007299	986841310957	150
9861700000	9861700974	9861700021	986566097533	986841310957	150
9861700000	9861700975	9861700468	986611270311	986841310957	150
9861700000	9861700976	9861700421	986641000214	986841310957	150
9861700000	9861700977	9861700987	986296005807	986841310957	150
9861700000	9861700978	9861700001	986914322221	986841310957	150
9861700000	9861700825	9861700646	986393705451	986841310957	150
9861700000	9861700300	9861700365	986736475654	986841310957	150
9861700000	9861700109	9861700104	986005118229	986841310957	150
9861700000	9861700926	9861700583	986296602332	986841310957	150
2109740012	2100686233	5780500773	210387761066	210246836478	150
2109740012	2100686233	5780500773	210387761066	210246836478	150
2109740012	2100686233	5780500773	210848394197	210246836478	150
2109740012	2100686233	5780500773	210088362232	210246836478	150
2109740012	2100686233	5780500773	210088362232	210246836478	150
9344815273	9346112499	5272500607	934415863173	934614930044	150
1171608842	1171608797	4314900062	117886282757	117606512137	150
1171608842	1171608797	4314900062	117886282757	117606512137	150
1171608842	1171608920	4314900062	117174775038	117606512137	150
3657510000	3657510171	3657510544	365433797272	365716393099	150
4766500000	4766500212	4766500533	476555026270	476519387782	150
6694800000	6694800800	6694800913	669553330807	669771311313	150
3657510000	3657510170	3657510544	365660709608	365716393099	150
3657510000	3657510170	3657510544	365660709608	365716393099	150
8494800000	8494800773	8494800893	849222530225	849059746018	150
3827202410	3827202690	2593400859	382558634784	382413752996	150
3103066205	3103066473	2129711369	310260597505	310448089642	150
3827202410	3827202851	2593400859	382655326554	382413752996	150
3827202410	3827202851	2593400859	382655326554	382413752996	150
3103066205	3103066160	2129711369	310757995399	310448089642	150
5313967552	5313967927	2325400134	531946742766	531494637701	150
6665638470	6665638750	402400970	666582452326	666541037133	150
18311356	18311505	4780610834	1297314408	1149040358	150
5569508844	5566796474	3614510065	556018370924	556719591402	150
5313967552	5313967786	2325400134	531148433967	531494637701	150
5313967552	5313967786	2325400134	531148433967	531494637701	150
6665638470	6665638925	402400970	666722748765	666541037133	150
6665638470	6665638925	402400970	666722748765	666541037133	150
18311356	18311897	4780610834	1930425862	1149040358	150
18311356	18311897	4780610834	1930425862	1149040358	150
5569508844	5568549908	3614510065	556221852212	556719591402	150
5569508844	5568549908	3614510065	556221852212	556719591402	150
6916432063	6916432609	5434510248	691472705478	691739999580	150
8736470309	8736470085	9697700865	873701445319	873027383415	150
6916432063	6916432621	5434510248	691846797470	691739999580	150
8736470309	8736470226	9697700865	873955295269	873027383415	150

8736470309	8736470226	9697700865	873955295269	873027383415	150
3827202410	3827202690	2593400859	382437147270	382520151645	150
5900900456	5900695036	5167891929	590922377657	590412319726	150
3827202410	3827202851	2593400859	382824684180	382520151645	150
3827202410	3827202851	2593400859	382824684180	382520151645	150
5900900456	5900900081	5167891929	590565667704	590412319726	150
5900900456	5900900081	5167891929	590565667704	590412319726	150
681158977	685443236	994400886	68848189907	68507017508	150
681158977	685620748	994400886	68916487537	68507017508	150
681158977	685620748	994400886	68916487537	68507017508	150
7604599577	7604599193	1452500423	760057814048	760232015412	150
7604599577	7604599193	1452500423	760829950020	760232015412	150
7604599577	7604599193	1452500423	760322450828	760232015412	150
7604599577	7604599702	1452500423	760211617255	760232015412	150
7604599577	7604599702	1452500423	760211617255	760232015412	150
7604599577	7604599702	1452500423	760466976013	760232015412	150
7604599577	7604599702	1452500423	760589669758	760232015412	150
7604599577	7604599702	1452500423	760589669758	760232015412	150
4374558931	4374558605	951510470	437007324795	437419705295	150
4374558931	4374558082	951510470	437291474307	437419705295	150
4374558931	4374558082	951510470	437291474307	437419705295	150
2014069564	2014069355	6893510882	201566505752	201636107070	150
2014069564	2014069926	6893510882	201733025318	201636107070	150
9166510000	9166510149	9166510594	916148484974	916056161640	150
8769152768	8769152517	6077410628	876707392363	876767409046	150
9166510000	9166510148	9166510594	916239915919	916056161640	150
9166510000	9166510148	9166510594	916239915919	916056161640	150
8769152768	8769152934	6077410628	876645386412	876767409046	150
8769152768	8769152934	6077410628	876645386412	876767409046	150
799828474	799828311	8703774150	79380116848	79977304198	150
2862600000	2862600536	2862600559	286968529241	286318483137	150
2862600000	2862600536	2862600559	286968529241	286318483137	150
3813541512	3813541805	1541308116	381207025120	381030738055	150
3813541512	3813541805	1541308116	381207025120	381030738055	150
2862600000	2862600537	2862600559	286081864610	286318483137	150
3813541512	3813541570	1541308116	381309232862	381030738055	150
8639410000	8639410708	8639410273	863274263946	863563999456	150
8639410000	8639410707	8639410273	863031213810	863563999456	150
8639410000	8639410707	8639410273	863031213810	863563999456	150
48510000	48510428	48510372	4311512372	4081426480	150
33500000	33500234	33500174	3767346979	3712838817	150
5510000	5510074	5510911	306756995	543725939	150
19410000	19410333	19410008	1635772403	1156236901	150
56500000	56500016	56500359	5630134773	5676000820	150
11610000	11610695	11610058	1956253102	1511873903	150
46500000	46500856	46500258	4816219784	4912352650	150
28510000	28510220	28510174	2286898178	2458707322	150

10610000	10610500	10610066	1526112514	1439443518	150
610000	610350	610966	650726827	596226569	150
17410000	17410728	17410032	1335366496	1019764134	150
39510000	39510550	39510274	3920237164	3606587725	150
108410000	108410830	108410930	10891474392	10836950119	150
109410000	109410220	109410919	10542932255	10025414614	150
229410000	229410548	229410127	22386536439	22733933803	150
207410000	207410697	207410951	20169850094	20620549396	150
190610000	190610444	190610870	19832332076	19706113665	150
232510000	232510894	232510205	23640647090	23268689448	150
198410000	198410097	198410820	19043106288	19190309881	150
129410000	129410528	129410117	12736163363	12224636384	150
149410000	149410786	149410315	14226059758	14908870886	150
147410000	147410276	147410336	14963745843	14108034216	150
131510000	131510052	9031510194	13888673657	13407674796	150
351510000	351510025	351510409	35249123733	35157924735	150
358410000	358410511	358410445	35851102726	35227089909	150
325510000	325510328	325510149	32137322765	32542052374	150
349410000	349410825	349410335	34705864942	34380220270	150
356510000	356510002	356510501	35077265068	35496954189	150
321610000	321610854	321610185	32108057418	32530899500	150
288410000	288410932	288410729	28206174772	28875708066	150
291610000	291610219	291610865	29039607098	29874472135	150
267510000	267510274	267510600	26564734294	26725199656	150
285500000	285500259	285500664	28934144698	28271800580	150
278410000	278410781	278410630	27305768985	27579441729	150
270510000	270510247	270510609	27414082246	27491528380	150
249410000	249410806	249410325	24250651697	24932458090	150
437410000	437410240	437410270	43413828615	43881316079	150
436410000	436410801	436410268	43633184189	43083876863	150
453510000	453510468	453510435	45509066497	45203724599	150
479510000	479510119	479510708	47453105908	47424737865	150
443510000	443510288	443510333	44663094348	44404659735	150
459510000	459510903	459510511	45002639173	45606453508	150
396510000	396510556	396510908	39281862937	39862908453	150
416510000	416510597	416510110	41387744624	41908816952	150
410610000	410610464	410610106	41978508291	41906883603	150
426500000	426500689	426500099	42389095967	42133486173	150
397410000	397410704	397410850	39211926892	39751478447	150
376410000	376410317	376410659	37674871147	37988863651	150
427410000	427410028	427410171	42520700422	42969810962	150
378410000	378410797	378410640	37145462921	37823396046	150
590610000	590610516	590610909	59438831582	59591105405	150
597410000	597410734	597410870	59368342380	59454495227	150
618410000	618410967	618410081	61348744643	61703018663	150
575510000	575510068	575510710	57569977759	57179487781	150
616410000	616410514	616410088	61596833659	61343786977	150

585500000	585500234	585500695	58071109972	58617916295	150
586410000	586410506	586410781	58507127172	58392093131	150
543510000	543510306	543510343	54769953761	54781624513	150
546500000	546500937	546500309	54924227714	54368783056	150
556500000	556500017	556500409	55233398900	55285935407	150
495510000	495510336	495510910	49723606323	49981318645	150
549510000	549510753	549510421	54137251649	54718881531	150
527510000	527510906	527510228	52247681711	52219264197	150
497510000	497510872	497510916	49434434391	49750186480	150
525500000	525500873	525500095	52900956334	52446519943	150
498410000	498410109	498410850	49324664618	49026573110	150
702510000	702510430	702510952	70001091895	70476414159	150
717410000	717410838	717410102	71471495729	71318051916	150
706500000	706500486	706500928	70835094460	70224171620	150
709510000	709510286	709510042	70100221276	70940557488	150
691610000	691610291	691610905	69087335115	69038786139	150
725510000	725510392	725510191	72834778019	72276128940	150
646500000	646500955	646500319	64236590055	64113691085	150
681610000	681610116	681610805	68255378676	68552026515	150
672510000	672510162	672510646	67353924531	67425777358	150
658410000	658410569	658410475	65610521055	65295519395	150
637410000	637410286	637410290	63502573955	63878037626	150
667410000	667410568	667410584	66230642304	66420739654	150
638510000	638510422	638510332	63454459880	63030163581	150
676510000	676510324	676510737	67205047526	67928806742	150
836500000	836500827	836500238	83291874973	83943929875	150
839510000	839510692	839510351	83999339938	83581573337	150
843510000	843510360	843510374	84630548131	84423332659	150
861610000	861610776	861610626	86489304854	86839037928	150
837410000	837410199	9737410308	83510760971	83842190574	150
852510000	852510403	852510467	85425414216	85936014947	150
757510000	757510184	757510551	75324134461	75405753858	150
749410000	749410773	749410375	74716865535	74753242417	150
750510000	750510990	750510461	75111073384	75384836691	150
770610000	770610281	770610729	77014059380	77006891319	150
795510000	795510390	795510940	79329309381	79881830979	150
758410000	758410590	758410484	75403261252	75993302975	150
771610000	771610938	771610715	77254918232	77549046580	150
778410000	778410842	778410680	77534419005	77434922654	150
958410000	958410550	958410504	95738453608	95866903880	150
943510000	943510377	943510384	94885504872	94835796232	150
967510000	967510392	967510668	96149892640	96239411479	150
935510000	935510622	935510315	93403342895	93578630778	150
960610000	960610155	960610649	96798517636	96473915587	150
912510000	912510656	912510074	91749773941	91354774900	150
915510000	915510257	915510110	91993544994	91771709633	150
918410000	918410014	918410110	91927007621	91725393891	150

890510000	890510244	890510865	89178698526	89472016566	150
924510000	924510359	924510192	92248541756	92063304334	150
1095510000	1095510264	1095510870	109534800324	109566205825	150
929410000	929410567	929410196	92845838658	92238418190	150
896510000	896510647	896510958	89975534556	89937720509	150
885510000	885510224	885510849	88127711971	88791879218	150
1117510000	1117510772	1117510090	111762644667	111789959600	150
1107410000	1107410679	1107410941	110453328537	110340936313	150
1080610000	1080610261	1080610761	108567237588	108333971555	150
1059410000	1059410827	1059410406	105041567951	105914787630	150
1103510000	1103510785	1103510901	110534662349	110211502976	150
1016500000	1016500533	1016500960	101309927604	101099510994	150
1050510000	1050510862	1050510392	105109356083	105897778029	150
1025510000	1025510276	1025510121	102420836671	102970797468	150
1039410000	1039410584	1039410207	103889818645	103961752962	150
1055510000	1055510721	1055510437	105600858809	105969671421	150
1027510000	1027510814	1027510179	102914706613	102534033175	150
1211510000	1211510570	1211510007	121036369899	121935834930	150
1216410000	1216410454	1216410049	121002556954	121886417845	150
1193510000	1193510935	1193510806	119617676497	119752501972	150
1217510000	1217510791	1217510101	121150952275	121293626715	150
1187410000	1187410667	1187410732	118384642307	118972401308	150
1189510000	1189510152	1189510779	118771814159	118492935975	150
1239510000	1239510588	1239510294	123394857863	123818018335	150
1183510000	1183510771	1183510703	118824935480	118144379019	150
1197510000	1197510818	1197510888	119394635057	119845617514	150
1209510000	1209510201	1209510992	120200661797	120260177597	150
1241610000	1241610285	1241610369	124948788975	124410411771	150
1186410000	1186410447	1186410742	118403654714	118463917158	150
1139410000	1139410600	1139410217	113719333325	113416686740	150
1142510000	1142510902	1142510296	114538688665	114421386374	150
1126500000	1126500646	1126500070	112770275105	112087055408	150
1159410000	1159410845	1159410416	115859078839	115971586635	150
1146410000	1146410912	1146410339	114304989239	114633100220	150
1127510000	1127510834	1127510188	112456128665	112605182164	150
1135510000	1135510489	1135510235	113646076854	113615527668	150
1346410000	1346410943	1346410359	134265437891	134719761029	150
1309410000	1309410259	1309410940	130673320834	130573776038	150
1347510000	1347510089	1347510413	134774678573	134261237514	150
1326510000	1326510668	1326510203	132442845323	132377917240	150
1332510000	1332510914	1332510216	133867156765	133130074910	150
1335510000	1335510527	1335510256	133891879839	133051928148	150
1270610000	1270610205	1270610680	127514231337	127865582082	150
1298410000	1298410116	1298410831	129494048840	129664150467	150
1283510000	1283510787	1283510713	128373489682	128041279237	150
1263510000	1263510483	1263510513	126346341105	126449070032	150
1254510000	1254510646	1254510431	125390421325	125429327383	150

1435500000	1435500838	1435500184	143933237860	143891651158	150
1487410000	1487410718	1487410762	148098690424	148702290973	150
1441510000	1441510748	1441510322	144232439263	144733622685	150
1438410000	1438410209	1438410259	143912149507	143580868202	150
1476410000	1476410333	1476410670	147554833282	147089618626	150
1485500000	1485500219	1485500687	148986036444	148047360918	150
1446500000	1446500923	1446500300	144526161766	144423939600	150
1446510000	1446510914	1446510415	144764821549	144804486635	150
1405510000	1405510141	1405510955	140240914015	140725883374	150
1387410000	1387410700	1387410752	138654539426	138113417774	150
1425500000	1425500859	1425500086	142168959928	142759284639	150
1591510000	1591510697	1591510831	159311074051	159100618404	150
1606500000	1606500473	1606500919	160042311627	160204443326	150
1608510000	1608510974	1608510037	160678607205	160023508048	150
1595500000	1595500392	1595500808	159214170887	159197373991	150
1616500000	1616500628	1616500020	161818993677	161775777678	150
1579410000	1579410165	1579410654	157354356211	157376735738	150
1596510000	1596510595	1596510929	159077071758	159021281666	150
1569410000	1569410973	1569410555	156684523162	156381347622	150
1496510000	1496510576	1496510919	149497438575	149392997652	150
1509410000	1509410296	1509410960	150025184819	150677487926	150
1510610000	1510610483	1510610117	151199637178	151692756499	150
1537510000	1537510071	1537510330	153910438705	153036275605	150
1699510000	1699510288	1699510927	169490054108	169172601414	150
1715500000	1715500741	1715500014	171542441926	171655905493	150
1730510000	1730510799	1730510263	173620809772	173103991492	150
1716510000	1716510565	1716510143	171018369494	171990668327	150
1703510000	1703510800	1703510963	170451480560	170343591008	150
1725500000	1725500907	1725500116	172431890723	172357859295	150
1698510000	1698510102	1698510932	169401309730	169137000782	150
1710510000	1710510613	1710510066	171074264741	171592332319	150
1693510000	1693510955	1693510855	169781862299	169260384627	150
1638410000	1638410246	1638410280	163313869804	163619700086	150
1622510000	1622510790	1622510146	162149209459	162290712659	150
1671510000	1671510318	1671510641	167112972085	167039372725	150
1662510000	1662510554	1662510548	166361702085	166937087632	150
1647410000	1647410390	1647410383	164407681007	164455917002	150
1858410000	1858410533	1858410495	185680271128	185554377993	150
1863500000	1863500545	1863500548	186650404779	186294447811	150
1786510000	1786510450	1786510849	178757586058	178967977625	150
1803510000	1803510819	1803510973	180757831453	180978489980	150
1786410000	1786410471	1786410800	178249804402	178619833880	150
1802510000	1802510454	1802510963	180083800631	180783735608	150
1756500000	1756500052	1756500430	175963270598	175817043167	150
1772510000	1772510184	1772510657	177236866668	177844594123	150
1773500000	1773500805	1773500636	177599995149	177050884649	150
1968410000	1968410732	1968410602	196929786394	196094376401	150

1914600000	1914600133	1914600056	191515032436	191737510685	150
1879410000	1879410218	1879410684	187963930091	187231991494	150
1887410000	1887410787	1887410801	188182499945	188405051506	150
1873510000	1873510720	1873510673	187060945372	187785658920	150
1889510000	1889510263	1889510849	188374266897	188585436589	150
1926500000	1926500769	1926500150	192946193307	192891351905	150
1890610000	1890610490	1890610940	189891633683	189764946574	150
2077510000	2077510277	2077510680	207211913496	207813466170	150
2086510000	2086510397	2086510779	208789954598	208538096892	150
2088410000	2088410901	2088410711	208435470826	208534056524	150
2090510000	2090510088	2090510789	209154188600	209719349453	150
2084510000	2084510871	2084510713	208058326383	208810366716	150
2067510000	2067510239	2067510583	206825230950	206148171623	150
2098410000	2098410083	2098410812	209621499117	209357247977	150
2092510000	2092510586	2092510787	209645802842	209440786657	150
2068410000	2068410570	2068410515	206315387186	206436427452	150
2049410000	2049410771	2049410307	204353227755	204779656207	150
1991510000	1991510768	1991510872	199278821013	199451507984	150
1996510000	1996510663	1996510969	199552202415	199739020145	150
2041510000	2041510667	2041510285	204700271259	204213332366	150
2022510000	2022510679	2022510087	202375889414	202992215109	150
2191510000	2191510624	2191510792	219412759352	219382186089	150
2186510000	2186510416	2186510790	218003800391	218793824795	150
2218510000	2218510083	2218510097	221328423639	221230088357	150
2179510000	2179510077	2179510680	217390033398	217639096152	150
2209410000	2209410240	2209410931	220012241931	220825619450	150
2235500000	2235500808	2235500166	223917923220	223783444315	150
2168410000	2168410588	2168410525	216364149216	216849457153	150
2137410000	2137410179	2137410244	213381543905	213605289824	150
2339410000	2339410637	2339410237	233350471241	233050128276	150
2132510000	2132510879	2132510197	213645135102	213010512254	150
2158410000	2158410477	2158410428	215061964887	215029063861	150
2164510000	2164510678	2164510523	216710522347	216254483829	150
2156500000	2156500034	2156500371	215662086611	215794123949	150
2312510000	2312510545	2312510014	231626145613	231519386861	150
2348510000	2348510483	2348510405	234573067778	234078366459	150
2316410000	2316410472	2316410060	231011944652	231565807068	150
2357410000	2357410509	2357410455	235703255894	235670452374	150
2329410000	2329410572	2329410139	232846222391	232630175697	150
2329510000	2329510510	2329510206	232268040247	232639291488	150
2290510000	2290510126	2290510807	229105765547	229023391519	150
2258410000	2258410496	2258410437	225485776077	225009452757	150
2291510000	2291510643	2291510802	229043818071	229157000980	150
2293510000	2293510887	2293510817	229603063828	229683230206	150
2271610000	2271610852	2271610667	227882231674	227784706216	150
2285500000	2285500262	2285500666	228913740478	228733381433	150
2285510000	2285510126	2285510790	228981328847	228488480961	150

2250510000	2250510900	2250510413	225048804447	225476920740	150
2280610000	2280610298	2280610782	228816714161	228143541919	150
2456500000	2456500005	2456500401	245643141361	245673430683	150
2438510000	2438510393	2438510314	243606595376	243828022587	150
2479410000	2479410149	2479410645	247286458207	247720048341	150
2467510000	2467510308	2467510622	246540464219	246444256976	150
2489510000	2489510198	2489510810	248208776923	248468709865	150
2428510000	2428510215	2428510216	242912076331	242418114285	150
2442510000	2442510956	2442510328	244730248543	244008897810	150
2470610000	2470610235	2470610701	247415217785	247388832104	150
2458510000	2458510667	2458510516	245046171483	245116286867	150
2468510000	2468510761	2468510615	246926834194	246748677430	150
2488410000	2488410973	2488410751	248455220815	248935775012	150
2371510000	2371510260	2371510611	237398538382	237177271586	150
2363510000	2363510504	2363510524	236341005277	236903657923	150
2395500000	2395500362	2395500788	239932703209	239067309757	150
2377510000	2377510325	2377510710	237226884104	237148751985	150
2579510000	2579510138	2579510720	257070193485	257664419692	150
2597510000	2597510893	2597510928	259607638863	259073304702	150
2595510000	2595510359	2595510922	259425120252	259158919579	150
2555510000	2555510806	2555510491	255994795966	255031054809	150
2608410000	2608410910	2608410983	260709268075	260157773254	150
2580610000	2580610341	2580610812	258362567016	258793563102	150
2578410000	2578410807	2578410662	257252127736	257634138279	150
2591610000	2591610276	2591610897	259924951488	259236136004	150
2508410000	2508410894	2508410973	250835770863	250821545840	150
2532510000	2532510952	2532510238	253128612852	253441594194	150
2538410000	2538410228	2538410271	253142334280	253278794768	150
2491510000	2491510680	2491510822	249523123959	249320577825	150
2519410000	2519410430	2519410059	251858979542	251608595791	150
2533510000	2533510224	2533510246	253745161112	253807213052	150
2548410000	2548410362	2548410370	254159229184	254560352316	150
2539410000	2539410679	2539410257	253911207228	253358470873	150
2702610000	2702610023	2702610016	270649485242	270661497803	150
2684510000	2684510974	2684510773	268688739827	268209278651	150
2718410000	2718410987	2718410092	271975127620	271055810817	150
2697410000	2697410754	2697410882	269140949886	269511616997	150
2676410000	2676410365	2676410691	267848171450	267464476007	150
2641610000	2641610359	2641610409	264595255185	264330311348	150
2658510000	2658510621	2658510536	265756879300	265400994474	150
2668410000	2668410683	2668410573	266736706332	266275708975	150
2619410000	2619410445	2619410069	261469140129	261213431088	150
2656500000	2656500038	2656500421	265090153733	265257622912	150
2624510000	2624510309	2624510163	262964629627	262855297853	150
2627510000	2627510926	2627510240	262489159856	262551115765	150
2669410000	2669410992	2669410566	266366556380	266817100659	150
2805510000	2805510208	2805510996	280217272800	280790130013	150

2807510000	2807510722	2807510061	280358094089	280893946975	150
2818410000	2818410001	2818410102	281261792442	281389972755	150
2812510000	2812510638	2812510066	281615682641	281057091430	150
2816500000	2816500603	2816500041	281489488214	281204483362	150
2825500000	2825500928	2825500127	282142975894	282272242654	150
2834510000	2834510514	2834510286	283105811562	283242256327	150
2829410000	2829410554	2829410188	282768148494	282678264069	150
2763510000	2763510575	2763510564	276785980437	276860316310	150
2748510000	2748510549	2748510445	274066784676	274159979148	150
2794510000	2794510024	2794510884	279914950137	279969816440	150
2765510000	2765510924	2765510624	276048716943	276362462215	150
2788510000	2788510039	2788510843	278348912388	278100804894	150
2766410000	2766410304	2766410601	276762192469	276994959935	150
2973510000	2973510741	2973510684	297450397503	297991566997	150
2979410000	2979410059	2979410695	297831278509	297421141581	150
2946510000	2946510937	2946510465	294008885676	294313396457	150
2935500000	2935500920	2935500235	293714651152	293768036351	150
2925500000	2925500946	2925500137	292276623236	292266171783	150
2891610000	2891610330	2891610927	289378373460	289328411155	150
2898410000	2898410178	2898410891	289451361365	289718998028	150
2900610000	2900610489	2900610058	290684401511	290940085647	150
2915500000	2915500775	2915500037	291982774772	291732150156	150
2919410000	2919410494	2919410099	291148710927	291868075847	150
2872510000	2872510208	2872510667	287185925850	287034185208	150
2911510000	2911510814	2911510078	291748317535	291511725501	150
2876410000	2876410396	2876410711	287735631867	287257916089	150
3057410000	3057410464	3057410426	305161020768	305389127507	150
3075510000	3075510982	3075510658	307208463536	307057015088	150
3078410000	3078410755	3078410613	307360275674	307890157935	150
3081610000	3081610994	3081610748	308337682019	308355230233	150
3051510000	3051510869	3051510382	305599338929	305756500548	150
3051610000	3051610945	3051610450	305849979971	305700453483	150
3069500000	3069500609	3069500487	306811137022	306403179394	150
3091510000	3091510608	3091510783	309026875946	309444971476	150
3074510000	3074510833	3074510614	307753690613	307376782650	150
3032510000	3032510863	3032510188	303201032388	303102058830	150
3035500000	3035500779	3035500148	303233347775	303968281403	150
3045500000	3045500940	3045500246	304102011702	304317057268	150
2984510000	2984510022	2984510803	298598033370	298951315026	150
3025500000	3025500795	3025500048	302519021547	302386797638	150
3028410000	3028410035	2028410122	302461466238	302416551860	150
3026510000	3026510619	3026510175	302407059247	302998047781	150
2997510000	2997510963	2997510968	299078129467	299792234999	150
3003510000	3003510771	3003510891	300727023158	300820299988	150
3013510000	3013510865	3013510997	301117392740	301303825725	150
3191610000	3191610205	3191610858	319505859532	319125827584	150
3222510000	3222510718	3222510107	322978313550	322222350297	150

3223510000	3223510094	3223510117	322062880201	322122792092	150
3177410000	3177410654	3177410635	317830650737	317581609913	150
3219410000	3219410375	3219410031	321146648239	321671835639	150
3227410000	3227410000	3227410154	322591129472	322371812129	150
3187510000	3187510456	3187510791	318943447002	318769876013	150
3150510000	3150510883	3150510404	315462173507	315337052838	150
3144510000	3144510568	3144510320	314800524419	314168686776	150
3119410000	3119410356	3119410021	311051848896	311957986866	150
3136410000	3136410760	3136410241	313657591242	313682106367	150
3133500000	3133500260	3133500187	313724287045	313554617878	150
3158510000	3158510617	3158510487	315850755101	315716638881	150
3118410000	3118410886	3118410034	311905441873	311544120011	150
3338510000	3338510378	3338510305	333392807305	333252551486	150
3319410000	3319410394	3319410041	331806864449	331095403183	150
3354510000	3354510665	3354510443	335590264764	335394714184	150
3300610000	3300610400	3300610999	330067932116	330371362890	150
3252510000	3252510108	3252510409	325693614746	325303482677	150
3286510000	3286510434	3286510801	328974572231	328748743868	150
3236510000	3236510703	3236510298	323425608638	323577464186	150
3258410000	3258410498	3258410438	325708690135	325188810700	150
3245500000	3245500972	3245500265	324903269718	324575781419	150
3448410000	3448410345	3448410361	344758621154	344951358392	150
3470510000	3470510293	3470510632	347447855759	347762571875	150
3428410000	3428410048	3428410161	342500860758	342252573369	150
3429410000	3429410593	3429410149	342628694839	342360299614	150
3461510000	3461510240	3461510524	346744664836	346826393382	150
3461610000	3461610190	3461610589	346417329593	346392241511	150
3439510000	3439510628	3439510315	343954380318	343517491803	150
3478510000	3478510849	3478510713	347342364966	347004221199	150
3435500000	3435500842	3435500186	343890571695	343043173905	150
3401510000	3401510407	3401510929	340310196561	340628289088	150
3378410000	3378410803	3378410643	337889791363	337431979486	150
3375510000	3375510036	3375510692	337757432036	337328464430	150
3392510000	3392510643	3392510819	339702057924	339981427886	150
3406500000	3406500445	3406500901	340902180302	340831585847	150
3387410000	3387410704	3387410754	338397884887	338510203627	150
3383510000	3383510808	3383510727	338042207886	338221102594	150
3416500000	3416500599	3416500002	341920117840	341604597248	150
3552510000	3552510349	3552510440	355353073966	355727588260	150
3600610000	3600610445	3600610029	360603815892	360317292533	150
3550510000	3550510956	3550510444	355606250705	355268572966	150
3581510000	3581510515	3581510733	358984526220	358896730824	150
3547410000	3547410375	3547410376	354300895340	354847625704	150
3506500000	3506500462	3506500911	350983508633	350891049580	150
3512510000	3512510583	3512510036	351015493373	351407748181	150
3515510000	3515510195	3515510071	351250900130	351200394503	150
3529410000	3529410610	3529410159	352349260377	352879590930	150

3486410000	3486410495	3486410774	348021586152	348938488684	150
3545500000	3545500023	3545500295	354053057095	354894851769	150
3729410000	3729410537	3729410179	372431725247	372255806782	150
3712510000	3712510620	3712510056	371388919935	371436391683	150
3700610000	3700610460	3700610039	370046451327	370943189663	150
3660510000	3660510132	3660510554	366478202958	366715972578	150
3664510000	3664510766	3664510575	366965937899	366594581756	150
3658410000	3658410576	3658410478	365432917962	365301224128	150
3609410000	3609410316	3609410972	360296593914	360136234108	150
3612510000	3612510603	3612510046	361724744119	361000043619	150
3625500000	3625500893	3625500108	362970819385	362457731964	150
3666500000	3666500198	3666500522	366653165502	366888010868	150
3659410000	3659410943	3659410467	365139571619	365514575216	150
3817510000	3817510781	3817510161	381424609558	381640242607	150
3801610000	3801610666	3801610041	380926331329	380069727853	150
3819410000	3819410481	3819410090	381515187805	381734318969	150
3804510000	3804510158	3804510982	380835871086	380165689069	150
3808410000	3808410838	3808410004	380580837641	380102303129	150
3797410000	3797410769	3797410893	379544867828	379287466320	150
3837510000	3837510009	3837510366	383298091304	383346588194	150
3769410000	3769410012	3769410577	376809774444	376340012015	150
3757410000	3757410422	3757410496	375944968155	375290486508	150
3767410000	3767410591	3767410596	376107345456	376543418671	150
3969410000	3969410054	3969410597	396923433726	396215707896	150
3939510000	3939510717	3939510364	393473042042	393804860015	150
3927510000	3927510980	3927510272	392334909032	392840750833	150
3860510000	3860510170	3860510573	386025674866	386411171665	150
3881610000	3881610152	3881610828	388257653424	388818945023	150
3882510000	3882510545	3882510768	388428408943	388418160197	150
3916500000	3916500617	3916500052	391661650137	391911738498	150
3888410000	3888410048	3888410793	388644048248	388799807191	150
3918410000	3918410018	3918410113	391748175132	391785306610	150
3895500000	3895500438	3895500841	389038759988	389415365734	150
4058410000	4058410463	4058410420	405035092907	405158684023	150
4042510000	4042510888	4042510289	404986292659	404277743598	150
4036500000	4036500788	4036500163	403210671793	403764507150	150
4090610000	4090610434	4090610864	409710566470	409877987363	150
4078510000	4078510862	4078510675	407552302084	407947727873	150
4065510000	4065510891	4065510548	406412763777	406769138899	150
4066500000	4066500104	4066500463	406200003849	406234538250	150
4069410000	4069410020	4069410508	406599894921	406476960300	150
4076510000	4076510227	4076510679	407935040865	407560012080	150
4049410000	4049410774	4049410309	404409299999	404788205733	150
4021510000	4021510840	4021510090	402217255871	402623288799	150
4006500000	4006500467	4006500864	400442536130	400058685927	150
4008410000	4008410818	4008410924	400698266570	400114698156	150
3995510000	3995510338	3995510963	399126975650	399463155741	150

4011610000	4011610704	4011610061	401099977865	401976075995	150
3998410000	3998410195	3998410902	399676248801	399125572954	150
3996410000	3996410648	3996410923	399464550238	399386063641	150
4002610000	4002610899	4002610949	400845675877	400384999396	150
4201510000	4201510369	4201510909	420031069540	420158716552	150
4165510000	4165510909	4165510560	416818223872	416466195597	150
4166500000	4166500121	4166500473	416793823421	416463017319	150
4189410000	4189410100	4189410717	418541978450	418407147033	150
4202510000	4202510347	4202510905	420078917515	420715219592	150
4175510000	4175510005	4175510671	417305010679	417573145058	150
4133510000	4133510155	4133510208	413807091441	413645907159	150
4136500000	4136500804	4136500173	413139430754	413225108086	150
4123510000	4123510076	4123510108	412506539682	412922456408	150
4129410000	4129410536	4129410121	412731594258	412455037417	150
4105510000	4105510098	4105510925	410251441000	410088672192	150
4112510000	4112510514	4112510995	411560059474	411034610467	150
4115510000	4115510263	4115510029	411231280638	411548240728	150
4125510000	4125510301	4125510133	412076056306	412919097586	150
4141610000	4141610274	4141610362	414226267578	414764001655	150
4318410000	4318410928	4318410055	431216219442	431511493526	150
4325500000	4325500845	4325500079	432265445579	432543241763	150
4306500000	4306500431	4306500892	430778669747	430539748932	150
4337510000	4337510046	4337510312	433306662866	433055006520	150
4290610000	4290610470	4290610884	429243316969	429482826771	150
4284510000	4284510907	4284510735	428335850696	428244429532	150
4342510000	4342510943	4342510319	434847985808	434733261119	150
4302610000	4302610951	4302610978	430306311480	430617212247	150
4272510000	4272510095	4272510613	427108437479	427004529396	150
4225510000	4225510318	4225510143	422714694053	422855001835	150
4242510000	4242510924	4242510309	424008615592	424689957992	150
4258510000	4258510637	4258510498	425538032786	425264711666	150
4445510000	4445510723	4445510374	444184841974	444656790345	150
4267410000	4267410508	4267410547	426408006332	426172982778	150
4239410000	4239410624	4239410230	423123582301	423535914532	150
4268410000	4268410611	4268410536	426653567809	426361663223	150
4246510000	4246510882	4246510399	424988386090	424386545748	150
4237410000	4237410209	4237410255	423715276937	423582547443	150
4417510000	4417510829	4417510124	441771767517	441884385527	150
4427410000	4427410035	4427410175	442451120233	442237163187	150
4409510000	4409510240	4409510015	440975875218	440131390481	150
4407510000	4407510656	4407510023	440471325352	440511195545	150
4425500000	4425500863	4425500089	442240813628	442818232231	150
4425510000	4425510350	4425510164	442720442936	442706112411	150
4346500000	4346500914	4346500293	434694877041	434026821576	150
4401610000	4401610599	4401610003	440068198436	440763662078	150
4361610000	4361610172	4361610580	436354405887	436296650914	150
4393510000	4393510907	4393510830	439860176335	439112626360	150

4380610000	4380610314	4380610794	438009532345	438676283882	150
4374510000	4374510886	4374510644	437467136105	437359253692	150
4404510000	4404510093	4404510941	440348922706	440958659288	150
4564510000	4564510748	4564510565	456689096994	456153886617	150
4571610000	4571610910	4571610699	457601940338	457187652554	150
4551510000	4551510069	4551510433	455691543137	455928229478	150
4590510000	4590510187	4590510839	459574608523	459054813231	150
4587410000	4587410744	4587410775	458875535169	458623097893	150
4557510000	4557510155	4557510535	455205049295	455550036106	150
4506410000	4506410346	4506410981	450715093144	450863595497	150
4477410000	4477410558	4477410666	447702672916	447471987042	150
4511510000	4511510638	4511510040	451116330846	451507759730	150
4531610000	4531610164	4531610303	453673325039	453732881926	150
4483510000	4483510828	4483510738	448109327677	448766061964	150
4711610000	4711610751	4711610129	471180321951	471730004506	150
4682510000	4682510421	4682510749	468664904546	468451488471	150
4716500000	4716500647	4716500033	471779097087	471756427203	150
4601510000	4601510450	4601510950	460396660319	460478442929	150
4616510000	4616510551	4616510134	461780501344	461242157078	150
4601610000	4601610635	4601610023	460060483149	460959758413	150
4633510000	4633510246	4633510259	463513364751	463204124727	150
4621610000	4621610913	4621610217	462638990331	462278226488	150
4602610000	4602610009	4602610008	460382848260	460531017654	150
4623510000	4623510067	4623510158	462813634860	462359975389	150
4792510000	4792510720	4792510861	479168056552	479922259888	150
4801510000	4801510494	4801510970	480752140012	480606607720	150
4822510000	4822510831	4822510168	482507389108	482231618418	150
4825510000	4825510416	4825510207	482079525017	482937910351	150
4798510000	4798510122	4798510945	479677372148	479956773929	150
4823500000	4823500205	4823500158	482953972197	482084895687	150
4747510000	4747510156	4747510456	474027317379	474103436721	150
4724510000	4724510329	4724510175	472817305601	472734443175	150
4741510000	4741510814	4741510354	474870705839	474484042403	150
4777510000	4777510395	4777510752	477515100140	477850909681	150
4719410000	4719410465	4719410081	471688851749	471911242406	150
4759410000	4759410963	4759410478	475442754652	475965731829	150
4778510000	4778510893	4778510744	477427177956	477286085203	150
4733510000	4733510263	3733510268	473801409035	473486102826	150
4719510000	4719510404	4719510148	471796184559	471053031038	150
4776510000	4776510347	4776510751	477850996156	477756842430	150
4948510000	4948510585	4948510468	494078860873	494724832430	150
4952510000	4952510429	4952510481	495385030593	495016938721	150
4938510000	4938510417	4938510366	493942556075	493670222579	150
4957410000	4957410458	4957410517	495460386109	495709710383	150
4863510000	4863510594	4863510576	486644639960	486359369484	150
4865510000	4865510947	4865510637	486180499993	486551185324	150
4870610000	4870610305	4870610744	487541475692	487244147314	150

4859410000	4859410983	4859410488	485775077217	485684784649	150
4885500000	4885500287	4885500733	488929495204	488108500279	150
4866410000	4866410321	4866410613	486406383439	486964779089	150
4857410000	4857410439	4857410507	485712866690	485848645438	150
4857510000	4857510209	4857510565	485413564819	485713367914	150
4870510000	4870510370	4870510673	487933626509	487256119218	150
5029410000	5029410520	5029410112	502510662428	502610563428	150
5085510000	5085510097	5085510770	508302505097	508531256931	150
5039410000	5039410591	5039410211	503162717892	503587896209	150
5024510000	5024510295	5024510106	502851339274	502576520182	150
5068510000	5068510695	5068510578	506234812103	506098015736	150
5043510000	5043510226	5043510299	504657829512	504020270100	150
4986510000	4986510491	4986510872	498982141137	498147506967	150
4980510000	4980510072	4980510781	498910685087	498078222616	150
5009410000	5009410212	5009410914	500823498798	500904650085	150
4962510000	4962510619	4962510583	496137525443	496489914322	150
5019410000	5019410343	5019410013	501773659667	501877644984	150
4988510000	4988510069	4988510865	498298814341	498799942025	150
4992510000	4992510754	4992510881	499734714335	499518240543	150
4995500000	4995500453	4995500853	499834905170	499176127153	150
5173510000	5173510653	5173510608	517117002395	517530481150	150
5194510000	5194510058	5194510827	519247297663	519129571798	150
5184510000	5184510891	5184510726	518482136791	518026168769	150
5207510000	5207510623	5207510004	520106741543	520574567770	150
5157410000	5157410483	5157410438	515359096079	515513375287	150
5157510000	5157510231	5157510496	515681246363	515113555766	150
5196410000	5196410537	5196410845	519211858404	519557638472	150
5094510000	5094510040	5094510817	509075486491	509047723336	150
5097510000	5097510809	5097510882	509114978296	509387668900	150
5089510000	5089510143	5089510773	508101593659	508767930362	150
5138510000	5138510345	5138510288	513397959720	513128881200	150
5135500000	5135500797	5135500159	513448099737	513619821593	150
5106510000	5106510376	5106510985	510582410992	510914633334	150
5104510000	5104510050	5104510910	510878895348	510402091255	150
5136510000	5136510814	5136510290	513766778278	513056282891	150
5298410000	5298410081	5298410835	529768021334	529838866428	150
5278410000	5278410790	5278410635	527302490440	527218675822	150
5309510000	5309510226	5309510006	530295431631	530796035278	150
5326410000	5326410628	5326410162	532183462952	532856848028	150
5326500000	5326500682	5326500094	532794708542	532183977133	150
5296410000	5296410552	5296410855	529509092309	529698679762	150
5303510000	5303510825	5303510927	530694447348	530294970672	150
5321610000	5321610863	5321610190	532368718458	532791180355	150
5289510000	5289510173	5289510793	528341086639	528386632564	150
5226500000	5226500666	5226500084	522395723607	522855023249	150
5229410000	5229410557	5229410132	522144234568	522195174716	150
5262510000	5262510485	5262510512	526071560148	526105156400	150

5231510000	5231510083	5231510209	523808601447	523694437898	150
5264510000	5264510701	5264510536	526637192527	526333863518	150
5237510000	5237510031	5237510303	523829750075	523999159894	150
5225500000	5225500831	5225500070	522760646446	522870688199	150
5238410000	5238410185	5238410243	523231462693	523797175509	150
5421510000	5421510920	5421510131	542988472097	542887444850	150
5456510000	5456510027	5456510516	545879418019	545017470154	150
5416410000	5416410490	5416410073	541267164945	541380573024	150
5429510000	5429510455	5429510218	542523015264	542173089051	150
5365510000	5365510860	5365510583	536574717800	536144988327	150
5385500000	5385500210	5385500681	538860754055	538394627557	150
5385510000	5385510148	5385510804	538685869647	538204732996	150
5360510000	5360510117	5360510527	536838640031	536152197136	150
5554510000	5554510701	5554510466	555509352315	555999226750	150
5527510000	5527510914	5527510233	552534996380	552444288632	150
5558410000	5558410560	5558410470	555785412704	555954695429	150
5580510000	5580510992	5580510742	558541511345	558174663521	150
5540510000	5540510956	5540510347	554894258456	554136260359	150
5556510000	5556510046	5556510526	555169759420	555765652519	150
5525510000	5525510369	5525510176	552764566781	552207111248	150
5535510000	5535510564	5535510278	553848976093	553839783546	150
5466500000	5466500170	5466500504	546123023901	546237777852	150
5498410000	5498410118	5498410855	549733823767	549835577654	150
5501510000	5501510433	5501510941	550462547184	550404758678	150
5501610000	5501610617	5501610014	550081737010	550938099833	150
5696410000	5696410606	5696410895	569383228832	569702941423	150
5699410000	5699410338	5699410863	569527654363	569772063827	150
5701510000	5701510474	5701510961	570662736403	570979345062	150
5666510000	5666510162	5666510639	566998474665	566032117198	150
5652510000	5652510374	5652510452	565145452315	565604421670	150
5585500000	5585500242	5585500700	558314793853	558015021514	150
5588410000	5588410997	5588410764	558197063884	558584503672	150
5642510000	5642510000	5642510351	564894758435	564870752689	150
5626410000	5626410680	5626410192	562489213797	562104607227	150
5811610000	5811610771	5811610140	581379202473	581591661047	150
5784510000	5784510995	5784510786	578532151392	578722623285	150
5809510000	5809510253	5809510057	580194150779	580691289164	150
5816510000	5816510586	5816510158	581763391443	581063508642	150
5782510000	5782510442	5782510760	578317137334	578389623830	150
5775510000	5775510115	5775510737	577287804684	577319186297	150
5746510000	5746510976	5746510447	574271736103	574259921480	150
5731510000	5731510614	5731510259	573743070649	573356121941	150
5741610000	5741610382	5741610422	574843447879	574808217313	150
5721510000	5721510978	5721510161	572180134538	572290391682	150
5719510000	5719510406	5719510149	571711745989	571538408884	150
5725510000	5725510401	5725510197	572038820221	572326714116	150
5726500000	5726500742	5726500134	572867998255	572848785769	150

5933510000	5933510302	5933510289	593303642650	593824185292	150
5925510000	5925510463	5925510218	592983691407	592871117771	150
5901510000	5901510518	5901510981	590490494607	590808946472	150
5936510000	5936510829	5936510371	593465382565	593711348102	150
5879510000	5879510107	5879510753	587339964565	587550516544	150
5829510000	5829510526	5829510259	582441306809	582212138193	150
5835500000	5835500909	5835500228	583621600801	583770447059	150
5869410000	5869410035	5869410589	586285059474	586658290447	150
5844510000	5844510590	5844510393	584982133074	584285557194	150
5839410000	5839410737	5839410291	583713183136	583668527090	150
5877410000	5877410626	5877410706	587110068624	587898253723	150
5859510000	5859510972	5859510555	585732752998	585498573405	150
6040510000	6040510864	6040510298	604703083837	604350961752	150
6057410000	6057410469	6057410429	605890526791	605275970743	150
6049510000	6049510738	6049510377	604276729507	604215098340	150
6037410000	6037410169	6037410238	603198309386	603352680978	150
6067410000	6067410478	6067410529	606131599735	606790614957	150
6026410000	6026410579	6026410133	602485881609	602395847230	150
6015510000	6015510247	6015510021	601000269496	601064189804	150
6019410000	6019410345	6019410014	601461916587	601232934379	150
5957510000	5957510227	5957510576	595881595084	595696571049	150
5988410000	5988410070	5988410805	598086385827	598864091541	150
5979510000	5979510125	5979510764	597194945535	597151559860	150
5985500000	5985500302	5985500746	598031254869	598209579327	150
5951610000	5951610104	5951610541	595475863660	595341469453	150
5977410000	5977410642	5977410716	597664524232	597350492936	150
5981610000	5981610173	5981610840	598136131690	598258511532	150
6160510000	6160510082	6160510508	616752118445	616632617259	150
6145500000	6145500960	6145500258	614521054522	614821085733	150
6148410000	6148410298	6148410334	614206011059	614848129812	150
6138410000	6138410169	6138410234	613399733530	613491850630	150
6147410000	6147410308	6147410341	614031129673	614954086276	150
6096410000	6096410523	6096410836	609350338231	609781217810	150
6086500000	6086500360	6086500664	608125956149	608150693990	150
6109410000	6109410231	6109410925	610887765681	610268121452	150
6314510000	6314510182	6314510036	631225871023	631862637518	150
6311510000	6311510602	6311510022	631412142189	631001934355	150
6281510000	6281510446	6281510706	628462635683	628696477796	150
6281610000	6281610053	6281610771	628875103373	628088595021	150
6319510000	6319510339	6319510109	631469468635	631455618644	150
6279410000	6279410107	6279410630	627826695349	627704359257	150
6266500000	6266500141	6266500485	626695409129	626873440334	150
6266510000	6266510165	6266510600	626574389239	626305879509	150
6240510000	6240510899	6240510318	624408562654	624254336010	150
6229510000	6229510498	6229510200	622371329392	622424274919	150
6235500000	6235500816	6235500170	623804089599	623113363300	150
6200510000	6200510449	6200510923	620638283123	620001348661	150

6214510000	6214510164	6214510026	621931982299	621917155781	150
6259410000	6259410873	6259410431	625361262223	625577113956	150
6247510000	6247510081	6247510408	624314411605	624738595828	150
6260610000	6260610055	6260610585	626201073829	626702341022	150
6212510000	6212510534	6212510008	621466687257	621219422073	150
6417410000	6417410804	6417410078	641447848524	641974053975	150
6395500000	6395500367	6395500793	639114940249	639409461940	150
6388510000	6388510984	6388510807	638594608159	638333636810	150
6403510000	6403510845	6403510938	640160983781	640338153951	150
6419410000	6419410419	6419410053	641501735120	641007612327	150
6392510000	6392510649	6392510822	639687186011	639555083004	150
6345510000	6345510710	6345510365	634527657144	634995484708	150
6362510000	6362510506	6362510523	636167343530	636194570454	150
6337410000	6337410233	6337410266	633185296003	633840220762	150
6369510000	6369510961	6369510605	636499728241	636845782389	150
6366500000	6366500154	6366500495	636957023146	636528405163	150
6359510000	6359510896	6359510507	635718415924	635671108089	150
6386510000	6386510383	6386510814	638087821556	638086932329	150
6350510000	6350510924	6350510427	635739956762	635453032471	150
6367410000	6367410527	6367410560	636832982206	636612199807	150
6344510000	6344510504	6344510343	634321378630	634697411378	150
6374510000	6374510890	6374510646	637771635585	637323094971	150
6527410000	6527410055	6527410187	652963760597	652988691572	150
6545500000	6545500028	6545500298	654203369431	654911269567	150
6525500000	6525500882	6525500101	652385467585	652377785463	150
6565510000	6565510898	6565510607	656080062086	656437393053	150
6509510000	6509510262	6509510028	650023237072	650689006533	150
6462510000	6462510526	6462510533	646707889336	646720122619	150
6451610000	6451610017	6451610492	645217570925	645641330357	150
6467410000	6467410545	6467410570	646855724617	646278924801	150
6485500000	6485500228	5485500691	648336547581	648234590950	150
6489410000	6489410159	6489410748	648816742881	648225114467	150
6457510000	6457510142	6457510527	645831263106	645643581094	150
6502510000	6502510405	6502510938	650368667537	650195305837	150
6474510000	6474510908	6474510656	647813120595	647405188751	150
6661610000	6661610754	6661610612	666201430918	666497986400	150
6649410000	6649410765	6649410371	664905358410	664180909658	150
6681610000	6681610125	6681610811	668725646422	668449913501	150
6647410000	6647410398	6647410388	664863899319	664545850414	150
6653510000	6653510513	6653510459	665264684956	665886654007	150
6572510000	6572510154	6572510644	657155089115	657851398775	150
6583510000	6583510848	6583510750	658278027183	658440450791	150
6586510000	6586510423	6586510834	658633618488	658782283540	150
6618510000	6618510158	6618510141	661455149044	661304749037	150
6764510000	6764510790	6764510588	676873073627	676704938198	150
6790610000	6790610481	6790610935	679720277882	679631161499	150
6797410000	6797410773	6797410896	679872024397	679023518349	150

6798410000	6798410170	6798410885	679248666954	679642237246	150
6768510000	6768510819	6768510648	676389187506	676781400484	150
6755510000	6755510844	6755510516	675833579363	675345523295	150
6739410000	6739410720	6739410282	673743757385	673587281995	150
6717410000	6717410852	6717410107	671592593012	671772442625	150
6691510000	6691510726	6691510846	669352215999	669594716792	150
6721610000	6721610933	6721610229	672964843114	672377082102	150
6715510000	6715510234	6715510095	671886304191	671305388192	150
6694510000	6694510014	6694510878	669428630521	669457073228	150
6751510000	6751510111	6751510456	675013940495	675158298319	150
6751610000	6751610069	6751610522	675587924557	675637021228	150
6695500000	6695500413	6695500823	669919111118	669866927528	150
6892510000	6892510739	6892510873	689016069776	689054054306	150
6925500000	6925500951	6925500141	692245094877	692899613679	150
6899510000	6899510330	6899510952	689202271120	689387818825	150
6878410000	6878410875	6878410695	687446301899	687581687462	150
6868410000	6868410725	6868410597	686040007769	686892691340	150
6826410000	6826410715	6826410213	682656255599	682108390963	150
6841610000	6841610911	6841610433	684238636513	684954640656	150
6827510000	6827510968	6827510264	682812664911	682481200045	150
6860510000	6860510175	6860510576	686197909586	686472022150	150
6861510000	6861510168	6861510566	686442802570	686489392610	150
6828510000	6828510294	6828510259	682832445340	682916686245	150
6850610000	6850610012	6850610547	685129851390	685368756686	150
6840510000	6840510833	6840510377	684481957503	684117681776	150
6857410000	6857410442	6857410509	685834453068	685156289958	150
6816410000	6816410544	6816410113	681068284438	681485775428	150
7023510000	7023510062	7023510101	702553400678	702777715935	150
7045510000	7045510656	7045510333	704687365943	704847478815	150
7016500000	7016500541	7016500966	701658166297	701291962244	150
7031610000	7031610993	7031610260	703032697023	703981510396	150
7037510000	7037510005	7037510286	703682579880	703252258786	150
7007410000	7007410672	7007410937	700082818323	700401010085	150
6996510000	6996510673	6996510974	699248845704	699022462960	150
7011510000	7011510541	7011510993	701507619050	701694384006	150
6991610000	6991610880	6991610941	699751309758	699397124538	150
6969410000	6969410058	6969410600	696486971429	696821769384	150
6939410000	6939410760	6939410301	693907229502	693671938391	150
6958410000	6958410561	6958410509	695121869655	695113219505	150
6959410000	6959410005	6959410500	695734490302	695009038078	150
6956500000	6956500092	6956500455	695913353390	695895402364	150
6990610000	6990610517	6990610955	699224952899	699279622476	150
6993510000	6993510015	6993510892	699143013735	699646840293	150
6950610000	6950610028	6950610557	695362412780	695503395651	150
7169510000	7169510933	7169510587	716570239290	716101974065	150
7156510000	7156510980	7156510489	715999273550	715502763237	150
7141510000	7141510696	7141510299	714457814951	714452882697	150

7149510000	7149510696	7149510388	714177464787	714171960481	150
7128410000	7128410058	7128410135	712089360856	712822881736	150
7176410000	7176410293	7176410647	717911626926	717821367879	150
7095500000	7095500321	7095500760	709785043416	709654617472	150
7071610000	7071610825	7071610652	707494918909	707628588265	150
7097410000	7097410667	7097410828	709172686215	709173591878	150
7113510000	7113510891	7113510010	711656648770	711042216336	150
7088510000	7088510940	7088510777	708406855954	708340059288	150
7107510000	7107510610	7107510995	710357714121	710421134640	150
7082510000	7082510252	7082510693	708738633498	708303362854	150
7114510000	7114510150	7114510017	711631666216	711872574223	150
7086410000	7086410441	7086410738	708322944788	708033012987	150
7108410000	7108410841	7108410937	710152872981	710500138929	150
7288510000	7288510972	7288510798	728807479482	728163244753	150
7249410000	7249410819	7249410332	724194291944	724517222139	150
7280510000	7280510938	7280510715	728723450647	728810533239	150
7269410000	7269410927	7269410531	726291017174	726982238012	150
7287410000	7287410695	7287410748	728113848049	728343527955	150
7248510000	7248510476	7248510400	724106629334	724565845150	150
7216510000	7216510573	7216510098	721974860091	721648742920	150
7181610000	7181610018	7181610762	718584052996	718508773450	150
7203510000	7203510812	7203510917	720642384318	720621836570	150
7237410000	7237410213	7237410258	723160624347	723561000408	150
7196510000	7196510531	7196510895	719269712302	719092521123	150
7208510000	7208510020	7208510003	720981834249	720244827066	150
7227510000	7227510865	7227510205	722628450311	722439615753	150
7222510000	7222510726	7222510111	722288297718	722445649081	150
7199510000	7199510316	7199510884	719709304086	719324320763	150
7197410000	7197410684	7197410838	719972550480	719127666844	150
7200610000	7200610390	7200610993	720265506852	720358852375	150
7411610000	7411610703	7411610103	741286720144	741669196948	150
7372510000	7372510123	7372510625	737130943475	737774900245	150
7402610000	7402610977	7402610991	740457215815	740973407998	150
7409410000	7409410289	7409410956	740764078704	740430712797	150
7412510000	7412510571	7412510029	741697500632	741362127118	150
7428410000	7428410054	7428410165	742617166056	742763877679	150
7406510000	7406510434	7406510018	740330411156	740300450789	150
7397410000	7397410714	7397410857	739518718630	739089491970	150
7359410000	7359410892	7359410442	735839628358	735350204814	150
7312510000	7312510554	7312510019	731830301655	731997652210	150
7351610000	7351610004	7351610483	735970838306	735138339473	150
7519410000	7519410438	7519410064	751558043019	751507859075	150
7498510000	7498510081	7498510918	749937482103	749775101822	150
7530510000	7530510775	7530510249	753919368534	753160715040	150
7531510000	7531510583	7531510241	753431430648	753560850396	150
7500510000	7500510513	7500510953	750142325843	750791227866	150
7500610000	7500610436	7500610023	750729628727	750012378651	150

7526500000	7526500716	7526500116	752179496299	752983633341	150
7536410000	7536410819	7536410285	753663222930	753542579015	150
7536500000	7536500868	7536500216	753637087488	753300158288	150
7536510000	7536510763	7536510332	753040067408	753930176001	150
7507510000	7507510680	7507510036	750987097049	750571325053	150
7492510000	7492510669	7492510833	749632397118	749076720349	150
7436500000	7436500853	7436500206	743649597474	743004890852	150
7477410000	7477410564	7477410669	747213810848	747306426786	150
7432510000	7432510946	7432510233	743693866628	743106476742	150
7481610000	7481610094	7481610792	748335026912	748994108398	150
7459510000	7459510915	7459510518	745724248449	745281347179	150
7637510000	7637510981	7637510348	763915680685	763500880427	150
7649510000	7649510781	7649510438	764171969696	764451324372	150
7646500000	7646500963	7646500326	764478389150	764279440428	150
7560510000	7560510120	7560510548	756730124669	756663005225	150
7578410000	7578410818	7578410667	757757570732	757440586787	150
7569410000	7569410982	7569410561	756626421177	756133706901	150
7568510000	7568510786	7568510630	756556450725	756320200707	150
7574510000	7574510927	7574510667	757696799085	757652694287	150
7767410000	7767410597	7767410600	776183566166	776893371969	150
7754510000	7754510739	7754510488	775993228775	775025956965	150
7771510000	7771510349	7771510657	777025270546	777698442635	150
7771610000	7771610950	7771610722	777515037327	777662135771	150
7759510000	7759510960	7759510547	775037376615	775772104166	150
7774510000	7774510827	7774510688	777564180017	777313343291	150
7728410000	7728410104	7728410194	772921015278	772605749532	150
7728510000	7728510276	7728510250	772485089080	772021260018	150
7675510000	7675510097	7675510728	767487302082	767843818419	150
7691610000	7691610305	7691610912	769237216525	769954190787	150
7676410000	7676410374	7676410696	767861995966	767514355652	150
7708510000	7708510001	7708510053	770857628997	770873054125	150
7687410000	7687410765	7687410787	768575765128	768092813748	150
7729510000	7729510514	7729510250	772226052400	772922555874	150
7719410000	7719410469	7719410084	771831770897	771139403538	150
7668410000	7668410692	7668410578	766615485068	766863758200	150
7697510000	7697510918	7697510943	769530017593	769948848604	150
7698410000	7698410157	7698410876	769295319043	769235398169	150
7845510000	7845510691	7845510422	784883155506	784748434858	150
7859410000	7859410988	7859410491	785653942740	785649909545	150
7811600000	7811600609	7811600063	781281298030	781132733788	150
7796410000	7796410624	7796410907	779493153643	779271513529	150
7827410000	7827410110	7827410220	782121964765	782033527007	150
7836510000	7836510814	7836510363	783636576557	783364318123	150
7907510000	7907510749	7907510076	790050064859	790518547923	150
7851610000	7851610087	7851610533	785377819610	785319604671	150
7911610000	7911610790	7911610152	791737018623	791340826728	150
7805510000	7805510216	7805510001	780867576187	780922124441	150

7871510000	7871510368	7871510667	787394619030	787100167896	150
7833510000	7833510287	7833510281	783094589396	783282233389	150
7929410000	7929410578	7929410203	792346746883	792803415522	150
7963510000	7963510620	7963510589	796303280414	796923782120	150
7990510000	7990510309	7990510882	799090984893	799486532730	150
8022510000	8022510691	8022510092	802736931577	802925524798	150
7921610000	7921610974	7921610250	792998668643	792858953075	150
8025500000	8025500801	8025500053	802349521619	802808979487	150
7999410000	7999410396	7999410895	799336837042	799551728151	150
7941610000	7941610935	7941610444	794120370185	794878886567	150
7957410000	7957410463	7957410520	795524842422	795112086267	150
7931610000	7931610243	7931610345	793956084732	793060422815	150
8019510000	8019510293	8019510080	801918118277	801451138717	150
7944510000	7944510609	7944510406	794368327541	794469028558	150
7978410000	7978410894	7978410706	797869700898	797560900436	150
7966410000	7966410258	7966410626	796684516631	796952675813	150
7966510000	7966510214	7966510671	796567486509	796664385990	150
8035500000	8035500786	8035500153	803190168921	803266634830	150
7926410000	7926410735	7926410225	792298961408	792531450337	150
7916500000	7916500623	7916500056	791981196865	791815584114	150
7956510000	7956510117	7956510570	795097185023	795621269998	150
8000510000	8000510416	8000510906	800033062006	800388848456	150
8002510000	8002510799	8002510889	800960153209	800958440351	150
8159410000	8159410858	8159410423	815817948143	815286952469	150
8121510000	8121510869	8121510103	812485954191	812332113827	150
8095510000	8095510277	8095510877	809901033062	809998389674	150
8134510000	8134510405	8134510221	813143203376	813109105250	150
8153510000	8153510429	8153510413	815448766572	815269825152	150
8102610000	8102610923	8102610963	810263785021	810085559648	150
8131610000	8131610096	8131610271	813150468119	813010445493	150
8092510000	8092510597	8092510793	809965337830	809472440501	150
8162510000	8162510471	8162510505	816416635924	816738355562	150
8148510000	8148510461	8148510390	814072193777	814175144701	150
8108510000	8108510005	8108510994	810947584307	810068160220	150
8110510000	8110510618	8110510013	811944249543	811013697454	150
8126500000	8126500657	8126500077	812248355666	812397372763	150
8285500000	8285500200	8285500674	828893714520	828391457105	150
8201610000	8201610576	8201610987	820828544560	820155625690	150
8179410000	8179410095	8179410622	817335926696	817474014828	150
8339510000	8339510619	8339510310	833471986941	833618522517	150
8228410000	8228410076	8228410146	822952836764	822889530609	150
8218410000	8218410916	8218410050	821274494781	821363058865	150
8234510000	8234510422	8234510231	823540246633	823374991948	150
8224510000	8224510333	8224510129	822713476895	822978547080	150
8174510000	8174510859	8174510628	817041203082	817885599198	150
8217410000	8217410778	8217410060	821141978496	821702732374	150
8202610000	8202610939	8202610972	820033563174	820708951006	150

8176510000	8176510253	8176510694	817666879889	817180390817	150
8261510000	8261510207	8261510509	826236836264	826724347341	150
8277410000	8277410533	8277410650	827695501167	827782863454	150
8195500000	8195500337	8195500773	819035344928	819933082973	150
8169410000	8169410910	8169410522	816472762833	816826142945	150
8253510000	8253510445	8253510423	825037873003	825978693727	150
8227410000	8227410009	8227410159	822607009857	822112399104	150
8418410000	8418410950	8418410069	841556782023	841390370698	150
8309410000	8309410273	8309410947	830149237476	830980353992	150
8322510000	8322510745	8322510123	832809516805	832460858204	150
8297410000	8297410701	8297410848	829194163784	829551473981	150
8297510000	8297510850	8297510905	829620059407	829826295655	150
8340510000	8340510924	8340510330	834412262199	834955427331	150
8299510000	8299510334	8299510894	829387732064	829404386086	150
8329410000	8329410581	8329410144	832283601166	832224644363	150
8391610000	8391610249	8391610883	839059802284	839043154571	150
8307510000	8307510645	8307510017	830534260400	830684505900	150
8537510000	8537510967	8537510338	853847803821	853507804113	150
8543510000	8543510321	8543510351	854926249212	854715946642	150
8529510000	8529510476	8529510231	852445887239	852216849563	150
8467410000	8467410548	8467410572	846782138212	846249844764	150
8467510000	8467510320	8467510628	846585076153	846074488686	150
8426500000	8426500702	8426500107	842129695067	842083705709	150
8539410000	8539410692	8539410263	853994188461	853917027194	150
8487410000	8487410732	8487410769	848787671175	848776943781	150
8487510000	8487510515	8487510826	848519813916	848091131064	150
8518410000	8518410963	8518410079	851274098333	851611575103	150
8430510000	8430510757	8430510240	843900503091	843456156386	150
8447410000	8447410367	8447410371	844288292345	844122748448	150
8447510000	8447510114	8447510429	844307188996	844928413869	150
8477410000	8477410566	8477410670	847418058618	847544755774	150
8493510000	8493510931	8493510843	849738767740	849881112006	150
8504510000	8504510120	8504510957	850142697372	850215260722	150
8490510000	8490510174	8490510833	849749071172	849713634101	150
8521510000	8521510947	8521510144	852917446602	852575660313	150
8545510000	8545510744	8545510389	854737679127	854535532395	150
8422510000	8422510765	8422510133	842411821169	842791599841	150
8531610000	8531610172	8531610307	853608080724	853746369742	150
8645510000	8645510659	8645510400	864375732796	864951651999	150
8631600000	8631600825	8631600249	863838944046	863762034540	150
8635510000	8635510585	8635510291	863990255647	863159050738	150
8570510000	8570510318	8570510647	857418878695	857711320462	150
8658510000	8658510631	8658510542	865552697493	865393723191	150
8549510000	8549510766	8549510429	854350476710	854288793384	150
8665510000	8665510918	8665510620	866141986775	866109159349	150
8557410000	8557410399	8557410481	855428360525	855526421131	150
8571610000	8571610917	8571610703	857355498257	857679542351	150

8639510000	8639510671	8639510340	863588904988	863545566845	150
8687510000	8687510748	8687510845	868140429956	868331422517	150
8714510000	8714510252	8714510080	871160974784	871163450697	150
8731610000	8731610208	8731610327	873517911727	873416149750	150
8732510000	8732510840	8732510264	873996595307	873677025714	150
8709410000	8709410341	8709410987	870854224659	870244177132	150
8748410000	8748410417	8748410395	874787458434	874109290488	150
8797510000	8797510937	8797510954	879243537987	879033685469	150
8697410000	8697410761	8697410888	869554312804	869561891919	150
8786410000	8786410483	8786410808	878284442002	878881194094	150
8688410000	8688410021	8688410777	868708416006	868341773097	150
8678510000	8678510885	8678510738	867716201943	867619692059	150
8679410000	8679410195	8679410671	867424118952	867953857143	150
8778410000	8778410859	8778410687	877279746899	877916393616	150
8753510000	8753510408	8753510470	875456459403	875075181130	150
8749410000	8749410788	8749410383	874303647864	874735489842	150
8749510000	8749510800	8749510449	874052737401	874097596873	150
8729410000	8729410546	8729410184	872001025042	872492497913	150
8897410000	8897410791	8897410908	889279374969	889241383618	150
8877510000	8877510416	8877510766	887686820187	887649690340	150
8847410000	8847410437	8847410410	884583229745	884223979409	150
8836410000	8836410872	8836410316	883821562176	883184496872	150
8881510000	8881510579	8881510768	888737917444	888702079154	150
8867410000	8867410615	8867410611	886348925979	886470113267	150
8813510000	8813510025	8813510082	881450161961	881984079430	150
8898410000	8898410188	8898410897	889548907182	889758724293	150
8858510000	8858510664	8858510563	885364993435	885816188001	150
8816500000	8816500610	8816500047	881344580198	881440764143	150
8808410000	8808410846	8808410009	880957784084	880881205266	150
8879410000	8879410052	8879410691	887250002443	887012572820	150
9028510000	9028510241	9028510183	902195597221	902451173477	150
9048410000	9048410284	9048410327	904678885596	904823927081	150
8991510000	8991510781	8991510879	899232071165	899011189747	150
9046500000	9046500872	9046500267	904510957166	904365641828	150
8928410000	8928410139	8928410216	892610127665	892201001201	150
8983510000	8983510915	8983510793	898373141896	898857573863	150
8959410000	8959410008	8959410502	895436617935	895649179769	150
9045500000	9045500949	9045500251	904599841675	904977770953	150
8970510000	8970510397	8970510687	897304706425	897378535051	150
9002610000	9002610906	9002610954	900637416762	900390922052	150
9038410000	9038410157	9038410227	903203997352	903075245963	150
9068410000	9068410582	9068410522	906418650867	906330433278	150
9080510000	9080510417	9080510697	908350770580	908894288556	150
9080610000	9080610276	9080610769	908516690091	908682483238	150
9085500000	9085500244	9085500651	908746347690	908709354396	150
9072510000	9072510066	9072510598	907859274135	907918309800	150
9110610000	9110610428	9110610085	911782583305	911183710805	150

9118410000	9118410898	9118410040	911425203890	911934033898	150
9159510000	9159510867	9159510490	915157117506	915183950744	150
9069410000	9069410029	9069410513	906543492067	906650103369	150
9125500000	9125500821	9125500064	912939115371	912772980646	150
9088410000	9088410913	9088410718	908157982457	908160998590	150
9062510000	9062510457	9062510496	906895523771	906309388098	150
9245510000	9245510697	9245510357	924169310110	924956044059	150
9233510000	9233510183	9233510223	923967602651	923314280173	150
9248410000	9248410322	9248410347	924239390725	924125715687	150
9221510000	9221510888	9221510115	922543383601	922594868691	150
9236500000	9236500827	9236500188	923987649604	923435965597	150
9225500000	9225500838	9225500074	922181715620	922781894261	150
9197510000	9197510833	9197510896	919516193002	919419425098	150
9286410000	9286410473	9286410760	928133815251	928734968239	150
9204510000	9204510069	9204510925	920038795824	920052098240	150
9249510000	9249510716	9249510400	924881763811	924838500580	150
9220510000	9220510720	9220510123	922323570324	922125022758	150
9235500000	9235500820	9235500173	923690378686	923414215027	150
9268510000	9268510738	9268510602	926311480619	926460410892	150
9213510000	9213510913	9213510023	921250666438	921100174335	150
9256500000	9256500058	9256500388	925047999951	925048272788	150
9243510000	9243510268	9243510322	924321675445	924534961873	150
9358410000	9358410528	9358410454	935002427588	935444326254	150
9302510000	9302510373	9302510920	930045232271	930861522672	150
9375510000	9375510048	9375510698	937077636433	937218764948	150
9304510000	9304510085	9304510936	930749965552	930816334113	150
9336500000	9336500841	9336500198	933609879636	933591335709	150
9306510000	9306510417	9306510009	930929679064	930778357349	150
9419510000	9419510361	9419510122	941648563043	941913971500	150
9408510000	9408510958	9408510025	940228992554	940111823999	150
9380610000	9380610323	9380610799	938715181720	938291247205	150
9352510000	9352510324	9352510425	935137448188	935537864637	150
9424510000	9424510369	9424510150	942737999590	942630381073	150
9381610000	9381610078	9381610784	938766834235	938033387905	150
9384510000	9384510936	9384510750	938155428971	938830568842	150
9399410000	9399410319	9399410837	939645754617	939339811793	150
9414510000	9414510202	9414510049	941377325506	941672191079	150
9373500000	9373500753	9373500606	937502276191	937457974131	150
9307410000	9307410638	9307410970	930446108595	930378689134	150
9364510000	9364510721	9364510550	936122657702	936745378543	150
9518510000	9518510144	9518510134	951307322769	951003321466	150
9476410000	9476410345	9476410678	947086660058	947621841472	150
9513510000	9513510969	9513510054	951862236507	951074644960	150
9499510000	9499510270	9499510915	949893165903	949659400113	150
9517410000	9517410824	9517410091	951726820962	951458288455	150
9503510000	9503510777	9503510951	950096048640	950666494518	150
9461610000	9461610203	9461610595	946676596240	946613947472	150

9468410000	9468410659	9468410560	946305065622	946920408168	150
9566510000	9566510221	8566510633	956736103336	956988696810	150
9676510000	9676510337	9676510746	967498786872	967113025436	150
9559410000	9559410935	9559410464	955578933725	955167393302	150
9560610000	9560610109	9560610618	956800968497	956130248725	150
9619410000	9619410456	9619410076	961865963255	961950297256	150
9609410000	9609410326	9609410978	960899749101	960667077442	150
9595500000	9595500404	9595500816	959134592944	959034712101	150
9679410000	9679410197	9679410672	967367387946	967541318002	150
9561610000	9561610740	9561610605	956646068785	956018250630	150
9643510000	9643510340	9643510363	964436095759	964745175958	150
9616500000	9616500639	9616500028	961746371195	961968032357	150
9604510000	9604510137	9604510968	960909621585	960761230036	150
9563510000	9563510554	9563510551	956200164608	956248907438	150
9659410000	9659410955	9659410473	965505271296	965187498698	150
9614510000	9614510235	9614510071	961074953883	961772641981	150
9592510000	9592510690	9592510846	959142043870	959152449118	150
9636410000	9636410839	9636410297	963463932442	963328121390	150
9636500000	9636500811	9636500228	963233810858	963632845134	150
9681510000	9681510546	9681510748	968806229448	968368529130	150
9756500000	9756500066	9756500438	975367027079	975212521838	150
9713510000	9713510007	9713510073	971260748935	971302281166	150
9849410000	9849410806	9849410394	984052009983	984448889775	150
9706410000	9706410384	9706410006	970803844086	970161101017	150
9806410000	9806410401	9806410017	980146947241	980493725958	150
9806510000	9806510506	9806510060	980630542589	980029832898	150
9785500000	9785500279	9785500727	978809453161	978877801140	150
9688510000	9688510034	9688510840	968446211497	968150820884	150
9727510000	9727510957	9727510257	972251175968	972160781302	150
9762510000	9762510590	9762510568	976054760215	976546334879	150
9720510000	9720510810	9720510173	972023215863	972054210679	150
9736410000	9736410858	9736410307	973193450058	973528062238	150
9819510000	9819510429	9819510163	981301569689	981263623766	150
9888410000	9888410060	9888410799	988416596371	988405107230	150
9888510000	9888510061	9888510860	988277761480	988924264044	150
9876410000	9876410408	9876410720	987330637303	987785124756	150
9836500000	9836500840	9836500247	983699251726	983854810814	150
9864510000	9864510811	9864510601	986411231307	986993475429	150
9820610000	9820610565	9820610254	982227124161	982726553553	150
9832510000	9832510862	9832510274	983227600753	983451264134	150
9835510000	9835510620	9835510314	983710567924	983533085235	150
9924510000	9924510374	9924510201	992047589048	992186606164	150
9927510000	9927510992	9927510278	992590294884	992897687171	150
9858410000	9858410548	9858410503	985764126389	985827852068	150
9950510000	9950510047	9950510491	995098345383	995780321297	150
9997510000	9997510976	9997510975	999958365789	999495952035	150
9960610000	9960610170	9960610658	996355834006	996531452703	150

1875336811	1875336269	1129910000	187466340736	187608977007	150
5354647273	5354647551	7118410038	535362431556	535366201566	150
8801716781	8801716311	9510510054	880850992939	880765083287	150
8302720957	8302720386	2171510592	830895863022	830220510577	150
5342577954	5342577648	7896410917	534316066402	534705142235	150
9490909798	9490909924	7619910000	949830035269	949292631728	150
4681427780	4681427267	4413510039	468548619272	468278137048	150
4109220903	4109220472	9241510311	410288978698	410468363745	150
2588979099	2588979626	1331610284	258708203266	258237235282	150
2228963763	2228963199	1379510699	222503869340	222878802799	150
8058065423	8058065902	228510194	805767635694	805023776454	150
3043228004	3043228741	2886510860	304666530090	304658072202	150
3452509666	3452509456	8360610597	345077646418	345608498350	150
6774914563	6774914074	5010510000	677430039190	677557794996	150
2188886171	2188886251	5038510278	218264557126	218775755577	150
6176560985	6176560398	1459410446	617262713466	617074428349	150
8081118587	8081118121	3471610688	808841498247	808590872176	150
5123185307	5123185497	6145510343	512093933816	512966536208	150
241494042	241494562	6746500335	24316409964	24632467274	150
8886129383	8886129416	9268410541	888624011730	888101962951	150
5650757018	5650757627	3495500800	565342956401	565434715828	150
7471637814	7471637296	5869510654	747050133525	747522352784	150
5604540380	5604540332	4357410457	560795691713	560832117503	150
6405586272	6405586261	9230510223	640857791487	640592080323	150
1083891348	1083891329	4709910000	108911447563	108025239864	150
64072665	64072213	9698910000	6467041463	6868183534	150
3554927675	3554927744	546510424	355274353890	355098624844	150
6402503600	6402503785	5246500284	640287744189	640901435779	150
3047181379	3047181715	2848510456	304092203992	304116551310	150
6711757141	6711757132	6541510337	671193698548	671317391279	150
2262965109	2262965249	7526510231	226331732189	226418649569	150
6797472436	6797472881	7371610682	679685026328	679600543439	150
9606790034	9606790780	4211610081	960113069673	960949745720	150
8745470735	8745470437	5795500833	874580372499	874563029332	150
6051724678	6051724355	2866401658	605141040752	605410699557	150
766470926	766470042	6826500145	76025580504	76958308396	150
7118410000	7118410654	679510728	711520027793	711627781799	150
9212167685	9212167018	9978510769	921480072576	921795422533	150
7598612947	7598612764	1919910000	759768284115	759761014086	150
6261893545	6261893957	6238510299	626824962770	626993447593	150
8121779812	8121779764	216500979	812111389274	812383512950	150
6069828130	6069828599	2558510526	606618295370	606459423613	150
974684683	974684246	6445500288	97147934827	97709769034	150
5052634177	5052634247	4277510702	505302575982	505930888483	150
1433570742	1433570239	698410869	143994855635	143962362743	150
3742561212	3742561020	1798410880	374851221596	374169208405	150
2046410000	2046410992	2046410330	204694008323	204616797049	150

2698310221	2698310076	9534510261	269049616779	269918039132	150
9939351783	9939351505	1173500578	993168203114	993462503753	150
6135161732	6135161544	9009510980	613235920094	613765457263	150
8132346632	8132346614	1388410740	813704300462	813116001405	150
1434905399	1434905757	4678410674	143587857173	143037652416	150
9766087515	9766087844	809410989	976685373693	976634963010	150
9508076760	9508076915	2259410427	950995083086	950420227429	150
5172820910	5172820977	9669510638	517312004596	517806160287	150
8755341100	8755341382	4626500123	875303352929	875505825642	150
2786854709	2786854251	8366510612	278512057619	278959821218	150
8294381324	8294381866	7146500275	829786594465	829906302159	150
2945636298	2945636014	636410288	294919179530	294601994667	150
7150367029	7150367561	9528410176	715023265690	715900913744	150
3378157923	3378157952	7856510560	337626031774	337246022952	150
3771694888	3771694633	8787510855	377614222164	377629800150	150
3645829046	3645829306	8740510370	364180224855	364671940144	150
5272047182	5272047259	2918510166	527438249979	527579960487	150
9079239523	9079239572	1086410732	907208674807	907993475363	150
5678365775	5678365770	4507410985	567709997910	567268399133	150
4922140549	4922140185	8916410126	492597577619	492324473332	150
4487510000	4487510274	8597510934	448368940707	448351770594	150
5860432019	5860432130	685500705	586045090967	586406083778	150
7059410000	7059410538	7059410412	705264593687	705689822051	150
6492577798	6492577773	7677410688	649727207116	649128119801	150
5105176345	5105176812	8620510162	510372514738	510660989212	150
9807727787	9807727000	3700510968	980226688394	980243194698	150
9327273927	9327273131	8782994765	932380287328	932528427017	150
1020510000	1020510120	1020510096	102063639434	102660507755	150
2385798531	2385798576	7347410361	238815868949	238293048517	150
1466451648	1466451365	9143510313	146546915551	146512109446	150
5879961495	5879961804	8885510857	587516193372	587470501627	150
8056533842	8056533679	2769510641	805973516989	805365665340	150
2809915225	2809915428	1928510264	280731432260	280659415605	150
957826038	957826596	9149910000	95039891274	95386252247	150
5836877291	5836877102	7465510597	583536497136	583657916042	150
8042967168	8042967731	9789510847	804445188229	804649267767	150
3589802920	3589802869	9839910000	358768265312	358393164816	150
9734299691	9734299267	3628510237	973982072004	973429332615	150
6675613578	6675613475	4073910000	667992230115	667144868317	150
1256500000	1256500872	1256500380	125457008284	125091490836	150
8487625852	8487625450	1229510195	848765905370	848714832764	150
6508725199	6508725889	6001610965	650824867666	650898352869	150
3734999619	3734999774	6171610661	373169357974	373409563535	150
5894573430	5894573593	4167510594	589513369046	589031710214	150
4457410000	4457410462	4457410467	445880436106	445332850192	150
3315546040	3315546273	5904510994	331975610242	331868968096	150
1503940725	1503940198	2087510780	150581885465	150203316168	150

8583005984	8583005141	7448510420	858709465108	858108515148	150
6989052634	6989052987	9648510442	698591003110	698366269090	150
9523570103	9523570398	48410318	952136099877	952331024532	150
5802418592	5802418060	4063510497	580411780028	580543085325	150
1880070538	1880070223	224510121	188676627496	188474750970	150
6265439458	6265439645	1586510829	626307267853	626369678739	150
3360416248	3360416582	8629410174	336589950467	336013554626	150
7980240710	7980240437	8535500201	798499288203	798984019382	150
7674603514	7674603349	8789410780	767318570054	767165985785	150
2727048719	2727048901	8647510450	272052827309	272809747408	150
6026294118	6026294916	7809410995	602172617118	602837013093	150
560473710	560473435	7469410551	56891373498	56028496235	150
6684625876	6684625210	3407410974	668298566783	668712085630	150
7400359661	7400359139	3800610049	740697476410	740454834750	150
3381930581	3381930838	477510718	338862026727	338625160626	150
9172133151	9172133433	5127510193	917775470570	917666768587	150
7769460792	7769460920	2811510068	776185585072	776217275823	150
2361840657	2361840989	7692510854	236706428432	236724596738	150
7723442566	7723442742	5912510080	772549912878	772595665254	150
6136700264	6136700257	8997410918	613366178806	613149999201	150
9173318476	9173318008	4420510138	917834990201	917104997111	150
4958510000	4958510391	4958510568	495762505828	495576335187	150
7806692201	7806692811	6215510041	780392682287	780544860906	150
3890528455	3890528565	5026500064	389614712882	389909139110	150
8586676033	8586676721	5520510149	858957925617	858683803583	150
4515611476	4515611341	2734510275	451088467722	451957500101	150
8586410000	8586410432	8586410788	858879225621	858911068716	150
4926421580	4926421184	1708410992	492002565583	492294627027	150
6342397019	6342397146	6716410103	634614998784	634826579706	150
8293064254	8293064144	5426410172	829961017538	829078442775	150
3639495978	3639495453	8380510726	363147272911	363659997735	150
2396511559	2396511464	2709410981	239678431427	239692391102	150
8396395654	8396395176	6679510734	839881906139	839200085849	150
6865872377	6865872351	1118510086	686794322329	686185739761	150
3270124631	3270124639	2408410963	327955000154	327267000670	150
7008684484	7008684043	5757410498	700424062812	700456235121	150
2826713003	2826713841	4607510043	282511489618	282723899798	150
5026995080	5026995805	4381610779	502496191694	502166870171	150
9931079919	9931079335	345500272	993877164705	993318520602	150
4633019421	4633019918	7491512072	463979066054	463873591670	150
7139868534	7139868544	5615500007	713856171231	713426609121	150
1109873020	1109873027	2597410872	110819448386	110776949999	150
2843905199	2843905467	177410632	284057129711	284711977202	150
2481386219	2481386909	9788410789	248270577985	248010965128	150
9669401443	9669401442	815500024	966804750614	966946017084	150
8566559720	8566559971	2023510096	856641538667	856281376815	150
1468314114	1468314487	6915500041	146757722645	146480579620	150

1631254931	1631254285	8568410569	163001958596	163674248522	150
8577966475	8577966948	2359410437	857698067356	857700731078	150
6719624438	6719624620	1771510651	671933434454	671044342815	150
2789858472	2789858159	5667510644	278072690909	278296985170	150
7518063017	7518063350	2149410317	751076083349	751626572931	150
2152510000	2152510319	2152510398	215521512892	215892083183	150
4508785851	4508785230	5216500984	450153527174	450511850699	150
1740850122	1740850815	5206500883	174863530397	174414376453	150
1825432810	1825432262	8369410542	182430022182	182217125442	150
7966477277	7966477502	3295500779	796523462271	796404163723	150
9540425640	9540425800	2439410247	954321561441	954893383122	150
720788218	720788109	119910000	72787771978	72149081359	150
1230456975	1230456912	8908510073	123461455408	123019014021	150
1924486479	1924486938	7007510985	192985214043	192523976292	150
5684710606	5684710271	9484510760	568177878216	568706504859	150
2606410000	2606410577	2606410989	260509173650	260946598062	150
7281158549	7281158698	7927410230	728747810918	728764257864	150
1756389462	1756389370	435510264	175337469800	175876231196	150
4206133529	4206133170	4869410588	420048446513	420701214531	150
2285256237	2285256335	9636510344	228439573749	228873043041	150
3345456772	3345456690	1961610637	334786483450	334607767745	150
2171488761	2171488403	3269510593	217386362933	217112976939	150
7651316208	7651316749	1016510072	765533500238	765509364382	150
727965109	727965985	4874510695	72026511759	72740954050	150
4553866842	4553866677	6436510321	455060319006	455779334297	150
4379222765	4379222592	4358410449	437652372703	437513345667	150
791370134	791370411	5378510705	79317969473	79935341212	150
3123899592	3123899508	3780510760	312524432803	312052147185	150
4438155008	4438155743	5776410704	443473405086	443053551215	150
7266900507	7266900096	1880510768	726387744401	726728985503	150
7228475592	7228475476	4147510396	722248935754	722468720818	150
3628326303	3628326974	4471510624	362223855876	362841486623	150
621924247	621924353	4197410835	62612374509	62543442325	150
2922510000	2922510471	2922510176	292113901035	292545386010	150
4301753534	4301753474	6937410323	430671822927	430675402500	150
2546378053	2546378051	6219410034	254672715225	254291324206	150
7257588176	7257588674	4318510109	725465403894	725444587886	150
9580186386	9580186105	9451510428	958701995173	958652540585	150
8489829547	8489829373	7305510951	848321807982	848532011107	150
9537960125	9537960713	7168510590	953362831911	953127029075	150
7391506559	7391506269	9961510579	739812811235	739658349579	150
3945445277	3945445920	4178410624	394113711363	394538580517	150
5257815639	5257815814	4937510377	525949317975	525199393166	150
6906269077	6906269809	2581610797	690092905021	690851326643	150
4976525082	4976525713	4791610919	497279638335	497173591115	150
2560219053	2560219230	4761610620	256546266196	256446430792	150
9026511699	9026511185	7406410975	902116786294	902443306689	150

3627610000	3627610886	7130510211	362904225208	362015439514	150
8545538415	8545538316	1077410623	854326200586	854510002418	150
8215568273	8215568879	5640510357	821523437398	821289769452	150
5387599249	5387599228	9725500124	538403711944	538248784051	150
2798376205	2798376058	5476510722	279415056814	279751545425	150
4590367715	4590367255	1398410841	459376057282	459501858902	150
2184366760	2184366307	4089410707	218538342092	218246454345	150
979262040	979262311	4099510872	97716370136	97200720922	150
5950786963	5950786940	2777410693	595360165471	595145926262	150
3134212478	3134212130	4058510478	313218332028	313152193734	150
4058510000	4058510547	8489510816	405300337456	405022888206	150
5279895948	5279895841	336410258	527071851987	527537076751	150
8001320770	8001320038	2402610986	800541177307	800704458801	150
5285758217	5285758077	6767510655	528557407508	528365298821	150
339524100	339524186	2244510329	33031739542	33797471873	150
8707762638	8707762712	1680510748	870499802756	870516676293	150
7949317293	7949317149	5648410383	794466516654	794593869620	150
8402510000	8402510003	8402510929	840947549962	840298702667	150
5687771312	5687771618	7919410104	568454467606	568343349196	150
1701117727	1701117302	29510174	170626814552	170140241992	150
2250522906	2250522572	5726410202	225539239383	225363998867	150
8776347244	8776347244	6909410004	877138259106	877125446771	150
2023956227	2023956402	835500223	202864595534	202303178438	150
4002190913	4002190627	8747410400	400689239336	400978036460	150
17871505	17871985	1847410403	1624084071	1896327271	150
3535432429	3535432110	2373510625	353797679466	353151334606	150
7473510000	7473510991	1267410544	747024952742	747344476962	150
9065215450	9065215907	7473510640	906635595047	906042883689	150
2051581668	2051581241	8469510617	205597177991	205985259106	150
7445632025	7445632115	1594510863	744199124891	744068474410	150
3762289272	3762289651	6939910000	376882721130	376203120367	150
904779400	904779545	9631610318	90122608042	90032480199	150
5639263313	5639263831	8209410937	563112608037	563440561912	150
17968589	17968140	8769410582	1651022291	1471121676	150
4458571545	4458571499	7502610001	445781275052	445886593157	150
4695086884	4695086975	1868410592	469640097441	469232946160	150
3817589078	3817589671	8947510479	381970888331	381397674686	150
7269323169	7269323565	3328510207	726135362068	726890175495	150
9731043140	9731043185	7723510172	973095538449	973543844920	150
3083663634	3083663049	4336510309	308394831004	308114688218	150
1252418636	1252418181	5006510975	125026651015	125733684814	150
8851654889	8851654690	8750510469	885849612245	885004887072	150
6888330557	6888330818	4395510904	688919074683	688246848109	150
6169694783	6169694492	3949410398	616766903153	616946412613	150
115426331	115426131	4867410607	11994771732	11889743319	150
1969462626	1969462934	3949510464	196625038377	196516318681	150
7077970190	7077970803	4056510477	707940962056	707371162403	150

8434989269	8434989303	5579410658	843841707960	843951446304	150
727610000	727610639	2588510823	72190426801	72028832969	150
7937950731	7937950966	7335500181	793356899798	793211675556	150
2003528789	2003528247	4680610824	200659948401	200221672597	150
4965865677	4965865404	7526410184	496117261077	496295933589	150
7783394796	7783394801	3727410205	778739267851	778369586653	150
8542645663	8542645294	5439410250	854264035473	854706920802	150
9779342311	9779342231	8706500936	977572894499	977234158888	150
3584875716	3584875670	5738410294	358543826496	358939910696	150
2243242666	2243242481	2368410544	224271174766	224871206156	150
9317441571	9317441864	4517510134	931889257596	931223903318	150
6127888303	6127888211	6169410520	612820645331	612367341021	150
2420568877	2420568414	5931510278	242627208663	242069155897	150
6914400870	6914400828	9349510410	691310667277	691872137453	150
6363487331	6363487600	7449410352	636285923079	636865339160	150
3507448522	3507448728	5106500874	350218242131	350503629083	150
1895364871	1895364693	4376510711	189509102336	189976360491	150
8612710483	8612710152	5151510394	861850180902	861196585956	150
7887332782	7887332735	3117410045	788925682057	788326813955	150
3994653248	3994653401	1423510136	399960314722	399113027526	150
3470595444	3470595814	6482510731	347470699586	347826135628	150
6261035748	6261035252	7433510241	626888498316	626765031046	150
8324925893	8324925476	8182510704	832393014248	832221030192	150
7457538582	7457538973	3939410298	745219021132	745251046812	150
16058323	16058665	5976510772	1190702193	1986757087	150
5924149408	5924149677	4825500129	592553047109	592947163069	150
9214444769	9214444412	1761510552	921064256278	921741743514	150
4271510000	4271510116	4271510603	427922241843	427471681940	150
6337651011	6337651961	2198510883	633868865306	633075253409	150
3647564870	3647564632	2489410744	364179984675	364694346807	150
5100519112	5100519316	71610645	510918405159	510873758293	150
7381721349	7381721196	29410107	738543086901	738483297171	150
5408462230	5408462202	3497410863	540158135122	540961039111	150
8558919078	8558919567	3418410064	855655052626	855259908622	150
311610000	311610119	311610086	31436187401	31314574841	150
4565883892	4565883045	2763910000	456967863566	456368704131	150
2954752815	2954752425	9168410531	295660200317	295244996221	150
4621656858	4621656277	2744510380	462309913553	462264739710	150
8785012539	8785012435	9315510055	878322791825	878928198622	150
5366467478	5366467441	9076410639	536801651368	536715660931	150
2639410000	2639410415	2639410267	263978877480	263701946398	150
960029792	960029759	6316500995	96404711373	96823604340	150
4466967988	4466967618	900510985	446416182209	446632387236	150
855910617	855910395	4898510955	85516985036	85802854963	150
6184807560	6184807090	1427510219	618336264516	618418321738	150
9138006190	9138006293	9726510253	913327042668	913583839935	150
3870641090	3870641020	4410510039	387588052258	387534701546	150

5892626763	5892626900	4654510475	589054370345	589016892189	150
1127456011	1127456900	3441610391	112301202034	112996509641	150
2463085906	2463085114	7139410223	246746606364	246700127480	150
6991171173	6991171656	247510402	699952989644	699262268798	150
7551006914	7551006588	9135500163	755216076901	755107337944	150
754034656	754034170	290610880	75098957009	75232265428	150
2273075581	2273075442	2357510513	227880652470	227940408461	150
7783609914	7783609376	6102510897	778557677056	778361935698	150
8759895438	8759895120	4288410733	875623688969	875124067716	150
3041754410	3041754042	6750610537	304452131221	304963408324	150
2700490432	2700490109	7972510682	270737053178	270863409281	150
9161343813	9161343112	7549410362	916197888403	916664122829	150
5423157360	5423157516	9061510489	542845634607	542380540051	150
6785986358	6785986536	2895510952	678187588909	678722297980	150
8126067700	8126067944	6831610335	812216532845	812867806374	150
1676938460	1676938839	5727410208	167730176388	167574093765	150
3827292612	3827292097	8400610014	382400415774	382066327758	150
2481584947	2481584740	1277410643	248592283712	248398023922	150
3636980459	3636980343	3978510763	363135338525	363403556821	150
5007553934	5007553165	6806500944	500912634388	500196888302	150
7255969178	7255969416	8291510808	725798517712	725873698436	150
7988784892	7988784601	5566500514	798550019907	798702845976	150
1011981351	1011981285	985500740	101382495794	101396841836	150
3850584546	3850584282	5768410586	385458400117	385222410644	150
4166115940	4166115080	5125500060	416747722324	416296911094	150
8383889219	8383889481	4876510761	838800997191	838365657066	150
979237264	979237450	9206510999	97951162637	97797328357	150
3472348084	3472348939	6294510838	347035544196	347468249823	150
4765244386	4765244778	7980610857	476209236883	476246532511	150
9690483314	9690483332	6613510060	969844847351	969226199626	150
1328238137	1328238382	4178510684	132304496931	132736330630	150
2616379200	2616379462	2424510143	261014853126	261111405910	150
2113571680	2113571503	5328410152	211695176129	211305147021	150
3325736365	3325736994	3577510731	332122735004	332652609652	150
8700107915	8700107752	9444510357	870202933478	870274287373	150
5153141460	5153141522	8394510850	515579776023	515464251339	150
3402156409	3402156322	7949510468	340032447005	340513877168	150
6669657932	6669657230	7527410188	666209457266	666642797804	150
2472030245	2472030950	7819410094	247081062552	247877344252	150
7431528861	7431528872	7149410322	743662657049	743541546886	150
3479613099	3479613249	3909410001	347088010799	347585654087	150
6395865386	6395865817	4087410725	639243944973	639415404162	150
2554627899	2554627399	7635500210	255638689946	255801856970	150
5556240662	5556240420	4235500168	555865662813	555214313742	150
461107816	461107979	987410810	46776253725	46686736969	150
9683788762	9683788781	5570610714	968687667510	968632186902	150
2484870275	2484870674	9251610475	248318321700	248923476631	150

5517593346	5517593876	919410097	551955335061	551257337160	150
5527235480	5527235146	987510867	552249746959	552736373802	150
4700165712	4700165894	227410151	470034044046	470182646394	150
8949064820	8949064131	101510894	894774885321	894858867433	150
4418803878	4418803316	6987410816	441068254327	441640996708	150
1603687221	1603687163	2707510051	160015571321	160230108348	150
3489048618	3489048254	3770510662	348018376382	348525294014	150
5367300733	5367300036	5690610924	536996299523	536767118993	150
8196359329	8196359143	8641610415	819759010973	819945999856	150
9118561750	9118561781	1079410605	911183017914	911243640905	150
6261138687	6261138105	4358510508	626851251307	626713835666	150
1901623417	1901623056	118410031	190668053909	190039301579	150
6185937891	6185937018	4755510514	618836220576	618541923221	150
3722197821	3722197175	7793510872	372584809460	372321134384	150
8202610651	8202610775	9585510828	820234083275	820251220407	150
8766672033	8766672469	2917410122	876462032689	876388960797	150
9840352274	9840352206	4269410528	984758665308	984392732984	150
6008812553	6008812302	279410624	600128930184	600943311252	150
4963471027	4963471883	3968510664	496439659833	496588588959	150
9842832612	9842832988	4219510097	984023056951	984661559895	150
4441106678	4441106318	7388410746	444266491962	444709472438	150
7917478128	7917478648	6458410461	791184030345	791854849255	150
1186893314	1186893202	689510828	118922818871	118768518725	150
6226399798	6226399289	5327510213	622734790970	622425956812	150
2457509925	2457509738	4823510179	245759887815	245527133950	150
9603325805	9603325809	3027410133	960403131188	960409974936	150
3685505684	3685505921	6596410886	368350820294	368312473219	150
901019797	901019749	6418510121	90150430619	90508186147	150
2625040240	2625040723	9291610874	262380660552	262781833522	150
2460509995	2460509821	6459410451	246764017331	246215722395	150
6983702586	6983702946	9577410680	698745836515	698191223883	150
9611084567	9611084171	57510481	961854533754	961684594838	150
5207689817	5207689939	1891510861	520863958927	520355647328	150
8091915664	8091915420	5079510673	809678957657	809435999998	150
5036505800	5036505377	969910000	503134262980	503894716388	150
6616012373	6616012395	4496410874	661072351277	661122036868	150
8796876228	8796876145	5345500277	879296544321	879449320848	150
1200030930	1200030460	632510246	120722907058	120750020900	150
6978940638	6978940449	6033510201	697439226478	697070248827	150
4582030350	4582030581	5517410087	458330971919	458832954253	150
7291910850	7291910094	8060510500	729401799427	729148590738	150
356993757	356993074	9985500751	35738309144	35645121516	150
1909468571	1909468009	382510716	190572421201	190770520730	150
8968944292	8968944893	9226410156	896693197936	896017543273	150
7665195965	7665195347	4629510237	766632486576	766411747386	150
3210018226	3210018893	1047410327	321083229023	321753255632	150
9582150864	9582150177	5875510748	958312471926	958310613421	150

2374306628	2374306201	8529410164	237130856361	237531801707	150
8590532982	8590532849	1236500180	859560294083	859128458684	150
3467489268	3467489744	7468410558	346586889922	346324154352	150
5169826463	5169826409	3478410653	516518150981	516537360469	150
6507173292	6507173105	3085500645	650694236489	650925866375	150
2426510000	2426510629	2426510215	242782413264	242406411636	150
355323211	355323987	1167410534	35888351830	35070047696	150
4326939997	4326939815	9727410212	432940115037	432047076527	150
9645848981	9645848811	228410138	964797027968	964320660892	150
6876907924	6876907509	8054510417	687877448747	687312509699	150
5167571961	5167571648	7233500201	516968035218	516739494627	150
1095580099	1095580563	8463510540	109801032314	109838956748	150
1789430255	1789430678	3177510691	178519470077	178059029122	150
2128961053	2128961226	3871610728	212863656293	212672992964	150
7340969389	7340969001	5557410478	734383711995	734537197469	150
4428020784	4428020040	535500193	442505538842	442751794260	150
7105958982	7105958229	8390610898	710702813353	710290174143	150
2686043366	2686043416	3549410358	268496858947	268572782489	150
8406305483	8406305010	1445500283	840135643898	840873446873	150
3474317658	3474317202	3883510777	347052518568	347960744761	150
9721546662	9721546055	1727510249	972981322971	972853453182	150
1254606897	1254606084	539510322	125435704825	125330222934	150
837285563	837285921	2955510534	83643803621	83240626765	150
8824686291	8824686316	3982510778	882806816375	882892558838	150
138390290	138390245	5738510348	13463159571	13981726422	150
8109486712	8109486623	2667410586	810759286640	810667057712	150
4343188805	4343188883	5116410043	434182906705	434918345541	150
5287368712	5287368588	9787410799	528798089589	528063314502	150
7718542976	7718542182	3379410637	771779075050	771697954237	150
596912131	596912679	6528410173	59306650711	59180641087	150
606653839	606653583	8817410118	60131447530	60571814797	150
3672202556	3672202589	8659510538	367879490489	367848126348	150
8944767079	8944767786	7135510241	894966775818	894255861920	150
9436018020	9436018755	2385810848	943180836665	943499986878	150
4970993333	4970993502	3327410164	497585977788	497594033632	150
2145656424	2145656858	7598410866	214101455566	214313350464	150
2387998316	2387998875	4070610663	238123578500	238106394699	150
3790077792	3790077298	4101610973	379157147025	379477163372	150
5772727149	5772727672	8926500157	577392245975	577283657037	150
6039218534	6039218392	6537410286	603788874682	603265540438	150
5717666997	5717666756	110610076	571381057742	571434431483	150
7268303348	7268303681	9028410127	726055656750	726873808770	150
9710889237	9710889034	7846500346	971743276962	971325233669	150
2591276184	2591276114	9708410000	259330489874	259147572722	150
6783025132	6783025129	6287510804	678198416835	678191086478	150
8398221665	8398141869	5218410047	839476139145	839352932785	150
4291664035	4296400043	4679910000	429667432634	429817751660	150

7194122753	7190991178	950510481	719377164022	719352588133	150
3413144161	3413144581	8894510900	341607281808	341959240999	150
2321132758	2321132487	9157410442	232936932344	232362999893	150
7296150747	7296150863	3446410371	729582415609	729989513942	150
7801893180	7807331467	5927410228	780209179678	780031224114	150
5991539734	5990084294	3369410537	599277662147	599979073039	150
4487031267	4487031772	7909510069	448432032912	448233678261	150
8993308382	8993308597	3081510683	899360963958	899096027221	150
1936104503	1933155744	6923510191	193524663562	193154099272	150
5464338145	5463811782	5187410736	546852618183	546592862240	150
3778973022	3778647967	6690510851	377415307168	377755298980	150
8497631597	8498284303	5155510451	849778593646	849528920869	150
9383699130	9388288701	1738510343	938570335606	938331611765	150
3364515638	3366343301	5815500030	336481935505	336872542109	150
6945374978	6941034168	4229910000	694383455669	694723435872	150
2022945130	2027225393	3783510767	202923751496	202192744113	150
6687155968	6680764453	5064510516	668967266173	668372589780	150
3860500316	3865408639	6505510970	386961393125	386647268544	150
5780215438	5787826527	1259910000	578932860895	578565554666	150
9204127469	9209921559	9439410254	920286094394	920927070446	150
7499211063	7497602240	279510688	749204120883	749022734464	150
700686599	708629864	8828410206	70573341711	70940558236	150
6762950280	6766004994	5047510387	676384791989	676158662499	150
4937572902	4930585464	6036410234	493038451282	493547223659	150
3266756797	3268861776	1718410091	326380446085	326473212327	150
4458134393	4454489473	818510155	445337824885	445113341801	150
6359495754	6353345205	2157510493	635915248887	635479566459	150
6474285568	6471726001	3611610119	647802276535	647270821337	150
9590958071	9595331016	953510483	959132485017	959801698083	150
305330259	300416237	830510272	30244161777	30822696020	150
1199423839	1198354505	7856500446	119204219705	119851769600	150
2521102638	2520707736	4967510672	252053766519	252571603155	150
6512200606	6519615583	7701542012	651769466796	651322237632	150
2341462163	2347433916	1460510533	234667939839	234881154022	150
7676080961	7677295278	9890510874	767187506878	767143008900	150
4741918270	4742358275	2161610558	474753193448	474562862984	150
7990181748	7995221022	2195500766	799378254687	799627120507	150
2259324010	2255470712	588410759	225349013006	225471736220	150
15385825	11633996	9499410847	1170705222	1303213652	150
294521852	297055348	9808410010	29427131163	29051531125	150
4978412630	4978477092	2318410054	497849040750	497501496835	150
5393912911	5399367113	6921510182	539005420186	539079691751	150
9373601049	9377977780	708510046	937323158442	937776373217	150
9269645987	9269710746	6706410003	926574968404	926384647185	150
4125373326	4120557021	6151610463	412425936427	412462727791	150
1230116283	1230640016	6349410341	123955115854	123615729713	150
1806503225	1803111621	6452510432	180000230288	180615796537	150

9117778969	9113532484	9673510662	911717996164	911291383434	150
2400583150	2409152226	5208410946	240516829154	240994924136	150
5303147999	5303946646	1559410456	530801553069	530047817551	150
2924599853	2920290252	6547510438	292349936655	292687250025	150
8879163277	8876950471	8319410046	887915166295	887936853676	150
1041939392	1048864857	3454510454	104620689060	104258843551	150
5838373331	584817856	688410769	58254084330	58144985549	150
9235761502	9239471056	8460610607	923549209780	923917914142	150
6472119247	6474870904	4779410677	647340771406	647435903192	150
6440637861	6446910090	3116510084	644765910261	644497451236	150
7172518877	7170933524	8247410353	717081287795	717013481053	150
1174123650	1176381003	8967410620	117896422427	117413236371	150
9577747001	9571822786	1018410022	957272622751	957893138033	150
9546809030	9546904734	3096510881	954880254330	954012042914	150
5761959754	5767999874	3722510157	576815391132	576415322489	150
1714856381	1713589975	907799912	171069102694	171392743779	150
7610778484	7615168061	5548510428	761527137144	761231206796	150
103871756	108018854	6261610572	10253681687	10830144526	150
974557495	975015229	4491610889	97836945675	97659036083	150
7394426752	7396022938	615510078	739034598582	739569490441	150
5543945510	5545626447	9099410808	554319887478	554569627324	150
6889423431	6886099855	5167891929	688973995614	688771249893	150
8081433241	8083835686	9079410613	808970063974	808614162743	150
8329667234	8325816359	4737510357	832379865857	832935569734	150
5727130808	5729197017	8455510486	572571578403	572718256345	150
682399390	685589937	2129711369	68148301020	68583636658	150
3774184177	3771315950	842510366	377285595353	377637366454	150
6731097422	6739074886	3657510544	673664380004	673138451212	150
1231512001	1230303697	5398410845	123707803400	123481663833	150
7935447961	7937320703	2449410347	793286631081	793381544402	150
1791379202	1791623703	5791510855	179508256788	179015782280	150
6197688433	6192690536	4780610834	619398353068	619869624516	150
6664629828	6666748567	3614510065	666549013606	666617466544	150
7200135379	7205636341	6881610831	720304445968	720581161472	150
48510000	48510427	48510372	4366007672	4081426480	150
48510000	48510427	48510372	4366007672	4081426480	150
33500000	33500233	33500174	3186369873	3712838817	150
33500000	33500233	33500174	3186369873	3712838817	150
5510000	5510073	5510911	917159057	543725939	150
5510000	5510073	5510911	917159057	543725939	150
19410000	19410332	19410008	1375958124	1156236901	150
19410000	19410332	19410008	1375958124	1156236901	150
56500000	56500015	56500359	5351448004	5676000820	150
56500000	56500015	56500359	5351448004	5676000820	150
11610000	11610694	11610058	1689803742	1511873903	150
11610000	11610694	11610058	1689803742	1511873903	150
46500000	46500855	46500258	4945407646	4912352650	150

46500000	46500855	46500258	4945407646	4912352650	150
28510000	28510219	28510174	2156111315	2458707322	150
28510000	28510219	28510174	2156111315	2458707322	150
10610000	10610499	10610066	1755388697	1439443518	150
10610000	10610499	10610066	1755388697	1439443518	150
610000	610349	610966	741785560	596226569	150
610000	610349	610966	741785560	596226569	150
17410000	17410727	17410032	1331279885	1019764134	150
17410000	17410727	17410032	1331279885	1019764134	150
39510000	39510549	39510274	3822303866	3606587725	150
39510000	39510549	39510274	3822303866	3606587725	150
108410000	108410829	108410930	10596726765	10836950119	150
108410000	108410829	108410930	10596726765	10836950119	150
109410000	109410219	109410919	10231368908	10025414614	150
109410000	109410219	109410919	10231368908	10025414614	150
229410000	229410547	229410127	22835577378	22733933803	150
229410000	229410547	229410127	22835577378	22733933803	150
207410000	207410696	207410951	20157894136	20620549396	150
207410000	207410696	207410951	20157894136	20620549396	150
190610000	190610443	190610870	19149265270	19706113665	150
190610000	190610443	190610870	19149265270	19706113665	150
232510000	232510893	232510205	23300843705	23268689448	150
232510000	232510893	232510205	23300843705	23268689448	150
198410000	198410096	198410820	19471688484	19190309881	150
198410000	198410096	198410820	19471688484	19190309881	150
129410000	129410527	129410117	12157939650	12224636384	150
129410000	129410527	129410117	12157939650	12224636384	150
149410000	149410785	149410315	14955384734	14908870886	150
149410000	149410785	149410315	14955384734	14908870886	150
131510000	131510051	9031510194	13773093793	13407674796	150
131510000	131510051	9031510194	13773093793	13407674796	150
147410000	147410275	147410336	14470598212	14108034216	150
147410000	147410275	147410336	14470598212	14108034216	150
351510000	351510024	351510409	35437448208	35157924735	150
351510000	351510024	351510409	35437448208	35157924735	150
358410000	358410510	358410445	35666122278	35227089909	150
358410000	358410510	358410445	35666122278	35227089909	150
325510000	325510327	325510149	32879267893	32542052374	150
325510000	325510327	325510149	32879267893	32542052374	150
349410000	349410824	349410335	34850889911	34380220270	150
349410000	349410824	349410335	34850889911	34380220270	150
356510000	356510001	356510501	35426055786	35496954189	150
356510000	356510001	356510501	35426055786	35496954189	150
321610000	321610853	321610185	32303193564	32530899500	150
321610000	321610853	321610185	32303193564	32530899500	150
288410000	288410931	288410729	28783225426	28875708066	150
288410000	288410931	288410729	28783225426	28875708066	150

291610000	291610218	291610865	29278083013	29874472135	150
291610000	291610218	291610865	29278083013	29874472135	150
267510000	267510273	267510600	26616586481	26725199656	150
267510000	267510273	267510600	26616586481	26725199656	150
285500000	285500258	285500664	28436829049	28271800580	150
285500000	285500258	285500664	28436829049	28271800580	150
278410000	278410780	278410630	27320122114	27579441729	150
278410000	278410780	278410630	27320122114	27579441729	150
270510000	270510246	270510609	27691042266	27491528380	150
270510000	270510246	270510609	27691042266	27491528380	150
249410000	249410805	249410325	24649088998	24932458090	150
249410000	249410805	249410325	24649088998	24932458090	150
437410000	437410239	437410270	43638338999	43881316079	150
437410000	437410239	437410270	43638338999	43881316079	150
436410000	436410800	436410268	43047253112	43083876863	150
436410000	436410800	436410268	43047253112	43083876863	150
453510000	453510467	453510435	45887733931	45203724599	150
453510000	453510467	453510435	45887733931	45203724599	150
479510000	479510118	479510708	47244426779	47424737865	150
479510000	479510118	479510708	47244426779	47424737865	150
443510000	443510287	443510333	44033921044	44404659735	150
443510000	443510287	443510333	44033921044	44404659735	150
459510000	459510902	459510511	45866234610	45606453508	150
459510000	459510902	459510511	45866234610	45606453508	150
396510000	396510555	396510908	39907271139	39862908453	150
396510000	396510555	396510908	39907271139	39862908453	150
416510000	416510596	416510110	41571103581	41908816952	150
416510000	416510596	416510110	41571103581	41908816952	150
410610000	410610463	410610106	41142128020	41906883603	150
410610000	410610463	410610106	41142128020	41906883603	150
426500000	426500688	426500099	42118424139	42133486173	150
426500000	426500688	426500099	42118424139	42133486173	150
397410000	397410703	397410850	39720978967	39751478447	150
397410000	397410703	397410850	39720978967	39751478447	150
376410000	376410316	376410659	37370483471	37988863651	150
376410000	376410316	376410659	37370483471	37988863651	150
427410000	427410027	427410171	42145836734	42969810962	150
427410000	427410027	427410171	42145836734	42969810962	150
378410000	378410796	378410640	37146495939	37823396046	150
378410000	378410796	378410640	37146495939	37823396046	150
590610000	590610515	590610909	59754750412	59591105405	150
590610000	590610515	590610909	59754750412	59591105405	150
597410000	597410733	597410870	59226163663	59454495227	150
597410000	597410733	597410870	59226163663	59454495227	150
618410000	618410966	618410081	61003381861	61703018663	150
618410000	618410966	618410081	61003381861	61703018663	150
575510000	575510067	575510710	57225492809	57179487781	150

575510000	575510067	575510710	57225492809	57179487781	150
616410000	616410513	616410088	61983284992	61343786977	150
585500000	585500233	585500695	58281519048	58617916295	150
585500000	585500233	585500695	58281519048	58617916295	150
586410000	586410505	586410781	58531798980	58392093131	150
586410000	586410505	586410781	58531798980	58392093131	150
543510000	543510305	543510343	54536186168	54781624513	150
543510000	543510305	543510343	54536186168	54781624513	150
546500000	546500936	546500309	54413337918	54368783056	150
546500000	546500936	546500309	54413337918	54368783056	150
556500000	556500016	556500409	55423513339	55285935407	150
495510000	495510335	495510910	49061604039	49981318645	150
495510000	495510335	495510910	49061604039	49981318645	150
549510000	549510752	549510421	54828126568	54718881531	150
549510000	549510752	549510421	54828126568	54718881531	150
527510000	527510905	527510228	52883877294	52219264197	150
527510000	527510905	527510228	52883877294	52219264197	150
497510000	497510871	497510916	49907032290	49750186480	150
497510000	497510871	497510916	49907032290	49750186480	150
525500000	525500872	525500095	52083442794	52446519943	150
525500000	525500872	525500095	52083442794	52446519943	150
498410000	498410108	498410850	49804016061	49026573110	150
498410000	498410108	498410850	49804016061	49026573110	150
702510000	702510429	702510952	70065674612	70476414159	150
702510000	702510429	702510952	70065674612	70476414159	150
717410000	717410837	717410102	71698819134	71318051916	150
717410000	717410837	717410102	71698819134	71318051916	150
706500000	706500485	706500928	70312878295	70224171620	150
706500000	706500485	706500928	70312878295	70224171620	150
709510000	709510285	709510042	70453004353	70940557488	150
709510000	709510285	709510042	70453004353	70940557488	150
691610000	691610290	691610905	69244346617	69038786139	150
691610000	691610290	691610905	69244346617	69038786139	150
725510000	725510391	725510191	72173759960	72276128940	150
725510000	725510391	725510191	72173759960	72276128940	150
646500000	646500954	646500319	64002887736	64113691085	150
646500000	646500954	646500319	64002887736	64113691085	150
681610000	681610115	681610805	68199188115	68552026515	150
681610000	681610115	681610805	68199188115	68552026515	150
672510000	672510161	672510646	67205803862	67425777358	150
672510000	672510161	672510646	67205803862	67425777358	150
658410000	658410568	658410475	65441956259	65295519395	150
658410000	658410568	658410475	65441956259	65295519395	150
637410000	637410285	637410290	63281867146	63878037626	150
637410000	637410285	637410290	63281867146	63878037626	150
667410000	667410567	667410584	66579232157	66420739654	150
667410000	667410567	667410584	66579232157	66420739654	150

638510000	638510421	638510332	63441801371	63030163581	150
638510000	638510421	638510332	63441801371	63030163581	150
676510000	676510323	676510737	67346217468	67928806742	150
676510000	676510323	676510737	67346217468	67928806742	150
836500000	836500826	836500238	83495080538	83943929875	150
836500000	836500826	836500238	83495080538	83943929875	150
839510000	839510691	839510351	83974652403	83581573337	150
839510000	839510691	839510351	83974652403	83581573337	150
843510000	843510359	843510374	84897014329	84423332659	150
843510000	843510359	843510374	84897014329	84423332659	150
861610000	861610775	861610626	86019998730	86839037928	150
861610000	861610775	861610626	86019998730	86839037928	150
837410000	837410198	9737410308	83464842377	83842190574	150
837410000	837410198	9737410308	83464842377	83842190574	150
852510000	852510402	852510467	85568133291	85936014947	150
852510000	852510402	852510467	85568133291	85936014947	150
757510000	757510183	757510551	75941760463	75405753858	150
757510000	757510183	757510551	75941760463	75405753858	150
749410000	749410772	749410375	74853536884	74753242417	150
749410000	749410772	749410375	74853536884	74753242417	150
750510000	750510989	750510461	75323827400	75384836691	150
750510000	750510989	750510461	75323827400	75384836691	150
770610000	770610280	770610729	77488270190	77006891319	150
770610000	770610280	770610729	77488270190	77006891319	150
795510000	795510389	795510940	79846615226	79881830979	150
795510000	795510389	795510940	79846615226	79881830979	150
758410000	758410589	758410484	75859618152	75993302975	150
758410000	758410589	758410484	75859618152	75993302975	150
771610000	771610937	771610715	77304894517	77549046580	150
771610000	771610937	771610715	77304894517	77549046580	150
778410000	778410841	778410680	77346708538	77434922654	150
778410000	778410841	778410680	77346708538	77434922654	150
958410000	958410549	958410504	95238484615	95866903880	150
958410000	958410549	958410504	95238484615	95866903880	150
943510000	943510376	943510384	94076513941	94835796232	150
943510000	943510376	943510384	94076513941	94835796232	150
967510000	967510391	967510668	96069066160	96239411479	150
967510000	967510391	967510668	96069066160	96239411479	150
935510000	935510621	935510315	93727088561	93578630778	150
935510000	935510621	935510315	93727088561	93578630778	150
960610000	960610154	960610649	96710982024	96473915587	150
960610000	960610154	960610649	96710982024	96473915587	150
912510000	912510655	912510074	91801300340	91354774900	150
912510000	912510655	912510074	91801300340	91354774900	150
915510000	915510256	915510110	91927262537	91771709633	150
915510000	915510256	915510110	91927262537	91771709633	150
918410000	918410013	918410110	91887720663	91725393891	150

918410000	918410013	918410110	91887720663	91725393891	150
890510000	890510243	890510865	89149318358	89472016566	150
890510000	890510243	890510865	89149318358	89472016566	150
924510000	924510358	924510192	92749975701	92063304334	150
924510000	924510358	924510192	92749975701	92063304334	150
1095510000	1095510263	1095510870	109307746716	109566205825	150
1095510000	1095510263	1095510870	109307746716	109566205825	150
929410000	929410566	929410196	92940768882	92238418190	150
929410000	929410566	929410196	92940768882	92238418190	150
896510000	896510646	896510958	89358772613	89937720509	150
896510000	896510646	896510958	89358772613	89937720509	150
885510000	885510223	885510849	88732349216	88791879218	150
885510000	885510223	885510849	88732349216	88791879218	150
1107410000	1107410678	1107410941	110836853683	110340936313	150
1107410000	1107410678	1107410941	110836853683	110340936313	150
1080610000	1080610260	1080610761	108955843824	108333971555	150
1080610000	1080610260	1080610761	108955843824	108333971555	150
1059410000	1059410826	1059410406	105702261053	105914787630	150
1059410000	1059410826	1059410406	105702261053	105914787630	150
1103510000	1103510784	1103510901	110589576861	110211502976	150
1103510000	1103510784	1103510901	110589576861	110211502976	150
1117510000	1117510771	1117510090	111112902037	111789959600	150
1117510000	1117510771	1117510090	111112902037	111789959600	150
1016500000	1016500532	1016500960	101334928488	101099510994	150
1016500000	1016500532	1016500960	101334928488	101099510994	150
1050510000	1050510861	1050510392	105560891457	105897778029	150
1050510000	1050510861	1050510392	105560891457	105897778029	150
1025510000	1025510275	1025510121	102146222178	102970797468	150
1025510000	1025510275	1025510121	102146222178	102970797468	150
1039410000	1039410583	1039410207	103695278435	103961752962	150
1039410000	1039410583	1039410207	103695278435	103961752962	150
1055510000	1055510720	1055510437	105466432653	105969671421	150
1055510000	1055510720	1055510437	105466432653	105969671421	150
1027510000	1027510813	1027510179	102599344865	102534033175	150
1027510000	1027510813	1027510179	102599344865	102534033175	150
1211510000	1211510569	1211510007	121124892516	121935834930	150
1211510000	1211510569	1211510007	121124892516	121935834930	150
1193510000	1193510934	1193510806	119765604011	119752501972	150
1193510000	1193510934	1193510806	119765604011	119752501972	150
1217510000	1217510790	1217510101	121537470257	121293626715	150
1217510000	1217510790	1217510101	121537470257	121293626715	150
1187410000	1187410666	1187410732	118284206965	118972401308	150
1187410000	1187410666	1187410732	118284206965	118972401308	150
1189510000	1189510151	1189510779	118316732512	118492935975	150
1189510000	1189510151	1189510779	118316732512	118492935975	150
1239510000	1239510587	1239510294	123258272402	123818018335	150
1239510000	1239510587	1239510294	123258272402	123818018335	150

1183510000	1183510770	1183510703	118870578505	118144379019	150
1183510000	1183510770	1183510703	118870578505	118144379019	150
1197510000	1197510817	1197510888	119010173407	119845617514	150
1197510000	1197510817	1197510888	119010173407	119845617514	150
1209510000	1209510200	1209510992	120451425336	120260177597	150
1209510000	1209510200	1209510992	120451425336	120260177597	150
1216410000	1216410453	1216410049	121884301288	121886417845	150
1216410000	1216410453	1216410049	121884301288	121886417845	150
1241610000	1241610284	1241610369	124528315787	124410411771	150
1241610000	1241610284	1241610369	124528315787	124410411771	150
1186410000	1186410446	1186410742	118770257677	118463917158	150
1186410000	1186410446	1186410742	118770257677	118463917158	150
1139410000	1139410599	1139410217	113239131828	113416686740	150
1139410000	1139410599	1139410217	113239131828	113416686740	150
1142510000	1142510901	1142510296	114715379004	114421386374	150
1142510000	1142510901	1142510296	114715379004	114421386374	150
1346410000	1346410942	1346410359	134170181231	134719761029	150
1346410000	1346410942	1346410359	134170181231	134719761029	150
1126500000	1126500645	1126500070	112353722966	112087055408	150
1126500000	1126500645	1126500070	112353722966	112087055408	150
1159410000	1159410844	1159410416	115578649972	115971586635	150
1159410000	1159410844	1159410416	115578649972	115971586635	150
1146410000	1146410911	1146410339	114979468491	114633100220	150
1146410000	1146410911	1146410339	114979468491	114633100220	150
1127510000	1127510833	1127510188	112743063259	112605182164	150
1127510000	1127510833	1127510188	112743063259	112605182164	150
1135510000	1135510488	1135510235	113920486133	113615527668	150
1135510000	1135510488	1135510235	113920486133	113615527668	150
1309410000	1309410258	1309410940	130614308847	130573776038	150
1309410000	1309410258	1309410940	130614308847	130573776038	150
1347510000	1347510088	1347510413	134668554672	134261237514	150
1347510000	1347510088	1347510413	134668554672	134261237514	150
1326510000	1326510667	1326510203	132406645562	132377917240	150
1326510000	1326510667	1326510203	132406645562	132377917240	150
1335510000	1335510526	1335510256	133730832003	133051928148	150
1335510000	1335510526	1335510256	133730832003	133051928148	150
1332510000	1332510913	1332510216	133323630226	133130074910	150
1332510000	1332510913	1332510216	133323630226	133130074910	150
1270610000	1270610204	1270610680	127891272110	127865582082	150
1270610000	1270610204	1270610680	127891272110	127865582082	150
1298410000	1298410115	1298410831	129695597111	129664150467	150
1298410000	1298410115	1298410831	129695597111	129664150467	150
1283510000	1283510786	1283510713	128401399614	128041279237	150
1283510000	1283510786	1283510713	128401399614	128041279237	150
1263510000	1263510482	1263510513	126263964274	126449070032	150
1263510000	1263510482	1263510513	126263964274	126449070032	150
1254510000	1254510645	1254510431	125203914842	125429327383	150

1254510000	1254510645	1254510431	125203914842	125429327383	150
1435500000	1435500837	1435500184	143496423825	143891651158	150
1435500000	1435500837	1435500184	143496423825	143891651158	150
1487410000	1487410717	1487410762	148043581795	148702290973	150
1487410000	1487410717	1487410762	148043581795	148702290973	150
1441510000	1441510747	1441510322	144469966865	144733622685	150
1441510000	1441510747	1441510322	144469966865	144733622685	150
1438410000	1438410208	1438410259	143275772207	143580868202	150
1438410000	1438410208	1438410259	143275772207	143580868202	150
1476410000	1476410332	1476410670	147856293910	147089618626	150
1476410000	1476410332	1476410670	147856293910	147089618626	150
1485500000	1485500218	1485500687	148759695788	148047360918	150
1485500000	1485500218	1485500687	148759695788	148047360918	150
1446500000	1446500922	1446500300	144005525256	144423939600	150
1446500000	1446500922	1446500300	144005525256	144423939600	150
1446510000	1446510913	1446510415	144321363135	144804486635	150
1446510000	1446510913	1446510415	144321363135	144804486635	150
1405510000	1405510140	1405510955	140902700257	140725883374	150
1405510000	1405510140	1405510955	140902700257	140725883374	150
1387410000	1387410699	1387410752	138087199957	138113417774	150
1425500000	1425500858	1425500086	142452002040	142759284639	150
1425500000	1425500858	1425500086	142452002040	142759284639	150
1591510000	1591510696	1591510831	159182566118	159100618404	150
1591510000	1591510696	1591510831	159182566118	159100618404	150
1606500000	1606500472	1606500919	160972583258	160204443326	150
1606500000	1606500472	1606500919	160972583258	160204443326	150
1608510000	1608510973	1608510037	160196238859	160023508048	150
1608510000	1608510973	1608510037	160196238859	160023508048	150
1595500000	1595500391	1595500808	159516648434	159197373991	150
1595500000	1595500391	1595500808	159516648434	159197373991	150
1616500000	1616500627	1616500020	161348520973	161775777678	150
1616500000	1616500627	1616500020	161348520973	161775777678	150
1579410000	1579410164	1579410654	157610747938	157376735738	150
1579410000	1579410164	1579410654	157610747938	157376735738	150
1596510000	1596510594	1596510929	159753296146	159021281666	150
1596510000	1596510594	1596510929	159753296146	159021281666	150
1569410000	1569410972	1569410555	156723558685	156381347622	150
1569410000	1569410972	1569410555	156723558685	156381347622	150
1496510000	1496510575	1496510919	149606564929	149392997652	150
1496510000	1496510575	1496510919	149606564929	149392997652	150
1509410000	1509410295	1509410960	150210220314	150677487926	150
1509410000	1509410295	1509410960	150210220314	150677487926	150
1510610000	1510610482	1510610117	151142185912	151692756499	150
1510610000	1510610482	1510610117	151142185912	151692756499	150
1537510000	1537510070	1537510330	153263615137	153036275605	150
1537510000	1537510070	1537510330	153263615137	153036275605	150
1699510000	1699510287	1699510927	169959823821	169172601414	150

1699510000	1699510287	1699510927	169959823821	169172601414	150
1715500000	1715500740	1715500014	171164522524	171655905493	150
1715500000	1715500740	1715500014	171164522524	171655905493	150
1730510000	1730510798	1730510263	173884891644	173103991492	150
1730510000	1730510798	1730510263	173884891644	173103991492	150
1716510000	1716510564	1716510143	171660484196	171990668327	150
1716510000	1716510564	1716510143	171660484196	171990668327	150
1703510000	1703510799	1703510963	170475784765	170343591008	150
1703510000	1703510799	1703510963	170475784765	170343591008	150
1725500000	1725500906	1725500116	172623793930	172357859295	150
1725500000	1725500906	1725500116	172623793930	172357859295	150
1698510000	1698510101	1698510932	169150583418	169137000782	150
1698510000	1698510101	1698510932	169150583418	169137000782	150
1710510000	1710510612	1710510066	171297838725	171592332319	150
1710510000	1710510612	1710510066	171297838725	171592332319	150
1728410000	1728410093	1728410188	172834072829	172419167614	150
1728410000	1728410093	1728410188	172834072829	172419167614	150
1693510000	1693510954	1693510855	169037243717	169260384627	150
1693510000	1693510954	1693510855	169037243717	169260384627	150
1638410000	1638410245	1638410280	163007739107	163619700086	150
1638410000	1638410245	1638410280	163007739107	163619700086	150
1622510000	1622510789	1622510146	162852249496	162290712659	150
1622510000	1622510789	1622510146	162852249496	162290712659	150
1671510000	1671510317	1671510641	167456460375	167039372725	150
1671510000	1671510317	1671510641	167456460375	167039372725	150
1662510000	1662510553	1662510548	166230207785	166937087632	150
1662510000	1662510553	1662510548	166230207785	166937087632	150
1647410000	1647410389	1647410383	164904378544	164455917002	150
1647410000	1647410389	1647410383	164904378544	164455917002	150
1858410000	1858410532	1858410495	185034505864	185554377993	150
1858410000	1858410532	1858410495	185034505864	185554377993	150
1863500000	1863500544	1863500548	186303867878	186294447811	150
1863500000	1863500544	1863500548	186303867878	186294447811	150
1803510000	1803510818	1803510973	180818130608	180978489980	150
1803510000	1803510818	1803510973	180818130608	180978489980	150
1786410000	1786410470	1786410800	178424645765	178619833880	150
1786410000	1786410470	1786410800	178424645765	178619833880	150
1802510000	1802510453	1802510963	180292585087	180783735608	150
1802510000	1802510453	1802510963	180292585087	180783735608	150
1756500000	1756500051	1756500430	175013525329	175817043167	150
1756500000	1756500051	1756500430	175013525329	175817043167	150
1772510000	1772510183	1772510657	177768477150	177844594123	150
1772510000	1772510183	1772510657	177768477150	177844594123	150
1786510000	1786510449	1786510849	178970270273	178967977625	150
1786510000	1786510449	1786510849	178970270273	178967977625	150
1773500000	1773500804	1773500636	177832920499	177050884649	150
1773500000	1773500804	1773500636	177832920499	177050884649	150

1968410000	1968410731	1968410602	196872097019	196094376401	150
1968410000	1968410731	1968410602	196872097019	196094376401	150
1914600000	1914600132	1914600056	191953553963	191737510685	150
1914600000	1914600132	1914600056	191953553963	191737510685	150
1887410000	1887410786	1887410801	188041552800	188405051506	150
1887410000	1887410786	1887410801	188041552800	188405051506	150
1873510000	1873510719	1873510673	187108291607	187785658920	150
1873510000	1873510719	1873510673	187108291607	187785658920	150
1889510000	1889510262	1889510849	188323150427	188585436589	150
1889510000	1889510262	1889510849	188323150427	188585436589	150
1926500000	1926500768	1926500150	192442585628	192891351905	150
1926500000	1926500768	1926500150	192442585628	192891351905	150
1890610000	1890610489	1890610940	189695936455	189764946574	150
1890610000	1890610489	1890610940	189695936455	189764946574	150
1879410000	1879410217	1879410684	187292008928	187231991494	150
1879410000	1879410217	1879410684	187292008928	187231991494	150
2077510000	2077510276	2077510680	207573419555	207813466170	150
2077510000	2077510276	2077510680	207573419555	207813466170	150
2086510000	2086510396	2086510779	208727374959	208538096892	150
2086510000	2086510396	2086510779	208727374959	208538096892	150
2088410000	2088410900	2088410711	208189858516	208534056524	150
2088410000	2088410900	2088410711	208189858516	208534056524	150
2090510000	2090510087	2090510789	209039083129	209719349453	150
2090510000	2090510087	2090510789	209039083129	209719349453	150
2084510000	2084510870	2084510713	208575927216	208810366716	150
2084510000	2084510870	2084510713	208575927216	208810366716	150
2067510000	2067510238	2067510583	206898711215	206148171623	150
2067510000	2067510238	2067510583	206898711215	206148171623	150
2092510000	2092510585	2092510787	209647493113	209440786657	150
2092510000	2092510585	2092510787	209647493113	209440786657	150
2098410000	2098410082	2098410812	209102325737	209357247977	150
2098410000	2098410082	2098410812	209102325737	209357247977	150
2068410000	2068410569	2068410515	206912664849	206436427452	150
2068410000	2068410569	2068410515	206912664849	206436427452	150
2049410000	2049410770	2049410307	204733177933	204779656207	150
2049410000	2049410770	2049410307	204733177933	204779656207	150
1991510000	1991510767	1991510872	199077652107	199451507984	150
1991510000	1991510767	1991510872	199077652107	199451507984	150
1996510000	1996510662	1996510969	199657835381	199739020145	150
1996510000	1996510662	1996510969	199657835381	199739020145	150
2041510000	2041510666	2041510285	204442178025	204213332366	150
2041510000	2041510666	2041510285	204442178025	204213332366	150
2022510000	2022510678	2022510087	202158709023	202992215109	150
2022510000	2022510678	2022510087	202158709023	202992215109	150
2191510000	2191510623	2191510792	219465177521	219382186089	150
2191510000	2191510623	2191510792	219465177521	219382186089	150
2209410000	2209410239	2209410931	220602532180	220825619450	150

2209410000	2209410239	2209410931	220602532180	220825619450	150
2186510000	2186510415	2186510790	218307572151	218793824795	150
2186510000	2186510415	2186510790	218307572151	218793824795	150
2218510000	2218510082	2218510097	221589113206	221230088357	150
2218510000	2218510082	2218510097	221589113206	221230088357	150
2179510000	2179510076	2179510680	217444988966	217639096152	150
2179510000	2179510076	2179510680	217444988966	217639096152	150
2235500000	2235500807	2235500166	223830682243	223783444315	150
2235500000	2235500807	2235500166	223830682243	223783444315	150
2168410000	2168410587	2168410525	216139032016	216849457153	150
2168410000	2168410587	2168410525	216139032016	216849457153	150
2137410000	2137410178	2137410244	213920086607	213605289824	150
2137410000	2137410178	2137410244	213920086607	213605289824	150
2339410000	2339410636	2339410237	233187478064	233050128276	150
2339410000	2339410636	2339410237	233187478064	233050128276	150
2132510000	2132510878	2132510197	213233154486	213010512254	150
2132510000	2132510878	2132510197	213233154486	213010512254	150
2158410000	2158410476	2158410428	215913293577	215029063861	150
2158410000	2158410476	2158410428	215913293577	215029063861	150
2164510000	2164510677	2164510523	216195926817	216254483829	150
2164510000	2164510677	2164510523	216195926817	216254483829	150
2156500000	2156500033	2156500371	215725486667	215794123949	150
2156500000	2156500033	2156500371	215725486667	215794123949	150
2348510000	2348510482	2348510405	234563732625	234078366459	150
2348510000	2348510482	2348510405	234563732625	234078366459	150
2312510000	2312510544	2312510014	231296847927	231519386861	150
2312510000	2312510544	2312510014	231296847927	231519386861	150
2316410000	2316410471	2316410060	231687896778	231565807068	150
2316410000	2316410471	2316410060	231687896778	231565807068	150
2357410000	2357410508	2357410455	235485676461	235670452374	150
2357410000	2357410508	2357410455	235485676461	235670452374	150
2329410000	2329410571	2329410139	232080246378	232630175697	150
2329410000	2329410571	2329410139	232080246378	232630175697	150
2329510000	2329510509	2329510206	232826603303	232639291488	150
2329510000	2329510509	2329510206	232826603303	232639291488	150
2290510000	2290510125	2290510807	229572682402	229023391519	150
2290510000	2290510125	2290510807	229572682402	229023391519	150
2258410000	2258410495	2258410437	225075763010	225009452757	150
2258410000	2258410495	2258410437	225075763010	225009452757	150
2291510000	2291510642	2291510802	229175156502	229157000980	150
2291510000	2291510642	2291510802	229175156502	229157000980	150
2293510000	2293510886	2293510817	229685818254	229683230206	150
2293510000	2293510886	2293510817	229685818254	229683230206	150
2271610000	2271610851	2271610667	227543889554	227784706216	150
2271610000	2271610851	2271610667	227543889554	227784706216	150
2285500000	2285500261	2285500666	228453078959	228733381433	150
2285500000	2285500261	2285500666	228453078959	228733381433	150

2285510000	2285510125	2285510790	228052279938	228488480961	150
2285510000	2285510125	2285510790	228052279938	228488480961	150
2250510000	2250510899	2250510413	225578278565	225476920740	150
2250510000	2250510899	2250510413	225578278565	225476920740	150
2280610000	2280610297	2280610782	228786571579	228143541919	150
2280610000	2280610297	2280610782	228786571579	228143541919	150
2456500000	2456500004	2456500401	245865635094	245673430683	150
2456500000	2456500004	2456500401	245865635094	245673430683	150
2438510000	2438510392	2438510314	243209937928	243828022587	150
2438510000	2438510392	2438510314	243209937928	243828022587	150
2479410000	2479410148	2479410645	247199784903	247720048341	150
2479410000	2479410148	2479410645	247199784903	247720048341	150
2467510000	2467510309	2467510622	246586801575	246444256976	150
2467510000	2467510309	2467510622	246586801575	246444256976	150
2489510000	2489510197	2489510810	248012363839	248468709865	150
2489510000	2489510197	2489510810	248012363839	248468709865	150
2428510000	2428510214	2428510216	242813197488	242418114285	150
2428510000	2428510214	2428510216	242813197488	242418114285	150
2442510000	2442510955	2442510328	244277542772	244008897810	150
2442510000	2442510955	2442510328	244277542772	244008897810	150
2470610000	2470610234	2470610701	247107049309	247388832104	150
2470610000	2470610234	2470610701	247107049309	247388832104	150
2458510000	2458510666	2458510516	245895496419	245116286867	150
2458510000	2458510666	2458510516	245895496419	245116286867	150
2468510000	2468510760	2468510615	246507707950	246748677430	150
2468510000	2468510760	2468510615	246507707950	246748677430	150
2488410000	2488410972	2488410751	248509213480	248935775012	150
2488410000	2488410972	2488410751	248509213480	248935775012	150
2371510000	2371510259	2371510611	237328801462	237177271586	150
2371510000	2371510259	2371510611	237328801462	237177271586	150
2363510000	2363510503	2363510524	236989447196	236903657923	150
2363510000	2363510503	2363510524	236989447196	236903657923	150
2395500000	2395500361	2395500788	239705658470	239067309757	150
2395500000	2395500361	2395500788	239705658470	239067309757	150
2377510000	2377510324	2377510710	237877880944	237148751985	150
2377510000	2377510324	2377510710	237877880944	237148751985	150
2579510000	2579510137	2579510720	257421503621	257664419692	150
2579510000	2579510137	2579510720	257421503621	257664419692	150
2597510000	2597510892	2597510928	259822258233	259073304702	150
2597510000	2597510892	2597510928	259822258233	259073304702	150
2595510000	2595510358	2595510922	259136094133	259158919579	150
2595510000	2595510358	2595510922	259136094133	259158919579	150
2555510000	2555510805	2555510491	255610276086	255031054809	150
2555510000	2555510805	2555510491	255610276086	255031054809	150
2608410000	2608410909	2608410983	260310680211	260157773254	150
2608410000	2608410909	2608410983	260310680211	260157773254	150
2580610000	2580610340	2580610812	258141912510	258793563102	150

2580610000	2580610340	2580610812	258141912510	258793563102	150
2578410000	2578410806	2578410662	257252734871	257634138279	150
2578410000	2578410806	2578410662	257252734871	257634138279	150
2591610000	2591610275	2591610897	259775550636	259236136004	150
2591610000	2591610275	2591610897	259775550636	259236136004	150
2508410000	2508410893	2508410973	250017980761	250821545840	150
2508410000	2508410893	2508410973	250017980761	250821545840	150
2532510000	2532510951	2532510238	253176372423	253441594194	150
2532510000	2532510951	2532510238	253176372423	253441594194	150
2538410000	2538410227	2538410271	253305089219	253278794768	150
2538410000	2538410227	2538410271	253305089219	253278794768	150
2491510000	2491510679	2491510822	249748520918	249320577825	150
2491510000	2491510679	2491510822	249748520918	249320577825	150
2519410000	2519410429	2519410059	251630768034	251608595791	150
2519410000	2519410429	2519410059	251630768034	251608595791	150
2533510000	2533510223	2533510246	253103454263	253807213052	150
2533510000	2533510223	2533510246	253103454263	253807213052	150
2548410000	2548410361	2548410370	254297408526	254560352316	150
2548410000	2548410361	2548410370	254297408526	254560352316	150
2539410000	2539410678	2539410257	253278521570	253358470873	150
2539410000	2539410678	2539410257	253278521570	253358470873	150
2702610000	2702610022	2702610016	270122523520	270661497803	150
2702610000	2702610022	2702610016	270122523520	270661497803	150
2684510000	2684510973	2684510773	268880321111	268209278651	150
2684510000	2684510973	2684510773	268880321111	268209278651	150
2718410000	2718410986	2718410092	271060243644	271055810817	150
2718410000	2718410986	2718410092	271060243644	271055810817	150
2697410000	2697410753	2697410882	269614712771	269511616997	150
2697410000	2697410753	2697410882	269614712771	269511616997	150
2676410000	2676410364	2676410691	267956551002	267464476007	150
2676410000	2676410364	2676410691	267956551002	267464476007	150
2641610000	2641610358	2641610409	264880396277	264330311348	150
2641610000	2641610358	2641610409	264880396277	264330311348	150
2658510000	2658510620	2658510536	265598788789	265400994474	150
2658510000	2658510620	2658510536	265598788789	265400994474	150
2668410000	2668410682	2668410573	266314427733	266275708975	150
2668410000	2668410682	2668410573	266314427733	266275708975	150
2619410000	2619410444	2619410069	261738000970	261213431088	150
2619410000	2619410444	2619410069	261738000970	261213431088	150
2656500000	2656500037	2656500421	265771653394	265257622912	150
2656500000	2656500037	2656500421	265771653394	265257622912	150
2624510000	2624510308	2624510163	262778797782	262855297853	150
2624510000	2624510308	2624510163	262778797782	262855297853	150
2627510000	2627510925	2627510240	262085135476	262551115765	150
2627510000	2627510925	2627510240	262085135476	262551115765	150
2669410000	2669410991	2669410566	266866509531	266817100659	150
2669410000	2669410991	2669410566	266866509531	266817100659	150

2805510000	2805510207	2805510996	280122090559	280790130013	150
2805510000	2805510207	2805510996	280122090559	280790130013	150
2807510000	2807510721	2807510061	280884933649	280893946975	150
2807510000	2807510721	2807510061	280884933649	280893946975	150
2818410000	2818410000	2818410102	281544787979	281389972755	150
2818410000	2818410000	2818410102	281544787979	281389972755	150
2812510000	2812510637	2812510066	281854668184	281057091430	150
2812510000	2812510637	2812510066	281854668184	281057091430	150
2816500000	2816500602	2816500041	281170425634	281204483362	150
2816500000	2816500602	2816500041	281170425634	281204483362	150
2829410000	2829410553	2829410188	282207097317	282678264069	150
2829410000	2829410553	2829410188	282207097317	282678264069	150
2834510000	2834510513	2834510286	283773531685	283242256327	150
2834510000	2834510513	2834510286	283773531685	283242256327	150
2825500000	2825500927	2825500127	282588022153	282272242654	150
2825500000	2825500927	2825500127	282588022153	282272242654	150
2763510000	2763510574	2763510564	276765345413	276860316310	150
2763510000	2763510574	2763510564	276765345413	276860316310	150
2748510000	2748510548	2748510445	274802534069	274159979148	150
2748510000	2748510548	2748510445	274802534069	274159979148	150
2794510000	2794510023	2794510884	279121814225	279969816440	150
2794510000	2794510023	2794510884	279121814225	279969816440	150
2765510000	2765510923	2765510624	276638097911	276362462215	150
2765510000	2765510923	2765510624	276638097911	276362462215	150
2788510000	2788510038	2788510843	278793662098	278100804894	150
2788510000	2788510038	2788510843	278793662098	278100804894	150
2766410000	2766410303	2766410601	276502516163	276994959935	150
2766410000	2766410303	2766410601	276502516163	276994959935	150
2973510000	2973510740	2973510684	297812558982	297991566997	150
2973510000	2973510740	2973510684	297812558982	297991566997	150
2979410000	2979410058	2979410695	297995044316	297421141581	150
2979410000	2979410058	2979410695	297995044316	297421141581	150
2946510000	2946510936	2946510465	294150653625	294313396457	150
2946510000	2946510936	2946510465	294150653625	294313396457	150
2935500000	2935500919	2935500235	293070174116	293768036351	150
2935500000	2935500919	2935500235	293070174116	293768036351	150
2925500000	2925500945	2925500137	292569949781	292266171783	150
2925500000	2925500945	2925500137	292569949781	292266171783	150
2891610000	2891610329	2891610927	289129004506	289328411155	150
2891610000	2891610329	2891610927	289129004506	289328411155	150
2898410000	2898410177	2898410891	289148028928	289718998028	150
2898410000	2898410177	2898410891	289148028928	289718998028	150
2900610000	2900610488	2900610058	290962999728	290940085647	150
2900610000	2900610488	2900610058	290962999728	290940085647	150
2915500000	2915500774	2915500037	291718830890	291732150156	150
2915500000	2915500774	2915500037	291718830890	291732150156	150
2919410000	2919410493	2919410099	291007849206	291868075847	150

2919410000	2919410493	2919410099	291007849206	291868075847	150
2872510000	2872510207	2872510667	287358099701	287034185208	150
2872510000	2872510207	2872510667	287358099701	287034185208	150
2911510000	2911510813	2911510078	291538449161	291511725501	150
2911510000	2911510813	2911510078	291538449161	291511725501	150
2876410000	2876410395	2876410711	287999595389	287257916089	150
2876410000	2876410395	2876410711	287999595389	287257916089	150
3057410000	3057410463	3057410426	305966700725	305389127507	150
3057410000	3057410463	3057410426	305966700725	305389127507	150
3075510000	3075510981	3075510658	307866148814	307057015088	150
3075510000	3075510981	3075510658	307866148814	307057015088	150
3078410000	3078410754	3078410613	307407973562	307890157935	150
3078410000	3078410754	3078410613	307407973562	307890157935	150
3081610000	3081610993	3081610748	308540199150	308355230233	150
3081610000	3081610993	3081610748	308540199150	308355230233	150
3051510000	3051510868	3051510382	305262040136	305756500548	150
3051510000	3051510868	3051510382	305262040136	305756500548	150
3051610000	3051610944	3051610450	305020993369	305700453483	150
3051610000	3051610944	3051610450	305020993369	305700453483	150
3069500000	3069500608	3069500487	306223159980	306403179394	150
3069500000	3069500608	3069500487	306223159980	306403179394	150
3091510000	3091510607	3091510783	309667704692	309444971476	150
3091510000	3091510607	3091510783	309667704692	309444971476	150
3074510000	3074510832	3074510614	307016792255	307376782650	150
3074510000	3074510832	3074510614	307016792255	307376782650	150
3032510000	3032510862	3032510188	303619974098	303102058830	150
3032510000	3032510862	3032510188	303619974098	303102058830	150
3035500000	3035500778	3035500148	303060175843	303968281403	150
3035500000	3035500778	3035500148	303060175843	303968281403	150
3045500000	3045500939	3045500246	304424391004	304317057268	150
3045500000	3045500939	3045500246	304424391004	304317057268	150
2984510000	2984510021	2984510803	298112089488	298951315026	150
2984510000	2984510021	2984510803	298112089488	298951315026	150
3025500000	3025500794	3025500048	302507486054	302386797638	150
3025500000	3025500794	3025500048	302507486054	302386797638	150
3028410000	3028410034	2028410122	302465034798	302416551860	150
3028410000	3028410034	2028410122	302465034798	302416551860	150
3026510000	3026510618	3026510175	302890420590	302998047781	150
3026510000	3026510618	3026510175	302890420590	302998047781	150
2997510000	2997510962	2997510968	299974859541	299792234999	150
2997510000	2997510962	2997510968	299974859541	299792234999	150
3003510000	3003510770	3003510891	300819183226	300820299988	150
3003510000	3003510770	3003510891	300819183226	300820299988	150
3013510000	3013510864	3013510997	301788799803	301303825725	150
3013510000	3013510864	3013510997	301788799803	301303825725	150
3191610000	3191610204	3191610858	319640725049	319125827584	150
3191610000	3191610204	3191610858	319640725049	319125827584	150

3222510000	3222510717	3222510107	322605219879	322222350297	150
3222510000	3222510717	3222510107	322605219879	322222350297	150
3223510000	3223510093	3223510117	322911364139	322122792092	150
3223510000	3223510093	3223510117	322911364139	322122792092	150
3177410000	3177410653	3177410635	317148196331	317581609913	150
3177410000	3177410653	3177410635	317148196331	317581609913	150
3219410000	3219410374	3219410031	321459279572	321671835639	150
3219410000	3219410374	3219410031	321459279572	321671835639	150
3227410000	3227410999	3227410154	322557539975	322371812129	150
3227410000	3227410999	3227410154	322557539975	322371812129	150
3187510000	3187510455	3187510791	318535733436	318769876013	150
3187510000	3187510455	3187510791	318535733436	318769876013	150
3150510000	3150510882	3150510404	315524416990	315337052838	150
3150510000	3150510882	3150510404	315524416990	315337052838	150
3144510000	3144510567	3144510320	314143766425	314168686776	150
3144510000	3144510567	3144510320	314143766425	314168686776	150
3119410000	3119410355	3119410021	311988759604	311957986866	150
3119410000	3119410355	3119410021	311988759604	311957986866	150
3136410000	3136410759	3136410241	313982406057	313682106367	150
3136410000	3136410759	3136410241	313982406057	313682106367	150
3133500000	3133500259	3133500187	313174694222	313554617878	150
3133500000	3133500259	3133500187	313174694222	313554617878	150
3158510000	3158510616	3158510487	315361170548	315716638881	150
3158510000	3158510616	3158510487	315361170548	315716638881	150
3118410000	3118410885	3118410034	311007474870	311544120011	150
3118410000	3118410885	3118410034	311007474870	311544120011	150
3338510000	3338510377	3338510305	333398805352	333252551486	150
3338510000	3338510377	3338510305	333398805352	333252551486	150
3319410000	3319410393	3319410041	331218186203	331095403183	150
3319410000	3319410393	3319410041	331218186203	331095403183	150
3354510000	3354510664	3354510443	335723920522	335394714184	150
3354510000	3354510664	3354510443	335723920522	335394714184	150
3300610000	3300610399	3300610999	330980134811	330371362890	150
3300610000	3300610399	3300610999	330980134811	330371362890	150
3252510000	3252510107	3252510409	325729827863	325303482677	150
3252510000	3252510107	3252510409	325729827863	325303482677	150
3286510000	3286510433	3286510801	328763501545	328748743868	150
3286510000	3286510433	3286510801	328763501545	328748743868	150
3236510000	3236510702	3236510298	323724647557	323577464186	150
3236510000	3236510702	3236510298	323724647557	323577464186	150
3258410000	3258410497	3258410438	325196232900	325188810700	150
3258410000	3258410497	3258410438	325196232900	325188810700	150
3245500000	3245500971	3245500265	324608385198	324575781419	150
3245500000	3245500971	3245500265	324608385198	324575781419	150
3448410000	3448410344	3448410361	344855822008	344951358392	150
3448410000	3448410344	3448410361	344855822008	344951358392	150
3470510000	3470510292	3470510632	347660584330	347762571875	150

3470510000	3470510292	3470510632	347660584330	347762571875	150
3428410000	3428410047	3428410161	342465553536	342252573369	150
3428410000	3428410047	3428410161	342465553536	342252573369	150
3429410000	3429410592	3429410149	342752303132	342360299614	150
3429410000	3429410592	3429410149	342752303132	342360299614	150
3461510000	3461510239	3461510524	346019831244	346826393382	150
3461510000	3461510239	3461510524	346019831244	346826393382	150
3461610000	3461610189	3461610589	346427144968	346392241511	150
3461610000	3461610189	3461610589	346427144968	346392241511	150
3439510000	3439510627	3439510315	343928545449	343517491803	150
3439510000	3439510627	3439510315	343928545449	343517491803	150
3478510000	3478510848	3478510713	347533868724	347004221199	150
3478510000	3478510848	3478510713	347533868724	347004221199	150
3435500000	3435500841	3435500186	343889398007	343043173905	150
3435500000	3435500841	3435500186	343889398007	343043173905	150
3401510000	3401510406	3401510929	340716101404	340628289088	150
3401510000	3401510406	3401510929	340716101404	340628289088	150
3378410000	3378410802	3378410643	337964552657	337431979486	150
3378410000	3378410802	3378410643	337964552657	337431979486	150
3375510000	3375510035	3375510692	337089524478	337328464430	150
3375510000	3375510035	3375510692	337089524478	337328464430	150
3392510000	3392510642	3392510819	339229205892	339981427886	150
3392510000	3392510642	3392510819	339229205892	339981427886	150
3406500000	3406500444	3406500901	340781688497	340831585847	150
3406500000	3406500444	3406500901	340781688497	340831585847	150
3387410000	3387410703	3387410754	338584649301	338510203627	150
3387410000	3387410703	3387410754	338584649301	338510203627	150
3383510000	3383510807	3383510727	338641304129	338221102594	150
3383510000	3383510807	3383510727	338641304129	338221102594	150
3416500000	3416500598	3416500002	341094843520	341604597248	150
3416500000	3416500598	3416500002	341094843520	341604597248	150
3552510000	3552510348	3552510440	355955093386	355727588260	150
3552510000	3552510348	3552510440	355955093386	355727588260	150
3600610000	3600610444	3600610029	360138721123	360317292533	150
3600610000	3600610444	3600610029	360138721123	360317292533	150
3581510000	3581510514	3581510733	358195786894	358896730824	150
3581510000	3581510514	3581510733	358195786894	358896730824	150
3550510000	3550510955	3550510444	355771488547	355268572966	150
3550510000	3550510955	3550510444	355771488547	355268572966	150
3547410000	3547410374	3547410376	354102670178	354847625704	150
3547410000	3547410374	3547410376	354102670178	354847625704	150
3506500000	3506500461	3506500911	350704031087	350891049580	150
3506500000	3506500461	3506500911	350704031087	350891049580	150
3512510000	3512510582	3512510036	351187397105	351407748181	150
3512510000	3512510582	3512510036	351187397105	351407748181	150
3515510000	3515510194	3515510071	351815024053	351200394503	150
3515510000	3515510194	3515510071	351815024053	351200394503	150

3529410000	3529410609	3529410159	352823813324	352879590930	150
3529410000	3529410609	3529410159	352823813324	352879590930	150
3486410000	3486410494	3486410774	348980067175	348938488684	150
3486410000	3486410494	3486410774	348980067175	348938488684	150
3545500000	3545500022	3545500295	354138814309	354894851769	150
3545500000	3545500022	3545500295	354138814309	354894851769	150
3729410000	3729410536	3729410179	372742906008	372255806782	150
3729410000	3729410536	3729410179	372742906008	372255806782	150
3712510000	3712510619	3712510056	371209828034	371436391683	150
3712510000	3712510619	3712510056	371209828034	371436391683	150
3700610000	3700610459	3700610039	370891338919	370943189663	150
3700610000	3700610459	3700610039	370891338919	370943189663	150
3660510000	3660510131	3660510554	366463780435	366715972578	150
3660510000	3660510131	3660510554	366463780435	366715972578	150
3664510000	3664510765	3664510575	366592857324	366594581756	150
3664510000	3664510765	3664510575	366592857324	366594581756	150
3609410000	3609410315	3609410972	360599120009	360136234108	150
3609410000	3609410315	3609410972	360599120009	360136234108	150
3658410000	3658410575	3658410478	365925299252	365301224128	150
3658410000	3658410575	3658410478	365925299252	365301224128	150
3612510000	3612510602	3612510046	361847007310	361000043619	150
3612510000	3612510602	3612510046	361847007310	361000043619	150
3625500000	3625500892	3625500108	362070374055	362457731964	150
3625500000	3625500892	3625500108	362070374055	362457731964	150
3666500000	3666500197	3666500522	366068742051	366888010868	150
3666500000	3666500197	3666500522	366068742051	366888010868	150
3659410000	3659410942	3659410467	365874477239	365514575216	150
3659410000	3659410942	3659410467	365874477239	365514575216	150
3817510000	3817510780	3817510161	381565267895	381640242607	150
3817510000	3817510780	3817510161	381565267895	381640242607	150
3801610000	3801610665	3801610041	380139474210	380069727853	150
3801610000	3801610665	3801610041	380139474210	380069727853	150
3819410000	3819410480	3819410090	381284096726	381734318969	150
3819410000	3819410480	3819410090	381284096726	381734318969	150
3804510000	3804510157	3804510982	380619721139	380165689069	150
3804510000	3804510157	3804510982	380619721139	380165689069	150
3808410000	3808410837	3808410004	380895670385	380102303129	150
3808410000	3808410837	3808410004	380895670385	380102303129	150
3797410000	3797410768	3797410893	379568960614	379287466320	150
3797410000	3797410768	3797410893	379568960614	379287466320	150
3837510000	3837510008	3837510366	383228940135	383346588194	150
3837510000	3837510008	3837510366	383228940135	383346588194	150
3769410000	3769410011	3769410577	376244393321	376340012015	150
3769410000	3769410011	3769410577	376244393321	376340012015	150
3757410000	3757410421	3757410496	375444549007	375290486508	150
3757410000	3757410421	3757410496	375444549007	375290486508	150
3767410000	3767410590	3767410596	376571879617	376543418671	150

3767410000	3767410590	3767410596	376571879617	376543418671	150
3969410000	3969410053	3969410597	396544806632	396215707896	150
3969410000	3969410053	3969410597	396544806632	396215707896	150
3939510000	3939510716	3939510364	393773943431	393804860015	150
3939510000	3939510716	3939510364	393773943431	393804860015	150
3927510000	3927510979	3927510272	392893966130	392840750833	150
3927510000	3927510979	3927510272	392893966130	392840750833	150
3860510000	3860510169	3860510573	386544125722	386411171665	150
3860510000	3860510169	3860510573	386544125722	386411171665	150
3881610000	3881610151	3881610828	388837654225	388818945023	150
3881610000	3881610151	3881610828	388837654225	388818945023	150
3882510000	3882510544	3882510768	388465931555	388418160197	150
3882510000	3882510544	3882510768	388465931555	388418160197	150
3916500000	3916500616	3916500052	391318826649	391911738498	150
3916500000	3916500616	3916500052	391318826649	391911738498	150
3888410000	3888410047	3888410793	388410261313	388799807191	150
3888410000	3888410047	3888410793	388410261313	388799807191	150
3918410000	3918410017	3918410113	391990469024	391785306610	150
3918410000	3918410017	3918410113	391990469024	391785306610	150
3895500000	3895500437	3895500841	389279999918	389415365734	150
3895500000	3895500437	3895500841	389279999918	389415365734	150
4058410000	4058410462	4058410420	405080777042	405158684023	150
4058410000	4058410462	4058410420	405080777042	405158684023	150
4042510000	4042510887	4042510289	404094301192	404277743598	150
4042510000	4042510887	4042510289	404094301192	404277743598	150
4036500000	4036500787	4036500163	403253299029	403764507150	150
4036500000	4036500787	4036500163	403253299029	403764507150	150
4090610000	4090610433	4090610864	409771771105	409877987363	150
4090610000	4090610433	4090610864	409771771105	409877987363	150
4078510000	4078510861	4078510675	407640057524	407947727873	150
4078510000	4078510861	4078510675	407640057524	407947727873	150
4065510000	4065510890	4065510548	406904780796	406769138899	150
4065510000	4065510890	4065510548	406904780796	406769138899	150
4066500000	4066500103	4066500463	406865574607	406234538250	150
4066500000	4066500103	4066500463	406865574607	406234538250	150
4069410000	4069410019	4069410508	406874305885	406476960300	150
4069410000	4069410019	4069410508	406874305885	406476960300	150
4076510000	4076510226	4076510679	407343095729	407560012080	150
4076510000	4076510226	4076510679	407343095729	407560012080	150
4049410000	4049410773	4049410309	404812557328	404788205733	150
4049410000	4049410773	4049410309	404812557328	404788205733	150
4011610000	4011610703	4011610061	401386358406	401976075995	150
4011610000	4011610703	4011610061	401386358406	401976075995	150
4021510000	4021510839	4021510090	402436450773	402623288799	150
4021510000	4021510839	4021510090	402436450773	402623288799	150
4006500000	4006500466	4006500864	400968989164	400058685927	150
4006500000	4006500466	4006500864	400968989164	400058685927	150

4008410000	4008410817	4008410924	400350530005	400114698156	150
4008410000	4008410817	4008410924	400350530005	400114698156	150
3995510000	3995510337	3995510963	399654376992	399463155741	150
3995510000	3995510337	3995510963	399654376992	399463155741	150
3998410000	3998410194	3998410902	399780506502	399125572954	150
3998410000	3998410194	3998410902	399780506502	399125572954	150
3996410000	3996410647	3996410923	399508454882	399386063641	150
3996410000	3996410647	3996410923	399508454882	399386063641	150
4002610000	4002610898	4002610949	400761731667	400384999396	150
4002610000	4002610898	4002610949	400761731667	400384999396	150
4201510000	4201510368	4201510909	420027157820	420158716552	150
4201510000	4201510368	4201510909	420027157820	420158716552	150
4165510000	4165510908	4165510560	416898297996	416466195597	150
4165510000	4165510908	4165510560	416898297996	416466195597	150
4166500000	4166500120	4166500473	416204859275	416463017319	150
4166500000	4166500120	4166500473	416204859275	416463017319	150
4189410000	4189410099	4189410717	418185964810	418407147033	150
4189410000	4189410099	4189410717	418185964810	418407147033	150
4202510000	4202510346	4202510905	420578294479	420715219592	150
4202510000	4202510346	4202510905	420578294479	420715219592	150
4175510000	4175510004	4175510671	417926805758	417573145058	150
4175510000	4175510004	4175510671	417926805758	417573145058	150
4133510000	4133510154	4133510208	413550939273	413645907159	150
4133510000	4133510154	4133510208	413550939273	413645907159	150
4136500000	4136500803	4136500173	413490163246	413225108086	150
4136500000	4136500803	4136500173	413490163246	413225108086	150
4105510000	4105510097	4105510925	410868567446	410088672192	150
4105510000	4105510097	4105510925	410868567446	410088672192	150
4123510000	4123510075	4123510108	412643850501	412922456408	150
4123510000	4123510075	4123510108	412643850501	412922456408	150
4129410000	4129410535	4129410121	412731104241	412455037417	150
4129410000	4129410535	4129410121	412731104241	412455037417	150
4112510000	4112510513	4112510995	411311818631	411034610467	150
4112510000	4112510513	4112510995	411311818631	411034610467	150
4115510000	4115510262	4115510029	411987799769	411548240728	150
4115510000	4115510262	4115510029	411987799769	411548240728	150
4125510000	4125510300	4125510133	412308349424	412919097586	150
4125510000	4125510300	4125510133	412308349424	412919097586	150
4141610000	4141610273	4141610362	414495805400	414764001655	150
4141610000	4141610273	4141610362	414495805400	414764001655	150
4318410000	4318410927	4318410055	431527620933	431511493526	150
4318410000	4318410927	4318410055	431527620933	431511493526	150
4325500000	4325500844	4325500079	432933479195	432543241763	150
4325500000	4325500844	4325500079	432933479195	432543241763	150
4306500000	4306500430	4306500892	430130005755	430539748932	150
4306500000	4306500430	4306500892	430130005755	430539748932	150
4337510000	4337510045	4337510312	433898150355	433055006520	150

4337510000	4337510045	4337510312	433898150355	433055006520	150
4290610000	4290610469	4290610884	429458990341	429482826771	150
4290610000	4290610469	4290610884	429458990341	429482826771	150
4284510000	4284510906	4284510735	428677867308	428244429532	150
4284510000	4284510906	4284510735	428677867308	428244429532	150
4342510000	4342510942	4342510319	434386441370	434733261119	150
4342510000	4342510942	4342510319	434386441370	434733261119	150
4302610000	4302610950	4302610978	430920215649	430617212247	150
4302610000	4302610950	4302610978	430920215649	430617212247	150
4272510000	4272510096	4272510613	427911747537	427004529396	150
4272510000	4272510096	4272510613	427911747537	427004529396	150
4242510000	4242510923	4242510309	424028906323	424689957992	150
4242510000	4242510923	4242510309	424028906323	424689957992	150
4258510000	4258510636	4258510498	425295778325	425264711666	150
4258510000	4258510636	4258510498	425295778325	425264711666	150
4445510000	4445510722	4445510374	444091719993	444656790345	150
4445510000	4445510722	4445510374	444091719993	444656790345	150
4267410000	4267410507	4267410547	426940626639	426172982778	150
4267410000	4267410507	4267410547	426940626639	426172982778	150
4239410000	4239410623	4239410230	423448991734	423535914532	150
4239410000	4239410623	4239410230	423448991734	423535914532	150
4268410000	4268410610	4268410536	426722132566	426361663223	150
4268410000	4268410610	4268410536	426722132566	426361663223	150
4225510000	4225510317	4225510143	422852753429	422855001835	150
4225510000	4225510317	4225510143	422852753429	422855001835	150
4246510000	4246510881	4246510399	424659545346	424386545748	150
4246510000	4246510881	4246510399	424659545346	424386545748	150
4237410000	4237410208	4237410255	423846690940	423582547443	150
4237410000	4237410208	4237410255	423846690940	423582547443	150
4417510000	4417510828	4417510124	441930976029	441884385527	150
4417510000	4417510828	4417510124	441930976029	441884385527	150
4427410000	4427410034	4427410175	442123901243	442237163187	150
4427410000	4427410034	4427410175	442123901243	442237163187	150
4407510000	4407510655	4407510023	440829809457	440511195545	150
4425500000	4425500862	4425500089	442680081063	442818232231	150
4425500000	4425500862	4425500089	442680081063	442818232231	150
4425510000	4425510349	4425510164	442304209701	442706112411	150
4425510000	4425510349	4425510164	442304209701	442706112411	150
4409510000	4409510239	4409510015	440099900367	440131390481	150
4409510000	4409510239	4409510015	440099900367	440131390481	150
4346500000	4346500913	4346500293	434270844646	434026821576	150
4346500000	4346500913	4346500293	434270844646	434026821576	150
4401610000	4401610598	4401610003	440568448624	440763662078	150
4401610000	4401610598	4401610003	440568448624	440763662078	150
4361610000	4361610171	4361610580	436606922278	436296650914	150
4361610000	4361610171	4361610580	436606922278	436296650914	150
4393510000	4393510906	4393510830	439967743885	439112626360	150

4393510000	4393510906	4393510830	439967743885	439112626360	150
4380610000	4380610313	4380610794	438882336627	438676283882	150
4380610000	4380610313	4380610794	438882336627	438676283882	150
4374510000	4374510885	4374510644	437933492579	437359253692	150
4374510000	4374510885	4374510644	437933492579	437359253692	150
4404510000	4404510092	4404510941	440008389797	440958659288	150
4404510000	4404510092	4404510941	440008389797	440958659288	150
4564510000	4564510747	4564510565	456914109952	456153886617	150
4564510000	4564510747	4564510565	456914109952	456153886617	150
4571610000	4571610909	4571610699	457020931798	457187652554	150
4571610000	4571610909	4571610699	457020931798	457187652554	150
4551510000	4551510068	4551510433	455523782711	455928229478	150
4551510000	4551510068	4551510433	455523782711	455928229478	150
4590510000	4590510186	4590510839	459283143623	459054813231	150
4590510000	4590510186	4590510839	459283143623	459054813231	150
4587410000	4587410743	4587410775	458360708117	458623097893	150
4587410000	4587410743	4587410775	458360708117	458623097893	150
4557510000	4557510154	4557510535	455947561593	455550036106	150
4557510000	4557510154	4557510535	455947561593	455550036106	150
4506410000	4506410345	4506410981	450907866667	450863595497	150
4506410000	4506410345	4506410981	450907866667	450863595497	150
4477410000	4477410557	4477410666	447366776451	447471987042	150
4477410000	4477410557	4477410666	447366776451	447471987042	150
4511510000	4511510637	4511510040	451075143746	451507759730	150
4511510000	4511510637	4511510040	451075143746	451507759730	150
4531610000	4531610163	4531610303	453110707675	453732881926	150
4531610000	4531610163	4531610303	453110707675	453732881926	150
4483510000	4483510827	4483510738	448861364024	448766061964	150
4483510000	4483510827	4483510738	448861364024	448766061964	150
4711610000	4711610750	4711610129	471561728646	471730004506	150
4711610000	4711610750	4711610129	471561728646	471730004506	150
4682510000	4682510420	4682510749	468822524520	468451488471	150
4682510000	4682510420	4682510749	468822524520	468451488471	150
4716500000	4716500646	4716500033	471087612939	471756427203	150
4716500000	4716500646	4716500033	471087612939	471756427203	150
4601510000	4601510449	4601510950	460676142460	460478442929	150
4601510000	4601510449	4601510950	460676142460	460478442929	150
4616510000	4616510550	4616510134	461815092870	461242157078	150
4616510000	4616510550	4616510134	461815092870	461242157078	150
4601610000	4601610634	4601610023	460637908756	460959758413	150
4601610000	4601610634	4601610023	460637908756	460959758413	150
4633510000	4633510245	4633510259	463932031319	463204124727	150
4633510000	4633510245	4633510259	463932031319	463204124727	150
4621610000	4621610912	4621610217	462188585534	462278226488	150
4621610000	4621610912	4621610217	462188585534	462278226488	150
4602610000	4602610008	4602610008	460767969496	460531017654	150
4602610000	4602610008	4602610008	460767969496	460531017654	150

4623510000	4623510066	4623510158	462003566056	462359975389	150
4623510000	4623510066	4623510158	462003566056	462359975389	150
4792510000	4792510719	4792510861	479401579098	479922259888	150
4792510000	4792510719	4792510861	479401579098	479922259888	150
4801510000	4801510493	4801510970	480212309115	480606607720	150
4801510000	4801510493	4801510970	480212309115	480606607720	150
4822510000	4822510830	4822510168	482745306238	482231618418	150
4822510000	4822510830	4822510168	482745306238	482231618418	150
4825510000	4825510415	4825510207	482288353562	482937910351	150
4825510000	4825510415	4825510207	482288353562	482937910351	150
4798510000	4798510121	4798510945	479794802972	479956773929	150
4798510000	4798510121	4798510945	479794802972	479956773929	150
4823500000	4823500204	4823500158	482886053047	482084895687	150
4823500000	4823500204	4823500158	482886053047	482084895687	150
4747510000	4747510155	4747510456	474225207265	474103436721	150
4747510000	4747510155	4747510456	474225207265	474103436721	150
4724510000	4724510328	4724510175	472996042502	472734443175	150
4724510000	4724510328	4724510175	472996042502	472734443175	150
4741510000	4741510813	4741510354	474289300979	474484042403	150
4741510000	4741510813	4741510354	474289300979	474484042403	150
4777510000	4777510394	4777510752	477613448325	477850909681	150
4777510000	4777510394	4777510752	477613448325	477850909681	150
4719410000	4719410464	4719410081	471224153703	471911242406	150
4719410000	4719410464	4719410081	471224153703	471911242406	150
4719510000	4719510403	4719510148	471526894887	471053031038	150
4719510000	4719510403	4719510148	471526894887	471053031038	150
4759410000	4759410962	4759410478	475064110241	475965731829	150
4759410000	4759410962	4759410478	475064110241	475965731829	150
4778510000	4778510892	4778510744	477714991699	477286085203	150
4778510000	4778510892	4778510744	477714991699	477286085203	150
4733510000	4733510262	3733510268	473015783524	473486102826	150
4733510000	4733510262	3733510268	473015783524	473486102826	150
4776510000	4776510346	4776510751	477125331125	477756842430	150
4776510000	4776510346	4776510751	477125331125	477756842430	150
4948510000	4948510584	4948510468	494987441589	494724832430	150
4948510000	4948510584	4948510468	494987441589	494724832430	150
4952510000	4952510428	4952510481	495323826823	495016938721	150
4952510000	4952510428	4952510481	495323826823	495016938721	150
4938510000	4938510416	4938510366	493397005533	493670222579	150
4938510000	4938510416	4938510366	493397005533	493670222579	150
4957410000	4957410457	4957410517	495527710774	495709710383	150
4957410000	4957410457	4957410517	495527710774	495709710383	150
4863510000	4863510593	4863510576	486678001718	486359369484	150
4863510000	4863510593	4863510576	486678001718	486359369484	150
4865510000	4865510946	4865510637	486082982084	486551185324	150
4865510000	4865510946	4865510637	486082982084	486551185324	150
4870610000	4870610304	4870610744	487813704791	487244147314	150

4870610000	4870610304	4870610744	487813704791	487244147314	150
4859410000	4859410982	4859410488	485937140870	485684784649	150
4859410000	4859410982	4859410488	485937140870	485684784649	150
4885500000	4885500286	4885500733	488598500194	488108500279	150
4885500000	4885500286	4885500733	488598500194	488108500279	150
4866410000	4866410320	4866410613	486115315531	486964779089	150
4866410000	4866410320	4866410613	486115315531	486964779089	150
4857410000	4857410438	4857410507	485718919385	485848645438	150
4857410000	4857410438	4857410507	485718919385	485848645438	150
4857510000	4857510208	4857510565	485304375320	485713367914	150
4857510000	4857510208	4857510565	485304375320	485713367914	150
4870510000	4870510369	4870510673	487529447253	487256119218	150
4870510000	4870510369	4870510673	487529447253	487256119218	150
5029410000	5029410519	5029410112	502642043946	502610563428	150
5029410000	5029410519	5029410112	502642043946	502610563428	150
5085510000	5085510096	5085510770	508075818138	508531256931	150
5085510000	5085510096	5085510770	508075818138	508531256931	150
5039410000	5039410590	5039410211	503033959835	503587896209	150
5039410000	5039410590	5039410211	503033959835	503587896209	150
5024510000	5024510294	5024510106	502997897237	502576520182	150
5024510000	5024510294	5024510106	502997897237	502576520182	150
5068510000	5068510694	5068510578	506674107273	506098015736	150
5068510000	5068510694	5068510578	506674107273	506098015736	150
5043510000	5043510225	5043510299	504812013434	504020270100	150
5043510000	5043510225	5043510299	504812013434	504020270100	150
4986510000	4986510490	4986510872	498171022757	498147506967	150
4986510000	4986510490	4986510872	498171022757	498147506967	150
4980510000	4980510071	4980510781	498454391139	498078222616	150
4980510000	4980510071	4980510781	498454391139	498078222616	150
5009410000	5009410211	5009410914	500425169297	500904650085	150
5009410000	5009410211	5009410914	500425169297	500904650085	150
4962510000	4962510618	4962510583	496726018161	496489914322	150
4962510000	4962510618	4962510583	496726018161	496489914322	150
5019410000	5019410342	5019410013	501911268868	501877644984	150
5019410000	5019410342	5019410013	501911268868	501877644984	150
4988510000	4988510068	4988510865	498938327921	498799942025	150
4988510000	4988510068	4988510865	498938327921	498799942025	150
4992510000	4992510753	4992510881	499887249698	499518240543	150
4992510000	4992510753	4992510881	499887249698	499518240543	150
4995500000	4995500452	4995500853	499956935597	499176127153	150
4995500000	4995500452	4995500853	499956935597	499176127153	150
5173510000	5173510652	5173510608	517335380257	517530481150	150
5173510000	5173510652	5173510608	517335380257	517530481150	150
5194510000	5194510057	5194510827	519217894808	519129571798	150
5194510000	5194510057	5194510827	519217894808	519129571798	150
5184510000	5184510890	5184510726	518958045814	518026168769	150
5184510000	5184510890	5184510726	518958045814	518026168769	150

5207510000	5207510622	5207510004	520013844270	520574567770	150
5207510000	5207510622	5207510004	520013844270	520574567770	150
5157410000	5157410482	5157410438	515750018835	515513375287	150
5157410000	5157410482	5157410438	515750018835	515513375287	150
5157510000	5157510230	5157510496	515082910954	515113555766	150
5157510000	5157510230	5157510496	515082910954	515113555766	150
5196410000	5196410536	5196410845	519602593046	519557638472	150
5196410000	5196410536	5196410845	519602593046	519557638472	150
5094510000	5094510039	5094510817	509847919574	509047723336	150
5094510000	5094510039	5094510817	509847919574	509047723336	150
5097510000	5097510808	5097510882	509857373115	509387668900	150
5097510000	5097510808	5097510882	509857373115	509387668900	150
5089510000	5089510142	5089510773	508657629855	508767930362	150
5089510000	5089510142	5089510773	508657629855	508767930362	150
5106510000	5106510375	5106510985	510064360882	510914633334	150
5106510000	5106510375	5106510985	510064360882	510914633334	150
5135500000	5135500796	5135500159	513771599010	513619821593	150
5135500000	5135500796	5135500159	513771599010	513619821593	150
5138510000	5138510344	5138510288	513176622094	513128881200	150
5138510000	5138510344	5138510288	513176622094	513128881200	150
5104510000	5104510049	5104510910	510042005719	510402091255	150
5104510000	5104510049	5104510910	510042005719	510402091255	150
5136510000	5136510813	5136510290	513014826313	513056282891	150
5136510000	5136510813	5136510290	513014826313	513056282891	150
5298410000	5298410080	5298410835	529188623402	529838866428	150
5298410000	5298410080	5298410835	529188623402	529838866428	150
5278410000	5278410789	5278410635	527757238204	527218675822	150
5278410000	5278410789	5278410635	527757238204	527218675822	150
5309510000	5309510225	5309510006	530218028249	530796035278	150
5309510000	5309510225	5309510006	530218028249	530796035278	150
5326410000	5326410627	5326410162	532471630028	532856848028	150
5326410000	5326410627	5326410162	532471630028	532856848028	150
5326500000	5326500681	5326500094	532342457283	532183977133	150
5326500000	5326500681	5326500094	532342457283	532183977133	150
5296410000	5296410551	5296410855	529322587589	529698679762	150
5296410000	5296410551	5296410855	529322587589	529698679762	150
5303510000	5303510824	5303510927	530074771577	530294970672	150
5303510000	5303510824	5303510927	530074771577	530294970672	150
5321610000	5321610862	5321610190	532781051826	532791180355	150
5321610000	5321610862	5321610190	532781051826	532791180355	150
5289510000	5289510172	5289510793	528193588452	528386632564	150
5289510000	5289510172	5289510793	528193588452	528386632564	150
5226500000	5226500665	5226500084	522567886987	522855023249	150
5226500000	5226500665	5226500084	522567886987	522855023249	150
5229410000	5229410556	5229410132	522839088649	522195174716	150
5229410000	5229410556	5229410132	522839088649	522195174716	150
5262510000	5262510484	5262510512	526256530756	526105156400	150

5262510000	5262510484	5262510512	526256530756	526105156400	150
5231510000	5231510082	5231510209	523013782067	523694437898	150
5231510000	5231510082	5231510209	523013782067	523694437898	150
5264510000	5264510700	5264510536	526209645181	526333863518	150
5264510000	5264510700	5264510536	526209645181	526333863518	150
5237510000	5237510030	5237510303	523708390679	523999159894	150
5237510000	5237510030	5237510303	523708390679	523999159894	150
5225500000	5225500830	5225500070	522586089593	522870688199	150
5225500000	5225500830	5225500070	522586089593	522870688199	150
5238410000	5238410184	5238410243	523545782285	523797175509	150
5238410000	5238410184	5238410243	523545782285	523797175509	150
5421510000	5421510919	5421510131	542253103843	542887444850	150
5421510000	5421510919	5421510131	542253103843	542887444850	150
5456510000	5456510026	5456510516	545575547965	545017470154	150
5456510000	5456510026	5456510516	545575547965	545017470154	150
5416410000	5416410489	5416410073	541087650463	541380573024	150
5416410000	5416410489	5416410073	541087650463	541380573024	150
5429510000	5429510454	5429510218	542672709071	542173089051	150
5429510000	5429510454	5429510218	542672709071	542173089051	150
5365510000	5365510859	5365510583	536971062153	536144988327	150
5365510000	5365510859	5365510583	536971062153	536144988327	150
5385500000	5385500209	5385500681	538303436602	538394627557	150
5385500000	5385500209	5385500681	538303436602	538394627557	150
5385510000	5385510147	5385510804	538549679895	538204732996	150
5385510000	5385510147	5385510804	538549679895	538204732996	150
5360510000	5360510116	5360510527	536102342573	536152197136	150
5360510000	5360510116	5360510527	536102342573	536152197136	150
5554510000	5554510700	5554510466	555618898058	555999226750	150
5554510000	5554510700	5554510466	555618898058	555999226750	150
5527510000	5527510913	5527510233	552073125365	552444288632	150
5527510000	5527510913	5527510233	552073125365	552444288632	150
5558410000	5558410559	5558410470	555220294081	555954695429	150
5558410000	5558410559	5558410470	555220294081	555954695429	150
5580510000	5580510991	5580510742	558484891377	558174663521	150
5580510000	5580510991	5580510742	558484891377	558174663521	150
5540510000	5540510955	5540510347	554471679395	554136260359	150
5556510000	5556510045	5556510526	555697297391	555765652519	150
5556510000	5556510045	5556510526	555697297391	555765652519	150
5525510000	5525510368	5525510176	552128862689	552207111248	150
5525510000	5525510368	5525510176	552128862689	552207111248	150
5535510000	5535510563	5535510278	553474515211	553839783546	150
5535510000	5535510563	5535510278	553474515211	553839783546	150
5466500000	5466500169	5466500504	546199712600	546237777852	150
5466500000	5466500169	5466500504	546199712600	546237777852	150
5498410000	5498410117	5498410855	549382041030	549835577654	150
5498410000	5498410117	5498410855	549382041030	549835577654	150
5501510000	5501510432	5501510941	550489498258	550404758678	150

5501510000	5501510432	5501510941	550489498258	550404758678	150
5501610000	5501610616	5501610014	550439180564	550938099833	150
5501610000	5501610616	5501610014	550439180564	550938099833	150
5696410000	5696410605	5696410895	569145285243	569702941423	150
5696410000	5696410605	5696410895	569145285243	569702941423	150
5699410000	5699410337	5699410863	569391012106	569772063827	150
5699410000	5699410337	5699410863	569391012106	569772063827	150
5701510000	5701510473	5701510961	570300128418	570979345062	150
5701510000	5701510473	5701510961	570300128418	570979345062	150
5666510000	5666510161	5666510639	566791405277	566032117198	150
5666510000	5666510161	5666510639	566791405277	566032117198	150
5652510000	5652510373	5652510452	565676693493	565604421670	150
5652510000	5652510373	5652510452	565676693493	565604421670	150
5585500000	5585500241	5585500700	558169471823	558015021514	150
5588410000	5588410996	5588410764	558862356483	558584503672	150
5588410000	5588410996	5588410764	558862356483	558584503672	150
5642510000	5642510999	5642510351	564643910631	564870752689	150
5642510000	5642510999	5642510351	564643910631	564870752689	150
5626410000	5626410679	5626410192	562362804169	562104607227	150
5626410000	5626410679	5626410192	562362804169	562104607227	150
5811610000	5811610770	5811610140	581439626689	581591661047	150
5811610000	5811610770	5811610140	581439626689	581591661047	150
5784510000	5784510994	5784510786	578940398380	578722623285	150
5784510000	5784510994	5784510786	578940398380	578722623285	150
5809510000	5809510252	5809510057	580925250941	580691289164	150
5809510000	5809510252	5809510057	580925250941	580691289164	150
5816510000	5816510585	5816510158	581202748019	581063508642	150
5816510000	5816510585	5816510158	581202748019	581063508642	150
5782510000	5782510441	5782510760	578421959938	578389623830	150
5782510000	5782510441	5782510760	578421959938	578389623830	150
5775510000	5775510114	5775510737	577621677670	577319186297	150
5775510000	5775510114	5775510737	577621677670	577319186297	150
5746510000	5746510975	5746510447	574139532176	574259921480	150
5746510000	5746510975	5746510447	574139532176	574259921480	150
5731510000	5731510613	5731510259	573686925575	573356121941	150
5731510000	5731510613	5731510259	573686925575	573356121941	150
5741610000	5741610381	5741610422	574912851586	574808217313	150
5741610000	5741610381	5741610422	574912851586	574808217313	150
5721510000	5721510977	5721510161	572403080727	572290391682	150
5721510000	5721510977	5721510161	572403080727	572290391682	150
5719510000	5719510405	5719510149	571711788129	571538408884	150
5719510000	5719510405	5719510149	571711788129	571538408884	150
5725510000	5725510400	5725510197	572384294425	572326714116	150
5725510000	5725510400	5725510197	572384294425	572326714116	150
5726500000	5726500741	5726500134	572617507214	572848785769	150
5726500000	5726500741	5726500134	572617507214	572848785769	150
5933510000	5933510301	5933510289	593508802372	593824185292	150

5933510000	5933510301	5933510289	593508802372	593824185292	150
5925510000	5925510462	5925510218	592346236558	592871117771	150
5925510000	5925510462	5925510218	592346236558	592871117771	150
5901510000	5901510517	5901510981	590817479786	590808946472	150
5901510000	5901510517	5901510981	590817479786	590808946472	150
5936510000	5936510828	5936510371	593058764916	593711348102	150
5936510000	5936510828	5936510371	593058764916	593711348102	150
5879510000	5879510106	5879510753	587959388674	587550516544	150
5879510000	5879510106	5879510753	587959388674	587550516544	150
5829510000	5829510525	5829510259	582544150728	582212138193	150
5829510000	5829510525	5829510259	582544150728	582212138193	150
5835500000	5835500908	5835500228	583826839661	583770447059	150
5835500000	5835500908	5835500228	583826839661	583770447059	150
5869410000	5869410034	5869410589	586460845182	586658290447	150
5869410000	5869410034	5869410589	586460845182	586658290447	150
5844510000	5844510589	5844510393	584445928726	584285557194	150
5844510000	5844510589	5844510393	584445928726	584285557194	150
5839410000	5839410736	5839410291	583440764062	583668527090	150
5839410000	5839410736	5839410291	583440764062	583668527090	150
5877410000	5877410625	5877410706	587384384337	587898253723	150
5877410000	5877410625	5877410706	587384384337	587898253723	150
5859510000	5859510971	5859510555	585340870426	585498573405	150
5859510000	5859510971	5859510555	585340870426	585498573405	150
6040510000	6040510863	6040510298	604404399182	604350961752	150
6040510000	6040510863	6040510298	604404399182	604350961752	150
6057410000	6057410468	6057410429	605570902778	605275970743	150
6057410000	6057410468	6057410429	605570902778	605275970743	150
6049510000	6049510737	6049510377	604125243708	604215098340	150
6049510000	6049510737	6049510377	604125243708	604215098340	150
6037410000	6037410168	6037410238	603719407328	603352680978	150
6037410000	6037410168	6037410238	603719407328	603352680978	150
6067410000	6067410477	6067410529	606936797793	606790614957	150
6067410000	6067410477	6067410529	606936797793	606790614957	150
6026410000	6026410578	6026410133	602484950434	602395847230	150
6026410000	6026410578	6026410133	602484950434	602395847230	150
6015510000	6015510246	6015510021	601826000145	601064189804	150
6015510000	6015510246	6015510021	601826000145	601064189804	150
6019410000	6019410344	6019410014	601308288887	601232934379	150
6019410000	6019410344	6019410014	601308288887	601232934379	150
5957510000	5957510226	5957510576	595723766992	595696571049	150
5957510000	5957510226	5957510576	595723766992	595696571049	150
5979510000	5979510124	5979510764	597897148848	597151559860	150
5979510000	5979510124	5979510764	597897148848	597151559860	150
5985500000	5985500301	5985500746	598761632818	598209579327	150
5985500000	5985500301	5985500746	598761632818	598209579327	150
5951610000	5951610103	5951610541	595194645607	595341469453	150
5951610000	5951610103	5951610541	595194645607	595341469453	150

5977410000	5977410641	5977410716	597957217830	597350492936	150
5977410000	5977410641	5977410716	597957217830	597350492936	150
5981610000	5981610172	5981610840	598044617134	598258511532	150
5981610000	5981610172	5981610840	598044617134	598258511532	150
5988410000	5988410069	5988410805	598282752631	598864091541	150
5988410000	5988410069	5988410805	598282752631	598864091541	150
6160510000	6160510081	6160510508	616642950688	616632617259	150
6160510000	6160510081	6160510508	616642950688	616632617259	150
6145500000	6145500959	6145500258	614532811060	614821085733	150
6145500000	6145500959	6145500258	614532811060	614821085733	150
6148410000	6148410297	6148410334	614050371283	614848129812	150
6148410000	6148410297	6148410334	614050371283	614848129812	150
6138410000	6138410168	6138410234	613626774099	613491850630	150
6138410000	6138410168	6138410234	613626774099	613491850630	150
6147410000	6147410307	6147410341	614765381322	614954086276	150
6147410000	6147410307	6147410341	614765381322	614954086276	150
6096410000	6096410522	6096410836	609473494217	609781217810	150
6096410000	6096410522	6096410836	609473494217	609781217810	150
6086500000	6086500359	6086500664	608127414635	608150693990	150
6086500000	6086500359	6086500664	608127414635	608150693990	150
6109410000	6109410230	6109410925	610576045031	610268121452	150
6109410000	6109410230	6109410925	610576045031	610268121452	150
6314510000	6314510181	6314510036	631681954491	631862637518	150
6314510000	6314510181	6314510036	631681954491	631862637518	150
6311510000	6311510601	6311510022	631624238133	631001934355	150
6311510000	6311510601	6311510022	631624238133	631001934355	150
6281510000	6281510445	6281510706	628667228584	628696477796	150
6281510000	6281510445	6281510706	628667228584	628696477796	150
6281610000	6281610052	6281610771	628512145957	628088595021	150
6281610000	6281610052	6281610771	628512145957	628088595021	150
6319510000	6319510338	6319510109	631446247052	631455618644	150
6319510000	6319510338	6319510109	631446247052	631455618644	150
6279410000	6279410106	6279410630	627200370881	627704359257	150
6279410000	6279410106	6279410630	627200370881	627704359257	150
6266500000	6266500140	6266500485	626634058909	626873440334	150
6266500000	6266500140	6266500485	626634058909	626873440334	150
6266510000	6266510164	6266510600	626915604869	626305879509	150
6266510000	6266510164	6266510600	626915604869	626305879509	150
6240510000	6240510898	6240510318	624863348393	624254336010	150
6240510000	6240510898	6240510318	624863348393	624254336010	150
6229510000	6229510497	6229510200	622727265208	622424274919	150
6229510000	6229510497	6229510200	622727265208	622424274919	150
6235500000	6235500815	6235500170	623611800167	623113363300	150
6235500000	6235500815	6235500170	623611800167	623113363300	150
6200510000	6200510448	6200510923	620236810634	620001348661	150
6200510000	6200510448	6200510923	620236810634	620001348661	150
6214510000	6214510163	6214510026	621265772972	621917155781	150

6214510000	6214510163	6214510026	621265772972	621917155781	150
6259410000	6259410872	6259410431	625745352847	625577113956	150
6259410000	6259410872	6259410431	625745352847	625577113956	150
6247510000	6247510080	6247510408	624246454312	624738595828	150
6260610000	6260610054	6260610585	626160895466	626702341022	150
6260610000	6260610054	6260610585	626160895466	626702341022	150
6212510000	6212510533	6212510008	621539568111	621219422073	150
6212510000	6212510533	6212510008	621539568111	621219422073	150
6417410000	6417410803	6417410078	641168012798	641974053975	150
6417410000	6417410803	6417410078	641168012798	641974053975	150
6395500000	6395500366	6395500793	639481022402	639409461940	150
6395500000	6395500366	6395500793	639481022402	639409461940	150
6388510000	6388510983	6388510807	638397625695	638333636810	150
6388510000	6388510983	6388510807	638397625695	638333636810	150
6403510000	6403510844	6403510938	640825953370	640338153951	150
6403510000	6403510844	6403510938	640825953370	640338153951	150
6419410000	6419410418	6419410053	641445486647	641007612327	150
6419410000	6419410418	6419410053	641445486647	641007612327	150
6392510000	6392510648	6392510822	639255034940	639555083004	150
6392510000	6392510648	6392510822	639255034940	639555083004	150
6345510000	6345510709	6345510365	634768073859	634995484708	150
6345510000	6345510709	6345510365	634768073859	634995484708	150
6362510000	6362510505	6362510523	636920577813	636194570454	150
6362510000	6362510505	6362510523	636920577813	636194570454	150
6337410000	6337410232	6337410266	633344541957	633840220762	150
6337410000	6337410232	6337410266	633344541957	633840220762	150
6369510000	6369510960	6369510605	636480932318	636845782389	150
6369510000	6369510960	6369510605	636480932318	636845782389	150
6366500000	6366500153	6366500495	636444925822	636528405163	150
6366500000	6366500153	6366500495	636444925822	636528405163	150
6359510000	6359510895	6359510507	635737529815	635671108089	150
6359510000	6359510895	6359510507	635737529815	635671108089	150
6350510000	6350510923	6350510427	635190943286	635453032471	150
6350510000	6350510923	6350510427	635190943286	635453032471	150
6386510000	6386510382	6386510814	638707852532	638086932329	150
6386510000	6386510382	6386510814	638707852532	638086932329	150
6344510000	6344510503	6344510343	634019414523	634697411378	150
6344510000	6344510503	6344510343	634019414523	634697411378	150
6367410000	6367410526	6367410560	636331522808	636612199807	150
6367410000	6367410526	6367410560	636331522808	636612199807	150
6374510000	6374510889	6374510646	637094072730	637323094971	150
6374510000	6374510889	6374510646	637094072730	637323094971	150
6527410000	6527410054	6527410187	652452627409	652988691572	150
6527410000	6527410054	6527410187	652452627409	652988691572	150
6545500000	6545500027	6545500298	654869791241	654911269567	150
6545500000	6545500027	6545500298	654869791241	654911269567	150
6525500000	6525500881	6525500101	652158612011	652377785463	150

6525500000	6525500881	6525500101	652158612011	652377785463	150
6565510000	6565510897	6565510607	656787380975	656437393053	150
6565510000	6565510897	6565510607	656787380975	656437393053	150
6509510000	6509510261	6509510028	650456295208	650689006533	150
6509510000	6509510261	6509510028	650456295208	650689006533	150
6462510000	6462510525	6462510533	646190240149	646720122619	150
6462510000	6462510525	6462510533	646190240149	646720122619	150
6451610000	6451610016	6451610492	645755567427	645641330357	150
6451610000	6451610016	6451610492	645755567427	645641330357	150
6467410000	6467410544	6467410570	646388873252	646278924801	150
6467410000	6467410544	6467410570	646388873252	646278924801	150
6485500000	6485500227	5485500691	648085295687	648234590950	150
6485500000	6485500227	5485500691	648085295687	648234590950	150
6489410000	6489410158	6489410748	648898871433	648225114467	150
6489410000	6489410158	6489410748	648898871433	648225114467	150
6457510000	6457510141	6457510527	645184046941	645643581094	150
6457510000	6457510141	6457510527	645184046941	645643581094	150
6502510000	6502510404	6502510938	650258653891	650195305837	150
6502510000	6502510404	6502510938	650258653891	650195305837	150
6474510000	6474510907	6474510656	647736119126	647405188751	150
6474510000	6474510907	6474510656	647736119126	647405188751	150
6661610000	6661610753	6661610612	666980680520	666497986400	150
6661610000	6661610753	6661610612	666980680520	666497986400	150
6649410000	6649410764	6649410371	664441216158	664180909658	150
6649410000	6649410764	6649410371	664441216158	664180909658	150
6681610000	6681610124	6681610811	668677874184	668449913501	150
6681610000	6681610124	6681610811	668677874184	668449913501	150
6647410000	6647410397	6647410388	664870943443	664545850414	150
6647410000	6647410397	6647410388	664870943443	664545850414	150
6653510000	6653510512	6653510459	665199151226	665886654007	150
6653510000	6653510512	6653510459	665199151226	665886654007	150
6572510000	6572510153	6572510644	657292916392	657851398775	150
6572510000	6572510153	6572510644	657292916392	657851398775	150
6583510000	6583510847	6583510750	658389238084	658440450791	150
6583510000	6583510847	6583510750	658389238084	658440450791	150
6586510000	6586510422	6586510834	658525806432	658782283540	150
6586510000	6586510422	6586510834	658525806432	658782283540	150
6618510000	6618510157	6618510141	661061428401	661304749037	150
6618510000	6618510157	6618510141	661061428401	661304749037	150
6764510000	6764510789	6764510588	676853204219	676704938198	150
6764510000	6764510789	6764510588	676853204219	676704938198	150
6790610000	6790610480	6790610935	679645405809	679631161499	150
6790610000	6790610480	6790610935	679645405809	679631161499	150
6797410000	6797410772	6797410896	679859360146	679023518349	150
6797410000	6797410772	6797410896	679859360146	679023518349	150
6798410000	6798410169	6798410885	679932354458	679642237246	150
6798410000	6798410169	6798410885	679932354458	679642237246	150

6768510000	6768510818	6768510648	676151831126	676781400484	150
6768510000	6768510818	6768510648	676151831126	676781400484	150
6755510000	6755510843	6755510516	675151293836	675345523295	150
6739410000	6739410719	6739410282	673942553014	673587281995	150
6739410000	6739410719	6739410282	673942553014	673587281995	150
6717410000	6717410851	6717410107	671942715897	671772442625	150
6717410000	6717410851	6717410107	671942715897	671772442625	150
6691510000	6691510725	6691510846	669839452160	669594716792	150
6691510000	6691510725	6691510846	669839452160	669594716792	150
6721610000	6721610932	6721610229	672598985338	672377082102	150
6721610000	6721610932	6721610229	672598985338	672377082102	150
6715510000	6715510233	6715510095	671724383896	671305388192	150
6715510000	6715510233	6715510095	671724383896	671305388192	150
6694510000	6694510013	6694510878	669799312365	669457073228	150
6694510000	6694510013	6694510878	669799312365	669457073228	150
6751510000	6751510110	6751510456	675350674738	675158298319	150
6751510000	6751510110	6751510456	675350674738	675158298319	150
6751610000	6751610068	6751610522	675938089212	675637021228	150
6751610000	6751610068	6751610522	675938089212	675637021228	150
6695500000	6695500412	6695500823	669179596881	669866927528	150
6695500000	6695500412	6695500823	669179596881	669866927528	150
6892510000	6892510738	6892510873	689123150736	689054054306	150
6892510000	6892510738	6892510873	689123150736	689054054306	150
6925500000	6925500950	6925500141	692444456418	692899613679	150
6925500000	6925500950	6925500141	692444456418	692899613679	150
6899510000	6899510329	6899510952	689843822400	689387818825	150
6899510000	6899510329	6899510952	689843822400	689387818825	150
6878410000	6878410874	6878410695	687478713505	687581687462	150
6878410000	6878410874	6878410695	687478713505	687581687462	150
6868410000	6868410724	6868410597	686226681891	686892691340	150
6868410000	6868410724	6868410597	686226681891	686892691340	150
6826410000	6826410714	6826410213	682143990310	682108390963	150
6826410000	6826410714	6826410213	682143990310	682108390963	150
6841610000	6841610910	6841610433	684345905474	684954640656	150
6841610000	6841610910	6841610433	684345905474	684954640656	150
6860510000	6860510174	6860510576	686544559268	686472022150	150
6860510000	6860510174	6860510576	686544559268	686472022150	150
6827510000	6827510967	6827510264	682556390093	682481200045	150
6827510000	6827510967	6827510264	682556390093	682481200045	150
6861510000	6861510167	6861510566	686401934437	686489392610	150
6861510000	6861510167	6861510566	686401934437	686489392610	150
6828510000	6828510293	6828510259	682726341825	682916686245	150
6828510000	6828510293	6828510259	682726341825	682916686245	150
6850610000	6850610011	6850610547	685510900948	685368756686	150
6850610000	6850610011	6850610547	685510900948	685368756686	150
6840510000	6840510832	6840510377	684283516779	684117681776	150
6840510000	6840510832	6840510377	684283516779	684117681776	150

6857410000	6857410441	6857410509	685949895516	685156289958	150
6857410000	6857410441	6857410509	685949895516	685156289958	150
6816410000	6816410543	6816410113	681263515609	681485775428	150
6816410000	6816410543	6816410113	681263515609	681485775428	150
7023510000	7023510061	7023510101	702332784288	702777715935	150
7023510000	7023510061	7023510101	702332784288	702777715935	150
7045510000	7045510655	7045510333	704284904500	704847478815	150
7045510000	7045510655	7045510333	704284904500	704847478815	150
7016500000	7016500540	7016500966	701261149362	701291962244	150
7016500000	7016500540	7016500966	701261149362	701291962244	150
7031610000	7031610992	7031610260	703927450990	703981510396	150
7031610000	7031610992	7031610260	703927450990	703981510396	150
7037510000	7037510004	7037510286	703533584224	703252258786	150
7037510000	7037510004	7037510286	703533584224	703252258786	150
7007410000	7007410671	7007410937	700034170675	700401010085	150
7007410000	7007410671	7007410937	700034170675	700401010085	150
6996510000	6996510672	6996510974	699691499841	699022462960	150
6996510000	6996510672	6996510974	699691499841	699022462960	150
7011510000	7011510540	7011510993	701134635437	701694384006	150
7011510000	7011510540	7011510993	701134635437	701694384006	150
6991610000	6991610879	6991610941	699182644650	699397124538	150
6991610000	6991610879	6991610941	699182644650	699397124538	150
6969410000	6969410057	6969410600	696987443348	696821769384	150
6969410000	6969410057	6969410600	696987443348	696821769384	150
6939410000	6939410759	6939410301	693973213766	693671938391	150
6939410000	6939410759	6939410301	693973213766	693671938391	150
6958410000	6958410560	6958410509	695537923675	695113219505	150
6958410000	6958410560	6958410509	695537923675	695113219505	150
6959410000	6959410004	6959410500	695849609817	695009038078	150
6959410000	6959410004	6959410500	695849609817	695009038078	150
6956500000	6956500091	6956500455	695160643270	695895402364	150
6956500000	6956500091	6956500455	695160643270	695895402364	150
6990610000	6990610516	6990610955	699347085310	699279622476	150
6990610000	6990610516	6990610955	699347085310	699279622476	150
6993510000	6993510014	6993510892	699939928704	699646840293	150
6993510000	6993510014	6993510892	699939928704	699646840293	150
6950610000	6950610027	6950610557	695919054296	695503395651	150
6950610000	6950610027	6950610557	695919054296	695503395651	150
7169510000	7169510932	7169510587	716065033846	716101974065	150
7169510000	7169510932	7169510587	716065033846	716101974065	150
7156510000	7156510979	7156510489	715058268121	715502763237	150
7156510000	7156510979	7156510489	715058268121	715502763237	150
7141510000	7141510695	7141510299	714511125503	714452882697	150
7141510000	7141510695	7141510299	714511125503	714452882697	150
7149510000	7149510695	7149510388	714437903196	714171960481	150
7149510000	7149510695	7149510388	714437903196	714171960481	150
7128410000	7128410057	7128410135	712918842308	712822881736	150

7128410000	7128410057	7128410135	712918842308	712822881736	150
7176410000	7176410292	7176410647	717310338786	717821367879	150
7176410000	7176410292	7176410647	717310338786	717821367879	150
7095500000	7095500320	7095500760	709396181636	709654617472	150
7095500000	7095500320	7095500760	709396181636	709654617472	150
7071610000	7071610824	7071610652	707029069223	707628588265	150
7071610000	7071610824	7071610652	707029069223	707628588265	150
7097410000	7097410666	7097410828	709735428247	709173591878	150
7097410000	7097410666	7097410828	709735428247	709173591878	150
7113510000	7113510890	7113510010	711306497247	711042216336	150
7113510000	7113510890	7113510010	711306497247	711042216336	150
7088510000	7088510939	7088510777	708701500513	708340059288	150
7088510000	7088510939	7088510777	708701500513	708340059288	150
7107510000	7107510609	7107510995	710437887097	710421134640	150
7107510000	7107510609	7107510995	710437887097	710421134640	150
7082510000	7082510251	7082510693	708885533545	708303362854	150
7082510000	7082510251	7082510693	708885533545	708303362854	150
7114510000	7114510149	7114510017	711315010897	711872574223	150
7114510000	7114510149	7114510017	711315010897	711872574223	150
7086410000	7086410440	7086410738	708837551186	708033012987	150
7086410000	7086410440	7086410738	708837551186	708033012987	150
7108410000	7108410840	7108410937	710110234858	710500138929	150
7108410000	7108410840	7108410937	710110234858	710500138929	150
7288510000	7288510971	7288510798	728799548312	728163244753	150
7288510000	7288510971	7288510798	728799548312	728163244753	150
7249410000	7249410818	7249410332	724750438219	724517222139	150
7249410000	7249410818	7249410332	724750438219	724517222139	150
7280510000	7280510937	7280510715	728369481789	728810533239	150
7280510000	7280510937	7280510715	728369481789	728810533239	150
7269410000	7269410926	7269410531	726722678605	726982238012	150
7269410000	7269410926	7269410531	726722678605	726982238012	150
7287410000	7287410694	7287410748	728615760600	728343527955	150
7287410000	7287410694	7287410748	728615760600	728343527955	150
7248510000	7248510475	7248510400	724485280176	724565845150	150
7248510000	7248510475	7248510400	724485280176	724565845150	150
7216510000	7216510572	7216510098	721339066173	721648742920	150
7216510000	7216510572	7216510098	721339066173	721648742920	150
7181610000	7181610017	7181610762	718280028153	718508773450	150
7181610000	7181610017	7181610762	718280028153	718508773450	150
7203510000	7203510811	7203510917	720369302713	720621836570	150
7203510000	7203510811	7203510917	720369302713	720621836570	150
7237410000	7237410212	7237410258	723494020617	723561000408	150
7237410000	7237410212	7237410258	723494020617	723561000408	150
7196510000	7196510530	7196510895	719950365682	719092521123	150
7196510000	7196510530	7196510895	719950365682	719092521123	150
7199510000	7199510315	7199510884	719953219409	719324320763	150
7199510000	7199510315	7199510884	719953219409	719324320763	150

7208510000	7208510019	7208510003	720051952738	720244827066	150
7208510000	7208510019	7208510003	720051952738	720244827066	150
7227510000	7227510864	7227510205	722795152102	722439615753	150
7227510000	7227510864	7227510205	722795152102	722439615753	150
7222510000	7222510725	7222510111	722655836475	722445649081	150
7222510000	7222510725	7222510111	722655836475	722445649081	150
7197410000	7197410683	7197410838	719552796250	719127666844	150
7197410000	7197410683	7197410838	719552796250	719127666844	150
7200610000	7200610389	7200610993	720273554491	720358852375	150
7200610000	7200610389	7200610993	720273554491	720358852375	150
7411610000	7411610702	7411610103	741772578572	741669196948	150
7411610000	7411610702	7411610103	741772578572	741669196948	150
7402610000	7402610976	7402610991	740275607229	740973407998	150
7402610000	7402610976	7402610991	740275607229	740973407998	150
7372510000	7372510122	7372510625	737042508687	737774900245	150
7372510000	7372510122	7372510625	737042508687	737774900245	150
7409410000	7409410288	7409410956	740235321372	740430712797	150
7409410000	7409410288	7409410956	740235321372	740430712797	150
7412510000	7412510570	7412510029	741370402702	741362127118	150
7412510000	7412510570	7412510029	741370402702	741362127118	150
7428410000	7428410053	7428410165	742313575883	742763877679	150
7428410000	7428410053	7428410165	742313575883	742763877679	150
7406510000	7406510433	7406510018	740943315487	740300450789	150
7406510000	7406510433	7406510018	740943315487	740300450789	150
7397410000	7397410713	7397410857	739443158431	739089491970	150
7397410000	7397410713	7397410857	739443158431	739089491970	150
7359410000	7359410891	7359410442	735690655557	735350204814	150
7359410000	7359410891	7359410442	735690655557	735350204814	150
7312510000	7312510553	7312510019	731284225645	731997652210	150
7312510000	7312510553	7312510019	731284225645	731997652210	150
7351610000	7351610003	7351610483	735883296382	735138339473	150
7351610000	7351610003	7351610483	735883296382	735138339473	150
7519410000	7519410437	7519410064	751994060643	751507859075	150
7519410000	7519410437	7519410064	751994060643	751507859075	150
7498510000	7498510080	7498510918	749236358792	749775101822	150
7498510000	7498510080	7498510918	749236358792	749775101822	150
7530510000	7530510774	7530510249	753054778457	753160715040	150
7530510000	7530510774	7530510249	753054778457	753160715040	150
7531510000	7531510582	7531510241	753620097737	753560850396	150
7531510000	7531510582	7531510241	753620097737	753560850396	150
7500510000	7500510512	7500510953	750635185044	750791227866	150
7500510000	7500510512	7500510953	750635185044	750791227866	150
7500610000	7500610435	7500610023	750709623828	750012378651	150
7500610000	7500610435	7500610023	750709623828	750012378651	150
7526500000	7526500715	7526500116	752149073352	752983633341	150
7526500000	7526500715	7526500116	752149073352	752983633341	150
7536410000	7536410818	7536410285	753223181587	753542579015	150

7536410000	7536410818	7536410285	753223181587	753542579015	150
7536500000	7536500867	7536500216	753808729504	753300158288	150
7536500000	7536500867	7536500216	753808729504	753300158288	150
7536510000	7536510762	7536510332	753026846415	753930176001	150
7536510000	7536510762	7536510332	753026846415	753930176001	150
7507510000	7507510679	7507510036	750110812934	750571325053	150
7507510000	7507510679	7507510036	750110812934	750571325053	150
7492510000	7492510668	7492510833	749195246320	749076720349	150
7492510000	7492510668	7492510833	749195246320	749076720349	150
7436500000	7436500852	7436500206	743572922420	743004890852	150
7436500000	7436500852	7436500206	743572922420	743004890852	150
7477410000	7477410563	7477410669	747651448612	747306426786	150
7477410000	7477410563	7477410669	747651448612	747306426786	150
7432510000	7432510945	7432510233	743771141879	743106476742	150
7432510000	7432510945	7432510233	743771141879	743106476742	150
7481610000	7481610093	7481610792	748986285743	748994108398	150
7481610000	7481610093	7481610792	748986285743	748994108398	150
7459510000	7459510914	7459510518	745527437924	745281347179	150
7459510000	7459510914	7459510518	745527437924	745281347179	150
7649510000	7649510780	7649510438	764181700990	764451324372	150
7649510000	7649510780	7649510438	764181700990	764451324372	150
7646500000	7646500962	7646500326	764414972107	764279440428	150
7646500000	7646500962	7646500326	764414972107	764279440428	150
7637510000	7637510980	7637510348	763090945003	763500880427	150
7637510000	7637510980	7637510348	763090945003	763500880427	150
7569410000	7569410981	7569410561	756191276943	756133706901	150
7569410000	7569410981	7569410561	756191276943	756133706901	150
7560510000	7560510119	7560510548	756729554542	756663005225	150
7560510000	7560510119	7560510548	756729554542	756663005225	150
7578410000	7578410817	7578410667	757614060707	757440586787	150
7578410000	7578410817	7578410667	757614060707	757440586787	150
7568510000	7568510785	7568510630	756163869735	756320200707	150
7568510000	7568510785	7568510630	756163869735	756320200707	150
7574510000	7574510926	7574510667	757313094303	757652694287	150
7574510000	7574510926	7574510667	757313094303	757652694287	150
7767410000	7767410596	7767410600	776746744562	776893371969	150
7767410000	7767410596	7767410600	776746744562	776893371969	150
7754510000	7754510738	7754510488	775858609002	775025956965	150
7754510000	7754510738	7754510488	775858609002	775025956965	150
7771510000	7771510348	7771510657	777624457079	777698442635	150
7771510000	7771510348	7771510657	777624457079	777698442635	150
7771610000	7771610949	7771610722	777396899759	777662135771	150
7771610000	7771610949	7771610722	777396899759	777662135771	150
7759510000	7759510959	7759510547	775426924153	775772104166	150
7759510000	7759510959	7759510547	775426924153	775772104166	150
7774510000	7774510826	7774510688	777056713451	777313343291	150
7774510000	7774510826	7774510688	777056713451	777313343291	150

7728410000	7728410103	7728410194	772963906693	772605749532	150
7728410000	7728410103	7728410194	772963906693	772605749532	150
7728510000	7728510275	7728510250	772575074336	772021260018	150
7728510000	7728510275	7728510250	772575074336	772021260018	150
7675510000	7675510096	7675510728	767230206332	767843818419	150
7675510000	7675510096	7675510728	767230206332	767843818419	150
7691610000	7691610304	7691610912	769574951423	769954190787	150
7691610000	7691610304	7691610912	769574951423	769954190787	150
7676410000	7676410373	7676410696	767657784503	767514355652	150
7676410000	7676410373	7676410696	767657784503	767514355652	150
7708510000	7708510000	7708510053	770852176391	770873054125	150
7708510000	7708510000	7708510053	770852176391	770873054125	150
7687410000	7687410764	7687410787	768658001989	768092813748	150
7687410000	7687410764	7687410787	768658001989	768092813748	150
7729510000	7729510513	7729510250	772814397566	772922555874	150
7729510000	7729510513	7729510250	772814397566	772922555874	150
7719410000	7719410468	7719410084	771781463960	771139403538	150
7719410000	7719410468	7719410084	771781463960	771139403538	150
7668410000	7668410691	7668410578	766861309859	766863758200	150
7668410000	7668410691	7668410578	766861309859	766863758200	150
7697510000	7697510917	7697510943	769304050267	769948848604	150
7697510000	7697510917	7697510943	769304050267	769948848604	150
7698410000	7698410156	7698410876	769452713976	769235398169	150
7698410000	7698410156	7698410876	769452713976	769235398169	150
7845510000	7845510690	7845510422	784927595394	784748434858	150
7845510000	7845510690	7845510422	784927595394	784748434858	150
7859410000	7859410987	7859410491	785284682281	785649909545	150
7859410000	7859410987	7859410491	785284682281	785649909545	150
7805510000	7805510215	7805510001	780486688235	780922124441	150
7805510000	7805510215	7805510001	780486688235	780922124441	150
7811600000	7811600608	7811600063	781742133576	781132733788	150
7811600000	7811600608	7811600063	781742133576	781132733788	150
7827410000	7827410109	7827410220	782562996112	782033527007	150
7827410000	7827410109	7827410220	782562996112	782033527007	150
7836510000	7836510813	7836510363	783002641430	783364318123	150
7836510000	7836510813	7836510363	783002641430	783364318123	150
7796410000	7796410623	7796410907	779800504209	779271513529	150
7796410000	7796410623	7796410907	779800504209	779271513529	150
7907510000	7907510748	7907510076	790957644347	790518547923	150
7907510000	7907510748	7907510076	790957644347	790518547923	150
7851610000	7851610086	7851610533	785036439808	785319604671	150
7851610000	7851610086	7851610533	785036439808	785319604671	150
7911610000	7911610789	7911610152	791047978957	791340826728	150
7911610000	7911610789	7911610152	791047978957	791340826728	150
7871510000	7871510367	7871510667	787319994065	787100167896	150
7871510000	7871510367	7871510667	787319994065	787100167896	150
7833510000	7833510286	7833510281	783539764594	783282233389	150

7833510000	7833510286	7833510281	783539764594	783282233389	150
7990510000	7990510308	7990510882	799500390073	799486532730	150
7990510000	7990510308	7990510882	799500390073	799486532730	150
7929410000	7929410577	7929410203	792519550058	792803415522	150
7929410000	7929410577	7929410203	792519550058	792803415522	150
7963510000	7963510619	7963510589	796617074359	796923782120	150
7963510000	7963510619	7963510589	796617074359	796923782120	150
8022510000	8022510690	8022510092	802284396902	802925524798	150
8022510000	8022510690	8022510092	802284396902	802925524798	150
7921610000	7921610973	7921610250	792798490077	792858953075	150
7921610000	7921610973	7921610250	792798490077	792858953075	150
8025500000	8025500800	8025500053	802074775742	802808979487	150
8025500000	8025500800	8025500053	802074775742	802808979487	150
7999410000	7999410395	7999410895	799150585535	799551728151	150
7999410000	7999410395	7999410895	799150585535	799551728151	150
7941610000	7941610934	7941610444	794365729635	794878886567	150
7941610000	7941610934	7941610444	794365729635	794878886567	150
7957410000	7957410462	7957410520	795878505482	795112086267	150
7957410000	7957410462	7957410520	795878505482	795112086267	150
7931610000	7931610242	7931610345	793303337448	793060422815	150
7931610000	7931610242	7931610345	793303337448	793060422815	150
8019510000	8019510292	8019510080	801750535412	801451138717	150
8019510000	8019510292	8019510080	801750535412	801451138717	150
7944510000	7944510608	7944510406	794191508930	794469028558	150
7944510000	7944510608	7944510406	794191508930	794469028558	150
7978410000	7978410893	7978410706	797501831713	797560900436	150
7978410000	7978410893	7978410706	797501831713	797560900436	150
8035500000	8035500785	8035500153	803655296103	803266634830	150
8035500000	8035500785	8035500153	803655296103	803266634830	150
7966410000	7966410257	7966410626	796016679487	796952675813	150
7966410000	7966410257	7966410626	796016679487	796952675813	150
7966510000	7966510213	7966510671	796123099382	796664385990	150
7966510000	7966510213	7966510671	796123099382	796664385990	150
7926410000	7926410734	7926410225	792452957421	792531450337	150
7926410000	7926410734	7926410225	792452957421	792531450337	150
7916500000	7916500622	7916500056	791409412587	791815584114	150
7916500000	7916500622	7916500056	791409412587	791815584114	150
7956510000	7956510116	7956510570	795359450345	795621269998	150
7956510000	7956510116	7956510570	795359450345	795621269998	150
8000510000	8000510415	8000510906	800099786937	800388848456	150
8000510000	8000510415	8000510906	800099786937	800388848456	150
8002510000	8002510798	8002510889	800596184190	800958440351	150
8002510000	8002510798	8002510889	800596184190	800958440351	150
8159410000	8159410857	8159410423	815998606806	815286952469	150
8159410000	8159410857	8159410423	815998606806	815286952469	150
8121510000	8121510868	8121510103	812630112736	812332113827	150
8121510000	8121510868	8121510103	812630112736	812332113827	150

8095510000	8095510276	8095510877	809423709034	809998389674	150
8095510000	8095510276	8095510877	809423709034	809998389674	150
8134510000	8134510404	8134510221	813004894297	813109105250	150
8134510000	8134510404	8134510221	813004894297	813109105250	150
8153510000	8153510428	8153510413	815047043847	815269825152	150
8153510000	8153510428	8153510413	815047043847	815269825152	150
8102610000	8102610922	8102610963	810028372674	810085559648	150
8102610000	8102610922	8102610963	810028372674	810085559648	150
8131610000	8131610095	8131610271	813113378262	813010445493	150
8131610000	8131610095	8131610271	813113378262	813010445493	150
8092510000	8092510596	8092510793	809731967305	809472440501	150
8092510000	8092510596	8092510793	809731967305	809472440501	150
8162510000	8162510470	8162510505	816009725762	816738355562	150
8162510000	8162510470	8162510505	816009725762	816738355562	150
8148510000	8148510460	8148510390	814030731533	814175144701	150
8148510000	8148510460	8148510390	814030731533	814175144701	150
8108510000	8108510004	8108510994	810575323056	810068160220	150
8108510000	8108510004	8108510994	810575323056	810068160220	150
8110510000	8110510617	8110510013	811250353971	811013697454	150
8110510000	8110510617	8110510013	811250353971	811013697454	150
8126500000	8126500656	8126500077	812410093330	812397372763	150
8126500000	8126500656	8126500077	812410093330	812397372763	150
8285500000	8285500199	8285500674	828816507968	828391457105	150
8285500000	8285500199	8285500674	828816507968	828391457105	150
8228410000	8228410075	8228410146	822851921192	822889530609	150
8228410000	8228410075	8228410146	822851921192	822889530609	150
8201610000	8201610575	8201610987	820316390831	820155625690	150
8201610000	8201610575	8201610987	820316390831	820155625690	150
8179410000	8179410094	8179410622	817036537484	817474014828	150
8179410000	8179410094	8179410622	817036537484	817474014828	150
8339510000	8339510618	8339510310	833140687960	833618522517	150
8339510000	8339510618	8339510310	833140687960	833618522517	150
8218410000	8218410915	8218410050	821281309675	821363058865	150
8218410000	8218410915	8218410050	821281309675	821363058865	150
8234510000	8234510421	8234510231	823776174295	823374991948	150
8234510000	8234510421	8234510231	823776174295	823374991948	150
8224510000	8224510332	8224510129	822263530108	822978547080	150
8224510000	8224510332	8224510129	822263530108	822978547080	150
8174510000	8174510858	8174510628	817871094980	817885599198	150
8174510000	8174510858	8174510628	817871094980	817885599198	150
8217410000	8217410777	8217410060	821932797415	821702732374	150
8217410000	8217410777	8217410060	821932797415	821702732374	150
8202610000	8202610938	8202610972	820225033182	820708951006	150
8202610000	8202610938	8202610972	820225033182	820708951006	150
8176510000	8176510252	8176510694	817364924258	817180390817	150
8176510000	8176510252	8176510694	817364924258	817180390817	150
8261510000	8261510206	8261510509	826972212876	826724347341	150

8261510000	8261510206	8261510509	826972212876	826724347341	150
8277410000	8277410532	8277410650	827876660162	827782863454	150
8277410000	8277410532	8277410650	827876660162	827782863454	150
8195500000	8195500336	8195500773	819551572382	819933082973	150
8195500000	8195500336	8195500773	819551572382	819933082973	150
8169410000	8169410909	8169410522	816252697615	816826142945	150
8169410000	8169410909	8169410522	816252697615	816826142945	150
8253510000	8253510444	8253510423	825482625075	825978693727	150
8253510000	8253510444	8253510423	825482625075	825978693727	150
8227410000	8227410008	8227410159	822699695701	822112399104	150
8227410000	8227410008	8227410159	822699695701	822112399104	150
8418410000	8418410949	8418410069	841876820258	841390370698	150
8418410000	8418410949	8418410069	841876820258	841390370698	150
8309410000	8309410272	8309410947	830317420348	830980353992	150
8309410000	8309410272	8309410947	830317420348	830980353992	150
8322510000	8322510744	8322510123	832946878764	832460858204	150
8322510000	8322510744	8322510123	832946878764	832460858204	150
8297410000	8297410700	8297410848	829052078605	829551473981	150
8297410000	8297410700	8297410848	829052078605	829551473981	150
8297510000	8297510849	8297510905	829277831043	829826295655	150
8297510000	8297510849	8297510905	829277831043	829826295655	150
8340510000	8340510923	8340510330	834250630322	834955427331	150
8340510000	8340510923	8340510330	834250630322	834955427331	150
8299510000	8299510333	8299510894	829771211438	829404386086	150
8299510000	8299510333	8299510894	829771211438	829404386086	150
8329410000	8329410580	8329410144	832424777861	832224644363	150
8329410000	8329410580	8329410144	832424777861	832224644363	150
8391610000	8391610248	8391610883	839068103616	839043154571	150
8391610000	8391610248	8391610883	839068103616	839043154571	150
8307510000	8307510644	8307510017	830568077228	830684505900	150
8307510000	8307510644	8307510017	830568077228	830684505900	150
8537510000	8537510966	8537510338	853656580702	853507804113	150
8537510000	8537510966	8537510338	853656580702	853507804113	150
8529510000	8529510475	8529510231	852610379964	852216849563	150
8529510000	8529510475	8529510231	852610379964	852216849563	150
8543510000	8543510320	8543510351	854445785366	854715946642	150
8543510000	8543510320	8543510351	854445785366	854715946642	150
8467410000	8467410547	8467410572	846204128237	846249844764	150
8467410000	8467410547	8467410572	846204128237	846249844764	150
8467510000	8467510319	8467510628	846745693825	846074488686	150
8467510000	8467510319	8467510628	846745693825	846074488686	150
8426500000	8426500701	8426500107	842216793747	842083705709	150
8426500000	8426500701	8426500107	842216793747	842083705709	150
8539410000	8539410691	8539410263	853500130461	853917027194	150
8539410000	8539410691	8539410263	853500130461	853917027194	150
8487410000	8487410731	8487410769	848209748358	848776943781	150
8487410000	8487410731	8487410769	848209748358	848776943781	150

8487510000	8487510514	8487510826	848650010761	848091131064	150
8487510000	8487510514	8487510826	848650010761	848091131064	150
8518410000	8518410962	8518410079	851485102707	851611575103	150
8518410000	8518410962	8518410079	851485102707	851611575103	150
8430510000	8430510756	8430510240	843662135003	843456156386	150
8430510000	8430510756	8430510240	843662135003	843456156386	150
8447410000	8447410366	8447410371	844958372363	844122748448	150
8447410000	8447410366	8447410371	844958372363	844122748448	150
8447510000	8447510113	8447510429	844963132776	844928413869	150
8447510000	8447510113	8447510429	844963132776	844928413869	150
8477410000	8477410565	8477410670	847213674021	847544755774	150
8477410000	8477410565	8477410670	847213674021	847544755774	150
8493510000	8493510930	8493510843	849024815192	849881112006	150
8493510000	8493510930	8493510843	849024815192	849881112006	150
8504510000	8504510119	8504510957	850790190012	850215260722	150
8504510000	8504510119	8504510957	850790190012	850215260722	150
8490510000	8490510173	8490510833	849870821936	849713634101	150
8490510000	8490510173	8490510833	849870821936	849713634101	150
8521510000	8521510946	8521510144	852438139267	852575660313	150
8521510000	8521510946	8521510144	852438139267	852575660313	150
8545510000	8545510743	8545510389	854610095364	854535532395	150
8545510000	8545510743	8545510389	854610095364	854535532395	150
8422510000	8422510764	8422510133	842948572582	842791599841	150
8422510000	8422510764	8422510133	842948572582	842791599841	150
8531610000	8531610171	8531610307	853858175512	853746369742	150
8531610000	8531610171	8531610307	853858175512	853746369742	150
8645510000	8645510658	8645510400	864652727506	864951651999	150
8645510000	8645510658	8645510400	864652727506	864951651999	150
8631600000	8631600824	8631600249	863542506524	863762034540	150
8635510000	8635510584	8635510291	863353724168	863159050738	150
8635510000	8635510584	8635510291	863353724168	863159050738	150
8570510000	8570510317	8570510647	857664394997	857711320462	150
8570510000	8570510317	8570510647	857664394997	857711320462	150
8658510000	8658510630	8658510542	865775187970	865393723191	150
8658510000	8658510630	8658510542	865775187970	865393723191	150
8549510000	8549510765	8549510429	854791927547	854288793384	150
8549510000	8549510765	8549510429	854791927547	854288793384	150
8665510000	8665510917	8665510620	866516893785	866109159349	150
8665510000	8665510917	8665510620	866516893785	866109159349	150
8557410000	8557410398	8557410481	855031900998	855526421131	150
8557410000	8557410398	8557410481	855031900998	855526421131	150
8571610000	8571610916	8571610703	857630300164	857679542351	150
8571610000	8571610916	8571610703	857630300164	857679542351	150
8639510000	8639510670	8639510340	863229914538	863545566845	150
8639510000	8639510670	8639510340	863229914538	863545566845	150
8687510000	8687510747	8687510845	868638487909	868331422517	150
8687510000	8687510747	8687510845	868638487909	868331422517	150

8731610000	8731610207	8731610327	873565513705	873416149750	150
8731610000	8731610207	8731610327	873565513705	873416149750	150
8714510000	8714510251	8714510080	871836395390	871163450697	150
8714510000	8714510251	8714510080	871836395390	871163450697	150
8732510000	8732510839	8732510264	873748065161	873677025714	150
8732510000	8732510839	8732510264	873748065161	873677025714	150
8709410000	8709410340	8709410987	870436371482	870244177132	150
8709410000	8709410340	8709410987	870436371482	870244177132	150
8748410000	8748410416	8748410395	874774826252	874109290488	150
8748410000	8748410416	8748410395	874774826252	874109290488	150
8797510000	8797510936	8797510954	879060474011	879033685469	150
8797510000	8797510936	8797510954	879060474011	879033685469	150
8697410000	8697410760	8697410888	869352662483	869561891919	150
8697410000	8697410760	8697410888	869352662483	869561891919	150
8786410000	8786410482	8786410808	878613615990	878881194094	150
8786410000	8786410482	8786410808	878613615990	878881194094	150
8688410000	8688410020	8688410777	868190368215	868341773097	150
8688410000	8688410020	8688410777	868190368215	868341773097	150
8678510000	8678510884	8678510738	867914580885	867619692059	150
8678510000	8678510884	8678510738	867914580885	867619692059	150
8679410000	8679410194	8679410671	867375862437	867953857143	150
8679410000	8679410194	8679410671	867375862437	867953857143	150
8778410000	8778410858	8778410687	877091585847	877916393616	150
8778410000	8778410858	8778410687	877091585847	877916393616	150
8753510000	8753510407	8753510470	875496611433	875075181130	150
8753510000	8753510407	8753510470	875496611433	875075181130	150
8749410000	8749410787	8749410383	874735451616	874735489842	150
8749410000	8749410787	8749410383	874735451616	874735489842	150
8749510000	8749510799	8749510449	874035170231	874097596873	150
8749510000	8749510799	8749510449	874035170231	874097596873	150
8729410000	8729410545	8729410184	872759942800	872492497913	150
8729410000	8729410545	8729410184	872759942800	872492497913	150
8897410000	8897410790	8897410908	889206310332	889241383618	150
8897410000	8897410790	8897410908	889206310332	889241383618	150
8877510000	8877510415	8877510766	887601764948	887649690340	150
8877510000	8877510415	8877510766	887601764948	887649690340	150
8847410000	8847410436	8847410410	884024798609	884223979409	150
8847410000	8847410436	8847410410	884024798609	884223979409	150
8836410000	8836410871	8836410316	883721925937	883184496872	150
8836410000	8836410871	8836410316	883721925937	883184496872	150
8881510000	8881510578	8881510768	888368941928	888702079154	150
8881510000	8881510578	8881510768	888368941928	888702079154	150
8867410000	8867410614	8867410611	886626227754	886470113267	150
8867410000	8867410614	8867410611	886626227754	886470113267	150
8813510000	8813510024	8813510082	881226393508	881984079430	150
8813510000	8813510024	8813510082	881226393508	881984079430	150
8898410000	8898410187	8898410897	889006076620	889758724293	150

8898410000	8898410187	8898410897	889006076620	889758724293	150
8858510000	8858510663	8858510563	885706497738	885816188001	150
8858510000	8858510663	8858510563	885706497738	885816188001	150
8816500000	8816500609	8816500047	881083382872	881440764143	150
8816500000	8816500609	8816500047	881083382872	881440764143	150
8808410000	8808410845	8808410009	880443328861	880881205266	150
8808410000	8808410845	8808410009	880443328861	880881205266	150
8879410000	8879410051	8879410691	887478954537	887012572820	150
8879410000	8879410051	8879410691	887478954537	887012572820	150
9028510000	9028510240	9028510183	902541076640	902451173477	150
9028510000	9028510240	9028510183	902541076640	902451173477	150
9048410000	9048410283	9048410327	904116429574	904823927081	150
9048410000	9048410283	9048410327	904116429574	904823927081	150
8991510000	8991510780	8991510879	899795677441	899011189747	150
8991510000	8991510780	8991510879	899795677441	899011189747	150
9046500000	9046500871	9046500267	904211843242	904365641828	150
9046500000	9046500871	9046500267	904211843242	904365641828	150
8928410000	8928410138	8928410216	892370811583	892201001201	150
8928410000	8928410138	8928410216	892370811583	892201001201	150
8983510000	8983510914	8983510793	898441950991	898857573863	150
8983510000	8983510914	8983510793	898441950991	898857573863	150
8959410000	8959410007	8959410502	895583543635	895649179769	150
8959410000	8959410007	8959410502	895583543635	895649179769	150
9045500000	9045500948	9045500251	904081054427	904977770953	150
9045500000	9045500948	9045500251	904081054427	904977770953	150
8970510000	8970510396	8970510687	897137808120	897378535051	150
8970510000	8970510396	8970510687	897137808120	897378535051	150
9002610000	9002610905	9002610954	900554428587	900390922052	150
9002610000	9002610905	9002610954	900554428587	900390922052	150
9038410000	9038410156	9038410227	903867059135	903075245963	150
9038410000	9038410156	9038410227	903867059135	903075245963	150
9068410000	9068410581	9068410522	906854701256	906330433278	150
9068410000	9068410581	9068410522	906854701256	906330433278	150
9080510000	9080510416	9080510697	908069165159	908894288556	150
9080510000	9080510416	9080510697	908069165159	908894288556	150
9080610000	9080610275	9080610769	908701753695	908682483238	150
9080610000	9080610275	9080610769	908701753695	908682483238	150
9085500000	9085500243	9085500651	908282920775	908709354396	150
9085500000	9085500243	9085500651	908282920775	908709354396	150
9072510000	9072510065	9072510598	907482021880	907918309800	150
9072510000	9072510065	9072510598	907482021880	907918309800	150
9110610000	9110610427	9110610085	911439591094	911183710805	150
9110610000	9110610427	9110610085	911439591094	911183710805	150
9118410000	9118410897	9118410040	911241501521	911934033898	150
9118410000	9118410897	9118410040	911241501521	911934033898	150
9159510000	9159510866	9159510490	915939340413	915183950744	150
9159510000	9159510866	9159510490	915939340413	915183950744	150

9069410000	9069410028	9069410513	906182621353	906650103369	150
9069410000	9069410028	9069410513	906182621353	906650103369	150
9125500000	9125500820	9125500064	912686178370	912772980646	150
9125500000	9125500820	9125500064	912686178370	912772980646	150
9088410000	9088410912	9088410718	908599567432	908160998590	150
9088410000	9088410912	9088410718	908599567432	908160998590	150
9062510000	9062510456	9062510496	906993921955	906309388098	150
9062510000	9062510456	9062510496	906993921955	906309388098	150
9245510000	9245510696	9245510357	924285357020	924956044059	150
9245510000	9245510696	9245510357	924285357020	924956044059	150
9233510000	9233510182	9233510223	923390692955	923314280173	150
9233510000	9233510182	9233510223	923390692955	923314280173	150
9248410000	9248410321	9248410347	924551768708	924125715687	150
9248410000	9248410321	9248410347	924551768708	924125715687	150
9221510000	9221510887	9221510115	922745370417	922594868691	150
9221510000	9221510887	9221510115	922745370417	922594868691	150
9235500000	9235500819	9235500173	923658405043	923414215027	150
9235500000	9235500819	9235500173	923658405043	923414215027	150
9236500000	9236500826	9236500188	923573704560	923435965597	150
9236500000	9236500826	9236500188	923573704560	923435965597	150
9225500000	9225500837	9225500074	922043791305	922781894261	150
9225500000	9225500837	9225500074	922043791305	922781894261	150
9197510000	9197510832	9197510896	919390997384	919419425098	150
9197510000	9197510832	9197510896	919390997384	919419425098	150
9286410000	9286410472	9286410760	928680029092	928734968239	150
9286410000	9286410472	9286410760	928680029092	928734968239	150
9204510000	9204510068	9204510925	920775726096	920052098240	150
9204510000	9204510068	9204510925	920775726096	920052098240	150
9249510000	9249510715	9249510400	924806504321	924838500580	150
9249510000	9249510715	9249510400	924806504321	924838500580	150
9220510000	9220510719	9220510123	922694455221	922125022758	150
9220510000	9220510719	9220510123	922694455221	922125022758	150
9268510000	9268510737	9268510602	926674206821	926460410892	150
9268510000	9268510737	9268510602	926674206821	926460410892	150
9213510000	9213510912	9213510023	921894637196	921100174335	150
9213510000	9213510912	9213510023	921894637196	921100174335	150
9256500000	9256500059	9256500388	925666724700	925048272788	150
9256500000	9256500059	9256500388	925666724700	925048272788	150
9243510000	9243510267	9243510322	924718045280	924534961873	150
9243510000	9243510267	9243510322	924718045280	924534961873	150
9384510000	9384510935	9384510750	938186152021	938830568842	150
9384510000	9384510935	9384510750	938186152021	938830568842	150
9358410000	9358410527	9358410454	935406821553	935444326254	150
9358410000	9358410527	9358410454	935406821553	935444326254	150
9302510000	9302510372	9302510920	930978619936	930861522672	150
9302510000	9302510372	9302510920	930978619936	930861522672	150
9375510000	9375510047	9375510698	937761169953	937218764948	150

9375510000	9375510047	9375510698	937761169953	937218764948	150
9304510000	9304510084	9304510936	930300512095	930816334113	150
9304510000	9304510084	9304510936	930300512095	930816334113	150
9336500000	9336500840	9336500198	933864519349	933591335709	150
9336500000	9336500840	9336500198	933864519349	933591335709	150
9306510000	9306510416	9306510009	930163765738	930778357349	150
9306510000	9306510416	9306510009	930163765738	930778357349	150
9419510000	9419510360	9419510122	941166890746	941913971500	150
9419510000	9419510360	9419510122	941166890746	941913971500	150
9408510000	9408510957	9408510025	940544544029	940111823999	150
9408510000	9408510957	9408510025	940544544029	940111823999	150
9380610000	9380610322	9380610799	938556999547	938291247205	150
9380610000	9380610322	9380610799	938556999547	938291247205	150
9352510000	9352510323	9352510425	935391479301	935537864637	150
9352510000	9352510323	9352510425	935391479301	935537864637	150
9424510000	9424510368	9424510150	942204702225	942630381073	150
9424510000	9424510368	9424510150	942204702225	942630381073	150
9381610000	9381610077	9381610784	938071037189	938033387905	150
9381610000	9381610077	9381610784	938071037189	938033387905	150
9399410000	9399410318	9399410837	939488896973	939339811793	150
9399410000	9399410318	9399410837	939488896973	939339811793	150
9414510000	9414510201	9414510049	941074539764	941672191079	150
9414510000	9414510201	9414510049	941074539764	941672191079	150
9373500000	9373500752	9373500606	937833901774	937457974131	150
9373500000	9373500752	9373500606	937833901774	937457974131	150
9307410000	9307410637	9307410970	930624940715	930378689134	150
9307410000	9307410637	9307410970	930624940715	930378689134	150
9364510000	9364510720	9364510550	936792727799	936745378543	150
9364510000	9364510720	9364510550	936792727799	936745378543	150
9518510000	9518510143	9518510134	951197894807	951003321466	150
9518510000	9518510143	9518510134	951197894807	951003321466	150
9476410000	9476410344	9476410678	947527850011	947621841472	150
9476410000	9476410344	9476410678	947527850011	947621841472	150
9513510000	9513510968	9513510054	951786058055	951074644960	150
9513510000	9513510968	9513510054	951786058055	951074644960	150
9499510000	9499510269	9499510915	949313651827	949659400113	150
9499510000	9499510269	9499510915	949313651827	949659400113	150
9517410000	9517410823	9517410091	951412930346	951458288455	150
9517410000	9517410823	9517410091	951412930346	951458288455	150
9503510000	9503510776	9503510951	950386737041	950666494518	150
9503510000	9503510776	9503510951	950386737041	950666494518	150
9461610000	9461610202	9461610595	946409595475	946613947472	150
9461610000	9461610202	9461610595	946409595475	946613947472	150
9468410000	9468410658	9468410560	946026068263	946920408168	150
9468410000	9468410658	9468410560	946026068263	946920408168	150
9566510000	9566510220	8566510633	956215784392	956988696810	150
9566510000	9566510220	8566510633	956215784392	956988696810	150

9676510000	9676510336	9676510746	967125613282	967113025436	150
9676510000	9676510336	9676510746	967125613282	967113025436	150
9559410000	9559410934	9559410464	955978982379	955167393302	150
9559410000	9559410934	9559410464	955978982379	955167393302	150
9560610000	9560610108	9560610618	956039175867	956130248725	150
9560610000	9560610108	9560610618	956039175867	956130248725	150
9619410000	9619410455	9619410076	961390364127	961950297256	150
9619410000	9619410455	9619410076	961390364127	961950297256	150
9609410000	9609410325	9609410978	960415787872	960667077442	150
9609410000	9609410325	9609410978	960415787872	960667077442	150
9595500000	9595500403	9595500816	959207279208	959034712101	150
9595500000	9595500403	9595500816	959207279208	959034712101	150
9679410000	9679410196	9679410672	967756989937	967541318002	150
9679410000	9679410196	9679410672	967756989937	967541318002	150
9561610000	9561610739	9561610605	956523199225	956018250630	150
9561610000	9561610739	9561610605	956523199225	956018250630	150
9643510000	9643510339	9643510363	964922892235	964745175958	150
9643510000	9643510339	9643510363	964922892235	964745175958	150
9659410000	9659410954	9659410473	965062106474	965187498698	150
9659410000	9659410954	9659410473	965062106474	965187498698	150
9616500000	9616500638	9616500028	961733094148	961968032357	150
9616500000	9616500638	9616500028	961733094148	961968032357	150
9604510000	9604510136	9604510968	960343719132	960761230036	150
9604510000	9604510136	9604510968	960343719132	960761230036	150
9563510000	9563510553	9563510551	956937922127	956248907438	150
9563510000	9563510553	9563510551	956937922127	956248907438	150
9614510000	9614510234	9614510071	961262089265	961772641981	150
9614510000	9614510234	9614510071	961262089265	961772641981	150
9592510000	9592510689	9592510846	959434674318	959152449118	150
9592510000	9592510689	9592510846	959434674318	959152449118	150
9636410000	9636410838	9636410297	963825108835	963328121390	150
9636410000	9636410838	9636410297	963825108835	963328121390	150
9636500000	9636500810	9636500228	963460436466	963632845134	150
9636500000	9636500810	9636500228	963460436466	963632845134	150
9681510000	9681510545	9681510748	968426468501	968368529130	150
9681510000	9681510545	9681510748	968426468501	968368529130	150
9756500000	9756500065	9756500438	975094464328	975212521838	150
9756500000	9756500065	9756500438	975094464328	975212521838	150
9713510000	9713510006	9713510073	971780464019	971302281166	150
9713510000	9713510006	9713510073	971780464019	971302281166	150
9849410000	9849410805	9849410394	984621410165	984448889775	150
9849410000	9849410805	9849410394	984621410165	984448889775	150
9706410000	9706410383	9706410006	970038780552	970161101017	150
9706410000	9706410383	9706410006	970038780552	970161101017	150
9806410000	9806410400	9806410017	980617958609	980493725958	150
9806410000	9806410400	9806410017	980617958609	980493725958	150
9806510000	9806510505	9806510060	980907601993	980029832898	150

9806510000	9806510505	9806510060	980907601993	980029832898	150
9785500000	9785500278	9785500727	978575181369	978877801140	150
9785500000	9785500278	9785500727	978575181369	978877801140	150
9688510000	9688510033	9688510840	968306982225	968150820884	150
9688510000	9688510033	9688510840	968306982225	968150820884	150
9727510000	9727510956	9727510257	972692829277	972160781302	150
9727510000	9727510956	9727510257	972692829277	972160781302	150
9762510000	9762510589	9762510568	976583645427	976546334879	150
9762510000	9762510589	9762510568	976583645427	976546334879	150
9720510000	9720510809	9720510173	972908751347	972054210679	150
9720510000	9720510809	9720510173	972908751347	972054210679	150
9736410000	9736410857	9736410307	973593576009	973528062238	150
9736410000	9736410857	9736410307	973593576009	973528062238	150
9819510000	9819510428	9819510163	981573255527	981263623766	150
9819510000	9819510428	9819510163	981573255527	981263623766	150
9888410000	9888410059	9888410799	988236900699	988405107230	150
9888410000	9888410059	9888410799	988236900699	988405107230	150
9888510000	9888510060	9888510860	988073398716	988924264044	150
9888510000	9888510060	9888510860	988073398716	988924264044	150
9876410000	9876410407	9876410720	987564249951	987785124756	150
9876410000	9876410407	9876410720	987564249951	987785124756	150
9836500000	9836500839	9836500247	983059497362	983854810814	150
9836500000	9836500839	9836500247	983059497362	983854810814	150
9864510000	9864510810	9864510601	986073008971	986993475429	150
9864510000	9864510810	9864510601	986073008971	986993475429	150
9820610000	9820610564	9820610254	982784739579	982726553553	150
9820610000	9820610564	9820610254	982784739579	982726553553	150
9832510000	9832510861	9832510274	983278494326	983451264134	150
9832510000	9832510861	9832510274	983278494326	983451264134	150
9835510000	9835510619	9835510314	983431829078	983533085235	150
9835510000	9835510619	9835510314	983431829078	983533085235	150
9924510000	9924510373	9924510201	992881629249	992186606164	150
9924510000	9924510373	9924510201	992881629249	992186606164	150
9927510000	9927510991	9927510278	992941352352	992897687171	150
9927510000	9927510991	9927510278	992941352352	992897687171	150
9858410000	9858410547	9858410503	985533794382	985827852068	150
9858410000	9858410547	9858410503	985533794382	985827852068	150
9950510000	9950510046	9950510491	995892464364	995780321297	150
9950510000	9950510046	9950510491	995892464364	995780321297	150
9960610000	9960610169	9960610658	996089872616	996531452703	150
9960610000	9960610169	9960610658	996089872616	996531452703	150
9997510000	9997510975	9997510975	999324760977	999495952035	150
9997510000	9997510975	9997510975	999324760977	999495952035	150
5354647273	5354647057	7118410038	535151310079	535366201566	150
5354647273	5354647057	7118410038	535151310079	535366201566	150
8801716781	8801716545	9510510054	880049142498	880765083287	150
8801716781	8801716545	9510510054	880049142498	880765083287	150

1875336811	1875336810	1129910000	187704739338	187608977007	150
1875336811	1875336810	1129910000	187704739338	187608977007	150
9490909798	9490909412	7619910000	949991359149	949292631728	150
9490909798	9490909412	7619910000	949991359149	949292631728	150
8302720957	8302720615	2171510592	830883883184	830220510577	150
8302720957	8302720615	2171510592	830883883184	830220510577	150
4681427780	4681427241	4413510039	468847215011	468278137048	150
4681427780	4681427241	4413510039	468847215011	468278137048	150
5342577954	5342577610	7896410917	534684065534	534705142235	150
5342577954	5342577610	7896410917	534684065534	534705142235	150
2228963763	2228963146	1379510699	222270876666	222878802799	150
2228963763	2228963146	1379510699	222270876666	222878802799	150
5123185307	5123185444	6145510343	512715157107	512966536208	150
5123185307	5123185444	6145510343	512715157107	512966536208	150
3452509666	3452509417	8360610597	345163046657	345608498350	150
3452509666	3452509417	8360610597	345163046657	345608498350	150
4109220903	4109220985	9241510311	410511855393	410468363745	150
4109220903	4109220985	9241510311	410511855393	410468363745	150
3043228004	3043228517	2886510860	304634353793	304658072202	150
3043228004	3043228517	2886510860	304634353793	304658072202	150
6774914563	6774914696	5010510000	677411526275	677557794996	150
6774914563	6774914696	5010510000	677411526275	677557794996	150
8081118587	8081118260	3471610688	808276827179	808590872176	150
8081118587	8081118260	3471610688	808276827179	808590872176	150
8058065423	8058065675	228510194	805531774113	805023776454	150
8058065423	8058065675	228510194	805531774113	805023776454	150
2588979099	2588979492	1331610284	258652376436	258237235282	150
2588979099	2588979492	1331610284	258652376436	258237235282	150
5604540380	5604540531	4357410457	560000301980	560832117503	150
5604540380	5604540531	4357410457	560000301980	560832117503	150
1083891348	1083891632	4709910000	108181078894	108025239864	150
1083891348	1083891632	4709910000	108181078894	108025239864	150
7471637814	7471637809	5869510654	747334020909	747522352784	150
7471637814	7471637809	5869510654	747334020909	747522352784	150
8886129383	8886129469	9268410541	888254169923	888101962951	150
8886129383	8886129469	9268410541	888254169923	888101962951	150
6176560985	6176560442	1459410446	617341966846	617074428349	150
6176560985	6176560442	1459410446	617341966846	617074428349	150
3554927675	3554927768	546510424	355480905879	355098624844	150
3554927675	3554927768	546510424	355480905879	355098624844	150
6405586272	6405586191	9230510223	640165110795	640592080323	150
6405586272	6405586191	9230510223	640165110795	640592080323	150
241494042	241494876	6746500335	24031905009	24632467274	150
241494042	241494876	6746500335	24031905009	24632467274	150
5650757018	5650757169	3495500800	565836477029	565434715828	150
5650757018	5650757169	3495500800	565836477029	565434715828	150
2188886171	2188886722	5038510278	218819619266	218775755577	150

2188886171	2188886722	5038510278	218819619266	218775755577	150
64072665	64072670	9698910000	6726317583	6868183534	150
64072665	64072670	9698910000	6726317583	6868183534	150
6402503600	6402503773	5246500284	640784696605	640901435779	150
6402503600	6402503773	5246500284	640784696605	640901435779	150
3047181379	3047181754	2848510456	304368727724	304116551310	150
3047181379	3047181754	2848510456	304368727724	304116551310	150
6711757141	6711757229	6541510337	671305315955	671317391279	150
6711757141	6711757229	6541510337	671305315955	671317391279	150
2262965109	2262965837	7526510231	226711380012	226418649569	150
2262965109	2262965837	7526510231	226711380012	226418649569	150
8745470735	8745470230	5795500833	874925761923	874563029332	150
8745470735	8745470230	5795500833	874925761923	874563029332	150
6797472436	6797472763	7371610682	679325853781	679600543439	150
6797472436	6797472763	7371610682	679325853781	679600543439	150
7118410000	7118410498	679510728	711573642891	711627781799	150
7118410000	7118410498	679510728	711573642891	711627781799	150
6051724678	6051724616	2866401658	605183664457	605410699557	150
6051724678	6051724616	2866401658	605183664457	605410699557	150
766470926	766470565	6826500145	76944618540	76958308396	150
766470926	766470565	6826500145	76944618540	76958308396	150
9606790034	9606790900	4211610081	960770770355	960949745720	150
9606790034	9606790900	4211610081	960770770355	960949745720	150
7598612947	7598612454	1919910000	759028760455	759761014086	150
7598612947	7598612454	1919910000	759028760455	759761014086	150
9212167685	9212167095	9978510769	921921481091	921795422533	150
9212167685	9212167095	9978510769	921921481091	921795422533	150
6069828130	6069828778	2558510526	606992043612	606459423613	150
6069828130	6069828778	2558510526	606992043612	606459423613	150
974684683	974684531	6445500288	97599452518	97709769034	150
974684683	974684531	6445500288	97599452518	97709769034	150
5052634177	5052634805	4277510702	505076707126	505930888483	150
5052634177	5052634805	4277510702	505076707126	505930888483	150
1433570742	1433570415	698410869	143046620908	143962362743	150
1433570742	1433570415	698410869	143046620908	143962362743	150
3742561212	3742561348	1798410880	374423006733	374169208405	150
3742561212	3742561348	1798410880	374423006733	374169208405	150
2046410000	2046410662	2046410330	204960737088	204616797049	150
2046410000	2046410662	2046410330	204960737088	204616797049	150
6261893545	6261893755	6238510299	626559606850	626993447593	150
6261893545	6261893755	6238510299	626559606850	626993447593	150
8121779812	8121779776	216500979	812280521296	812383512950	150
8121779812	8121779776	216500979	812280521296	812383512950	150
6135161732	6135161268	9009510980	613423021456	613765457263	150
6135161732	6135161268	9009510980	613423021456	613765457263	150
2698310221	2698310155	9534510261	269231344653	269918039132	150
2698310221	2698310155	9534510261	269231344653	269918039132	150

9939351783	9939351934	1173500578	993739327944	993462503753	150
9939351783	9939351934	1173500578	993739327944	993462503753	150
8132346632	8132346959	1388410740	813726930982	813116001405	150
8132346632	8132346959	1388410740	813726930982	813116001405	150
5172820910	5172820021	9669510638	517508362402	517806160287	150
5172820910	5172820021	9669510638	517508362402	517806160287	150
9766087515	9766087589	809410989	976602374378	976634963010	150
9766087515	9766087589	809410989	976602374378	976634963010	150
1434905399	1434905130	4678410674	143242381478	143037652416	150
1434905399	1434905130	4678410674	143242381478	143037652416	150
8294381324	8294381677	7146500275	829682919111	829906302159	150
8294381324	8294381677	7146500275	829682919111	829906302159	150
3378157923	3378157093	7856510560	337291996439	337246022952	150
3378157923	3378157093	7856510560	337291996439	337246022952	150
2786854709	2786854348	8366510612	278126655484	278959821218	150
2786854709	2786854348	8366510612	278126655484	278959821218	150
8755341100	8755341236	4626500123	875221287094	875505825642	150
8755341100	8755341236	4626500123	875221287094	875505825642	150
9508076760	9508076589	2259410427	950513231521	950420227429	150
9508076760	9508076589	2259410427	950513231521	950420227429	150
2945636298	2945636403	636410288	294707147216	294601994667	150
2945636298	2945636403	636410288	294707147216	294601994667	150
7150367029	7150367299	9528410176	715412943534	715900913744	150
7150367029	7150367299	9528410176	715412943534	715900913744	150
5678365775	5678365264	4507410985	567215280373	567268399133	150
5678365775	5678365264	4507410985	567215280373	567268399133	150
9079239523	9079239144	1086410732	907954647739	907993475363	150
9079239523	9079239144	1086410732	907954647739	907993475363	150
4922140549	4922140133	8916410126	492890320432	492324473332	150
4922140549	4922140133	8916410126	492890320432	492324473332	150
3771694888	3771694032	8787510855	377170304688	377629800150	150
3771694888	3771694032	8787510855	377170304688	377629800150	150
3645829046	3645829492	8740510370	364170948781	364671940144	150
3645829046	3645829492	8740510370	364170948781	364671940144	150
5272047182	5272047302	2918510166	527982090389	527579960487	150
5272047182	5272047302	2918510166	527982090389	527579960487	150
4487510000	4487510820	8597510934	448096387666	448351770594	150
4487510000	4487510820	8597510934	448096387666	448351770594	150
5860432019	5860432647	685500705	586872196178	586406083778	150
5860432019	5860432647	685500705	586872196178	586406083778	150
7059410000	7059410532	7059410412	705117321258	705689822051	150
7059410000	7059410532	7059410412	705117321258	705689822051	150
6492577798	6492577973	7677410688	649484749238	649128119801	150
6492577798	6492577973	7677410688	649484749238	649128119801	150
5105176345	5105176517	8620510162	510780519664	510660989212	150
5105176345	5105176517	8620510162	510780519664	510660989212	150
9807727787	9807727524	3700510968	980494672714	980243194698	150

9807727787	9807727524	3700510968	980494672714	980243194698	150
9327273927	9327273029	8782994765	932494447542	932528427017	150
9327273927	9327273029	8782994765	932494447542	932528427017	150
8042967168	8042967096	9789510847	804882733337	804649267767	150
8042967168	8042967096	9789510847	804882733337	804649267767	150
5836877291	5836877770	7465510597	583578428981	583657916042	150
5836877291	5836877770	7465510597	583578428981	583657916042	150
9734299691	9734299942	3628510237	973286322612	973429332615	150
9734299691	9734299942	3628510237	973286322612	973429332615	150
1020510000	1020510000	1020510096	102732216746	102660507755	150
1020510000	1020510000	1020510096	102732216746	102660507755	150
2385798531	2385798648	7347410361	238603893609	238293048517	150
2385798531	2385798648	7347410361	238603893609	238293048517	150
5879961495	5879961505	8885510857	587196953010	587470501627	150
5879961495	5879961505	8885510857	587196953010	587470501627	150
3589802920	3589802019	9839910000	358673485933	358393164816	150
3589802920	3589802019	9839910000	358673485933	358393164816	150
1466451648	1466451418	9143510313	146625982636	146512109446	150
1466451648	1466451418	9143510313	146625982636	146512109446	150
8056533842	8056533048	2769510641	805150477274	805365665340	150
8056533842	8056533048	2769510641	805150477274	805365665340	150
6675613578	6675613242	4073910000	667246050601	667144868317	150
6675613578	6675613242	4073910000	667246050601	667144868317	150
957826038	957826947	9149910000	95907212974	95386252247	150
957826038	957826947	9149910000	95907212974	95386252247	150
1256500000	1256500622	1256500380	125244114349	125091490836	150
1256500000	1256500622	1256500380	125244114349	125091490836	150
2809915225	2809915341	1928510264	280447334907	280659415605	150
2809915225	2809915341	1928510264	280447334907	280659415605	150
8487625852	8487625294	1229510195	848284082867	848714832764	150
8487625852	8487625294	1229510195	848284082867	848714832764	150
6508725199	6508725290	6001610965	650517495969	650898352869	150
6508725199	6508725290	6001610965	650517495969	650898352869	150
4457410000	4457410856	4457410467	445430524662	445332850192	150
4457410000	4457410856	4457410467	445430524662	445332850192	150
3734999619	3734999485	6171610661	373847298892	373409563535	150
3734999619	3734999485	6171610661	373847298892	373409563535	150
5894573430	5894573633	4167510594	589919936992	589031710214	150
5894573430	5894573633	4167510594	589919936992	589031710214	150
1503940725	1503940298	2087510780	150519970115	150203316168	150
1503940725	1503940298	2087510780	150519970115	150203316168	150
3315546040	3315546702	5904510994	331407363631	331868968096	150
3315546040	3315546702	5904510994	331407363631	331868968096	150
5802418592	5802418323	4063510497	580555612826	580543085325	150
5802418592	5802418323	4063510497	580555612826	580543085325	150
8583005984	8583005814	7448510420	858140277094	858108515148	150
8583005984	8583005814	7448510420	858140277094	858108515148	150

9523570103	9523570386	48410318	952686781331	952331024532	150
9523570103	9523570386	48410318	952686781331	952331024532	150
3360416248	3360416590	8629410174	336985414247	336013554626	150
3360416248	3360416590	8629410174	336985414247	336013554626	150
6989052634	6989052906	9648510442	698400507101	698366269090	150
6989052634	6989052906	9648510442	698400507101	698366269090	150
6265439458	6265439853	1586510829	626386173875	626369678739	150
6265439458	6265439853	1586510829	626386173875	626369678739	150
1880070538	1880070660	224510121	188518108855	188474750970	150
1880070538	1880070660	224510121	188518108855	188474750970	150
7980240710	7980240460	8535500201	798326831485	798984019382	150
7980240710	7980240460	8535500201	798326831485	798984019382	150
3381930581	3381930832	477510718	338252466653	338625160626	150
3381930581	3381930832	477510718	338252466653	338625160626	150
6026294118	6026294849	7809410995	602775925886	602837013093	150
6026294118	6026294849	7809410995	602775925886	602837013093	150
6684625876	6684625740	3407410974	668923794305	668712085630	150
6684625876	6684625740	3407410974	668923794305	668712085630	150
2727048719	2727048437	8647510450	272352022448	272809747408	150
2727048719	2727048437	8647510450	272352022448	272809747408	150
7674603514	7674603083	8789410780	767278162575	767165985785	150
7674603514	7674603083	8789410780	767278162575	767165985785	150
9172133151	9172133195	5127510193	917644772051	917666768587	150
9172133151	9172133195	5127510193	917644772051	917666768587	150
7769460792	7769460007	2811510068	776769565838	776217275823	150
7769460792	7769460007	2811510068	776769565838	776217275823	150
2361840657	2361840992	7692510854	236277235925	236724596738	150
2361840657	2361840992	7692510854	236277235925	236724596738	150
6136700264	6136700582	8997410918	613547275650	613149999201	150
6136700264	6136700582	8997410918	613547275650	613149999201	150
560473710	560473596	7469410551	56953128594	56028496235	150
560473710	560473596	7469410551	56953128594	56028496235	150
7723442566	7723442624	5912510080	772917536073	772595665254	150
7723442566	7723442624	5912510080	772917536073	772595665254	150
7400359661	7400359213	3800610049	740935434408	740454834750	150
7400359661	7400359213	3800610049	740935434408	740454834750	150
7806692201	7806692384	6215510041	780507724421	780544860906	150
7806692201	7806692384	6215510041	780507724421	780544860906	150
9173318476	9173318336	4420510138	917747672291	917104997111	150
9173318476	9173318336	4420510138	917747672291	917104997111	150
3890528455	3890528519	5026500064	389969258406	389909139110	150
3890528455	3890528519	5026500064	389969258406	389909139110	150
4926421580	4926421493	1708410992	492778337496	492294627027	150
4926421580	4926421493	1708410992	492778337496	492294627027	150
8586676033	8586676189	5520510149	858323105143	858683803583	150
8586676033	8586676189	5520510149	858323105143	858683803583	150
4958510000	4958510601	4958510568	495836805866	495576335187	150

4958510000	4958510601	4958510568	495836805866	495576335187	150
4515611476	4515611136	2734510275	451915798082	451957500101	150
4515611476	4515611136	2734510275	451915798082	451957500101	150
8293064254	8293064606	5426410172	829534133265	829078442775	150
8293064254	8293064606	5426410172	829534133265	829078442775	150
8586410000	8586410732	8586410788	858324808426	858911068716	150
8586410000	8586410732	8586410788	858324808426	858911068716	150
4633019421	4633019512	7491512072	463037614366	463873591670	150
4633019421	4633019512	7491512072	463037614366	463873591670	150
8396395654	8396395856	6679510734	839863810285	839200085849	150
8396395654	8396395856	6679510734	839863810285	839200085849	150
6342397019	6342397844	6716410103	634532810252	634826579706	150
6342397019	6342397844	6716410103	634532810252	634826579706	150
3639495978	3639495025	8380510726	363492243094	363659997735	150
3639495978	3639495025	8380510726	363492243094	363659997735	150
6865872377	6865872118	1118510086	686726423545	686185739761	150
6865872377	6865872118	1118510086	686726423545	686185739761	150
2396511559	2396511016	2709410981	239511548990	239692391102	150
2396511559	2396511016	2709410981	239511548990	239692391102	150
9931079919	9931079625	345500272	993589612670	993318520602	150
9931079919	9931079625	345500272	993589612670	993318520602	150
3270124631	3270124176	2408410963	327087603353	327267000670	150
3270124631	3270124176	2408410963	327087603353	327267000670	150
7008684484	7008684439	5757410498	700430935201	700456235121	150
7008684484	7008684439	5757410498	700430935201	700456235121	150
2826713003	2826713757	4607510043	282426757775	282723899798	150
2826713003	2826713757	4607510043	282426757775	282723899798	150
5026995080	5026995340	4381610779	502308429684	502166870171	150
5026995080	5026995340	4381610779	502308429684	502166870171	150
7139868534	7139868041	5615500007	713099553750	713426609121	150
7139868534	7139868041	5615500007	713099553750	713426609121	150
1109873020	1109873096	2597410872	110545243482	110776949999	150
1109873020	1109873096	2597410872	110545243482	110776949999	150
2843905199	2843905720	177410632	284796358480	284711977202	150
2481386219	2481386262	9788410789	248673002304	248010965128	150
2481386219	2481386262	9788410789	248673002304	248010965128	150
9669401443	9669401716	815500024	966281466216	966946017084	150
9669401443	9669401716	815500024	966281466216	966946017084	150
8566559720	8566559718	2023510096	856483257946	856281376815	150
8566559720	8566559718	2023510096	856483257946	856281376815	150
6719624438	6719624368	1771510651	671006266518	671044342815	150
6719624438	6719624368	1771510651	671006266518	671044342815	150
8577966475	8577966123	2359410437	857067129756	857700731078	150
8577966475	8577966123	2359410437	857067129756	857700731078	150
1631254931	1631254535	8568410569	163105424240	163674248522	150
1631254931	1631254535	8568410569	163105424240	163674248522	150
1468314114	1468314096	6915500041	146903622469	146480579620	150

2789858472	2789858425	5667510644	278432424637	278296985170	150
2789858472	2789858425	5667510644	278432424637	278296985170	150
2152510000	2152510735	2152510398	215867134778	215892083183	150
7518063017	7518063828	2149410317	751471803122	751626572931	150
7518063017	7518063828	2149410317	751471803122	751626572931	150
4508785851	4508785823	5216500984	450399002719	450511850699	150
4508785851	4508785823	5216500984	450399002719	450511850699	150
1924486479	1924486790	7007510985	192152567112	192523976292	150
1924486479	1924486790	7007510985	192152567112	192523976292	150
1740850122	1740850225	5206500883	174045212019	174414376453	150
1740850122	1740850225	5206500883	174045212019	174414376453	150
1825432810	1825432266	8369410542	182156850736	182217125442	150
1825432810	1825432266	8369410542	182156850736	182217125442	150
7966477277	7966477956	3295500779	796515230614	796404163723	150
7966477277	7966477956	3295500779	796515230614	796404163723	150
9540425640	9540425267	2439410247	954041201041	954893383122	150
9540425640	9540425267	2439410247	954041201041	954893383122	150
7281158549	7281158851	7927410230	728042142390	728764257864	150
7281158549	7281158851	7927410230	728042142390	728764257864	150
1230456975	1230456232	8908510073	123571414005	123019014021	150
1230456975	1230456232	8908510073	123571414005	123019014021	150
720788218	720788556	119910000	72299749766	72149081359	150
720788218	720788556	119910000	72299749766	72149081359	150
1756389462	1756389318	435510264	175719421313	175876231196	150
1756389462	1756389318	435510264	175719421313	175876231196	150
2606410000	2606410144	2606410989	260896611821	260946598062	150
2606410000	2606410144	2606410989	260896611821	260946598062	150
4206133529	4206133880	4869410588	420306419353	420701214531	150
4206133529	4206133880	4869410588	420306419353	420701214531	150
2285256237	2285256750	9636510344	228082929572	228873043041	150
2285256237	2285256750	9636510344	228082929572	228873043041	150
2171488761	2171488679	3269510593	217730339732	217112976939	150
2171488761	2171488679	3269510593	217730339732	217112976939	150
5684710606	5684710413	9484510760	568477650993	568706504859	150
5684710606	5684710413	9484510760	568477650993	568706504859	150
3345456772	3345456336	1961610637	334774833644	334607767745	150
3345456772	3345456336	1961610637	334774833644	334607767745	150
727965109	727965843	4874510695	72864019618	72740954050	150
727965109	727965843	4874510695	72864019618	72740954050	150
7651316208	7651316598	1016510072	765814945523	765509364382	150
7651316208	7651316598	1016510072	765814945523	765509364382	150
4553866842	4553866780	6436510321	455232126944	455779334297	150
4438155008	4438155137	5776410704	443217618825	443053551215	150
4438155008	4438155137	5776410704	443217618825	443053551215	150
791370134	791370284	5378510705	79211912672	79935341212	150
791370134	791370284	5378510705	79211912672	79935341212	150
3628326303	3628326093	4471510624	362121172733	362841486623	150

3628326303	3628326093	4471510624	362121172733	362841486623	150
7228475592	7228475078	4147510396	722084573973	722468720818	150
7228475592	7228475078	4147510396	722084573973	722468720818	150
3123899592	3123899653	3780510760	312587795237	312052147185	150
3123899592	3123899653	3780510760	312587795237	312052147185	150
4379222765	4379222692	4358410449	437690601615	437513345667	150
4379222765	4379222692	4358410449	437690601615	437513345667	150
7266900507	7266900318	1880510768	726107408637	726728985503	150
7266900507	7266900318	1880510768	726107408637	726728985503	150
2922510000	2922510303	2922510176	292865604654	292545386010	150
2922510000	2922510303	2922510176	292865604654	292545386010	150
4301753534	4301753620	6937410323	430750206465	430675402500	150
4301753534	4301753620	6937410323	430750206465	430675402500	150
9580186386	9580186706	9451510428	958249464907	958652540585	150
9580186386	9580186706	9451510428	958249464907	958652540585	150
2546378053	2546378121	6219410034	254936703715	254291324206	150
2546378053	2546378121	6219410034	254936703715	254291324206	150
7257588176	7257588959	4318510109	725385075270	725444587886	150
7257588176	7257588959	4318510109	725385075270	725444587886	150
621924247	621924360	4197410835	62927401373	62543442325	150
621924247	621924360	4197410835	62927401373	62543442325	150
3945445277	3945445027	4178410624	394104308720	394538580517	150
3945445277	3945445027	4178410624	394104308720	394538580517	150
8489829547	8489829250	7305510951	848801364645	848532011107	150
8489829547	8489829250	7305510951	848801364645	848532011107	150
9537960125	9537960229	7168510590	953909962042	953127029075	150
9537960125	9537960229	7168510590	953909962042	953127029075	150
7391506559	7391506622	9961510579	739782764240	739658349579	150
7391506559	7391506622	9961510579	739782764240	739658349579	150
9026511699	9026511899	7406410975	902269718585	902443306689	150
9026511699	9026511899	7406410975	902269718585	902443306689	150
5257815639	5257815470	4937510377	525528527412	525199393166	150
5257815639	5257815470	4937510377	525528527412	525199393166	150
4976525082	4976525922	4791610919	497847102313	497173591115	150
4976525082	4976525922	4791610919	497847102313	497173591115	150
6906269077	6906269876	2581610797	690485338523	690851326643	150
6906269077	6906269876	2581610797	690485338523	690851326643	150
5387599249	5387599612	9725500124	538051549987	538248784051	150
5387599249	5387599612	9725500124	538051549987	538248784051	150
2798376205	2798376556	5476510722	279567421518	279751545425	150
2798376205	2798376556	5476510722	279567421518	279751545425	150
2560219053	2560219852	4761610620	256241998244	256446430792	150
2560219053	2560219852	4761610620	256241998244	256446430792	150
8545538415	8545538350	1077410623	854394137437	854510002418	150
8545538415	8545538350	1077410623	854394137437	854510002418	150
3627610000	3627610681	7130510211	362405017604	362015439514	150
3627610000	3627610681	7130510211	362405017604	362015439514	150

8215568273	8215568388	5640510357	821089147062	821289769452	150
8215568273	8215568388	5640510357	821089147062	821289769452	150
4590367715	4590367798	1398410841	459531202404	459501858902	150
4590367715	4590367798	1398410841	459531202404	459501858902	150
2184366760	2184366072	4089410707	218081124366	218246454345	150
2184366760	2184366072	4089410707	218081124366	218246454345	150
5285758217	5285758691	6767510655	528342348567	528365298821	150
5285758217	5285758691	6767510655	528342348567	528365298821	150
4058510000	4058510151	8489510816	405409558410	405022888206	150
4058510000	4058510151	8489510816	405409558410	405022888206	150
3134212478	3134212665	4058510478	313952966511	313152193734	150
3134212478	3134212665	4058510478	313952966511	313152193734	150
5950786963	5950786158	2777410693	595259551247	595145926262	150
5950786963	5950786158	2777410693	595259551247	595145926262	150
5279895948	5279895346	336410258	527808016392	527537076751	150
5279895948	5279895346	336410258	527808016392	527537076751	150
979262040	979262507	4099510872	97521187816	97200720922	150
979262040	979262507	4099510872	97521187816	97200720922	150
339524100	339524162	2244510329	33984311698	33797471873	150
339524100	339524162	2244510329	33984311698	33797471873	150
8707762638	8707762502	1680510748	870118870274	870516676293	150
8707762638	8707762502	1680510748	870118870274	870516676293	150
8001320770	8001320587	2402610986	800703381671	800704458801	150
1701117727	1701117039	29510174	170550693701	170140241992	150
1701117727	1701117039	29510174	170550693701	170140241992	150
7473510000	7473510239	1267410544	747230798438	747344476962	150
7473510000	7473510239	1267410544	747230798438	747344476962	150
8776347244	8776347285	6909410004	877057364986	877125446771	150
8776347244	8776347285	6909410004	877057364986	877125446771	150
5687771312	5687771115	7919410104	568843490843	568343349196	150
5687771312	5687771115	7919410104	568843490843	568343349196	150
4002190913	4002190434	8747410400	400243432154	400978036460	150
4002190913	4002190434	8747410400	400243432154	400978036460	150
7949317293	7949317114	5648410383	794073345044	794593869620	150
7949317293	7949317114	5648410383	794073345044	794593869620	150
2250522906	2250522767	5726410202	225837011799	225363998867	150
2250522906	2250522767	5726410202	225837011799	225363998867	150
2023956227	2023956833	835500223	202968136853	202303178438	150
2023956227	2023956833	835500223	202968136853	202303178438	150
8402510000	8402510951	8402510929	840059661662	840298702667	150
17871505	17871554	1847410403	1937179977	1896327271	150
17871505	17871554	1847410403	1937179977	1896327271	150
6337651011	6337651683	2198510883	633169078615	633075253409	150
6337651011	6337651683	2198510883	633169078615	633075253409	150
9065215450	9065215059	7473510640	906072408680	906042883689	150
9065215450	9065215059	7473510640	906072408680	906042883689	150
904779400	904779023	9631610318	90492460411	90032480199	150

904779400	904779023	9631610318	90492460411	90032480199	150
2051581668	2051581454	8469510617	205047874257	205985259106	150
2051581668	2051581454	8469510617	205047874257	205985259106	150
7445632025	7445632252	1594510863	744925873699	744068474410	150
7445632025	7445632252	1594510863	744925873699	744068474410	150
3762289272	3762289798	6939910000	376679410218	376203120367	150
3762289272	3762289798	6939910000	376679410218	376203120367	150
3535432429	3535432271	2373510625	353403063350	353151334606	150
3535432429	3535432271	2373510625	353403063350	353151334606	150
9731043140	9731043447	7723510172	973042727918	973543844920	150
9731043140	9731043447	7723510172	973042727918	973543844920	150
17968589	17968175	8769410582	1585395332	1471121676	150
17968589	17968175	8769410582	1585395332	1471121676	150
4695086884	4695086113	1868410592	469324151776	469232946160	150
4695086884	4695086113	1868410592	469324151776	469232946160	150
5639263313	5639263453	8209410937	563856831754	563440561912	150
5639263313	5639263453	8209410937	563856831754	563440561912	150
4458571545	4458571223	7502610001	445588369170	445886593157	150
4458571545	4458571223	7502610001	445588369170	445886593157	150
6888330557	6888330698	4395510904	688912703142	688246848109	150
6888330557	6888330698	4395510904	688912703142	688246848109	150
3083663634	3083663452	4336510309	308992593147	308114688218	150
3083663634	3083663452	4336510309	308992593147	308114688218	150
8851654889	8851654025	8750510469	885394681036	885004887072	150
8851654889	8851654025	8750510469	885394681036	885004887072	150
6169694783	6169694169	3949410398	616361199275	616946412613	150
6169694783	6169694169	3949410398	616361199275	616946412613	150
1252418636	1252418304	5006510975	125865430438	125733684814	150
1252418636	1252418304	5006510975	125865430438	125733684814	150
3817589078	3817589950	8947510479	381264389300	381397674686	150
3817589078	3817589950	8947510479	381264389300	381397674686	150
7269323169	7269323822	3328510207	726589748839	726890175495	150
7269323169	7269323822	3328510207	726589748839	726890175495	150
1969462626	1969462187	3949510464	196805824327	196516318681	150
1969462626	1969462187	3949510464	196805824327	196516318681	150
4965865677	4965865465	7526410184	496430421363	496295933589	150
4965865677	4965865465	7526410184	496430421363	496295933589	150
7077970190	7077970821	4056510477	707253807490	707371162403	150
7077970190	7077970821	4056510477	707253807490	707371162403	150
8434989269	8434989780	5579410658	843229939427	843951446304	150
8434989269	8434989780	5579410658	843229939427	843951446304	150
2003528789	2003528582	4680610824	200791802983	200221672597	150
2003528789	2003528582	4680610824	200791802983	200221672597	150
7937950731	7937950273	7335500181	793064614639	793211675556	150
7937950731	7937950273	7335500181	793064614639	793211675556	150
727610000	727610424	2588510823	72799579156	72028832969	150
727610000	727610424	2588510823	72799579156	72028832969	150

115426331	115426842	4867410607	11427338104	11889743319	150
115426331	115426842	4867410607	11427338104	11889743319	150
7783394796	7783394371	3727410205	778190224802	778369586653	150
7783394796	7783394371	3727410205	778190224802	778369586653	150
3584875716	3584875234	5738410294	358834753097	358939910696	150
3584875716	3584875234	5738410294	358834753097	358939910696	150
8542645663	8542645031	5439410250	854441627866	854706920802	150
8542645663	8542645031	5439410250	854441627866	854706920802	150
9779342311	9779342997	8706500936	977546278806	977234158888	150
9779342311	9779342997	8706500936	977546278806	977234158888	150
9317441571	9317441906	4517510134	931518847030	931223903318	150
9317441571	9317441906	4517510134	931518847030	931223903318	150
6127888303	6127888820	6169410520	612050046239	612367341021	150
6127888303	6127888820	6169410520	612050046239	612367341021	150
2243242666	2243242196	2368410544	224454672332	224871206156	150
2243242666	2243242196	2368410544	224454672332	224871206156	150
7887332782	7887332291	3117410045	788756663034	788326813955	150
7887332782	7887332291	3117410045	788756663034	788326813955	150
2420568877	2420568851	5931510278	242902477267	242069155897	150
2420568877	2420568851	5931510278	242902477267	242069155897	150
6363487331	6363487227	7449410352	636626484767	636865339160	150
6363487331	6363487227	7449410352	636626484767	636865339160	150
6914400870	6914400282	9349510410	691045309346	691872137453	150
6914400870	6914400282	9349510410	691045309346	691872137453	150
8612710483	8612710688	5151510394	861091732757	861196585956	150
8612710483	8612710688	5151510394	861091732757	861196585956	150
3994653248	3994653951	1423510136	399129295820	399113027526	150
3994653248	3994653951	1423510136	399129295820	399113027526	150
1895364871	1895364846	4376510711	189149493913	189976360491	150
1895364871	1895364846	4376510711	189149493913	189976360491	150
3507448522	3507448517	5106500874	350442007536	350503629083	150
3507448522	3507448517	5106500874	350442007536	350503629083	150
7457538582	7457538240	3939410298	745295495223	745251046812	150
7457538582	7457538240	3939410298	745295495223	745251046812	150
3470595444	3470595684	6482510731	347491129183	347826135628	150
3470595444	3470595684	6482510731	347491129183	347826135628	150
6261035748	6261035452	7433510241	626065564559	626765031046	150
6261035748	6261035452	7433510241	626065564559	626765031046	150
8324925893	8324925779	8182510704	832295050408	832221030192	150
8324925893	8324925779	8182510704	832295050408	832221030192	150
16058323	16058926	5976510772	1482197637	1986757087	150
16058323	16058926	5976510772	1482197637	1986757087	150
5924149408	5924149529	4825500129	592212555770	592947163069	150
5924149408	5924149529	4825500129	592212555770	592947163069	150
4271510000	4271510291	4271510603	427594302446	427471681940	150
4271510000	4271510291	4271510603	427594302446	427471681940	150
9214444769	9214444418	1761510552	921355461868	921741743514	150

5408462230	5408462380	3497410863	540577797555	540961039111	150
5408462230	5408462380	3497410863	540577797555	540961039111	150
8558919078	8558919474	3418410064	855907385979	855259908622	150
8558919078	8558919474	3418410064	855907385979	855259908622	150
7381721349	7381721255	29410107	738324949144	738483297171	150
7381721349	7381721255	29410107	738324949144	738483297171	150
5100519112	5100519276	71610645	510231404152	510873758293	150
5100519112	5100519276	71610645	510231404152	510873758293	150
3647564870	3647564236	2489410744	364280044347	364694346807	150
3647564870	3647564236	2489410744	364280044347	364694346807	150
5366467478	5366467197	9076410639	536229341979	536715660931	150
5366467478	5366467197	9076410639	536229341979	536715660931	150
4565883892	4565883565	2763910000	456528643271	456368704131	150
4565883892	4565883565	2763910000	456528643271	456368704131	150
855910617	855910067	4898510955	85714685340	85802854963	150
855910617	855910067	4898510955	85714685340	85802854963	150
3870641090	3870641445	4410510039	387634649945	387534701546	150
3870641090	3870641445	4410510039	387634649945	387534701546	150
4621656858	4621656185	2744510380	462777134652	462264739710	150
4621656858	4621656185	2744510380	462777134652	462264739710	150
9138006190	9138006227	9726510253	913379360277	913583839935	150
9138006190	9138006227	9726510253	913379360277	913583839935	150
2954752815	2954752523	9168410531	295824867938	295244996221	150
2954752815	2954752523	9168410531	295824867938	295244996221	150
8785012539	8785012731	9315510055	878034717592	878928198622	150
8785012539	8785012731	9315510055	878034717592	878928198622	150
6184807560	6184807552	1427510219	618896554229	618418321738	150
6184807560	6184807552	1427510219	618896554229	618418321738	150
311610000	311610594	311610086	31212166251	31314574841	150
311610000	311610594	311610086	31212166251	31314574841	150
2639410000	2639410970	2639410267	263866802328	263701946398	150
2639410000	2639410970	2639410267	263866802328	263701946398	150
4466967988	4466967682	900510985	446470860751	446632387236	150
4466967988	4466967682	900510985	446470860751	446632387236	150
960029792	960029084	6316500995	96662126549	96823604340	150
960029792	960029084	6316500995	96662126549	96823604340	150
1127456011	1127456427	3441610391	112157863948	112996509641	150
1127456011	1127456427	3441610391	112157863948	112996509641	150
5892626763	5892626235	4654510475	589098371959	589016892189	150
5892626763	5892626235	4654510475	589098371959	589016892189	150
2463085906	2463085166	7139410223	246557530017	246700127480	150
2463085906	2463085166	7139410223	246557530017	246700127480	150
6991171173	6991171328	247510402	699719836488	699262268798	150
7551006914	7551006424	9135500163	755296050765	755107337944	150
7551006914	7551006424	9135500163	755296050765	755107337944	150
754034656	754034285	290610880	75680300061	75232265428	150
754034656	754034285	290610880	75680300061	75232265428	150

2273075581	2273075373	2357510513	227316086750	227940408461	150
2273075581	2273075373	2357510513	227316086750	227940408461	150
7783609914	7783609183	6102510897	778232765107	778361935698	150
7783609914	7783609183	6102510897	778232765107	778361935698	150
5007553934	5007553455	6806500944	500911407485	500196888302	150
5007553934	5007553455	6806500944	500911407485	500196888302	150
9161343813	9161343071	7549410362	916845817932	916664122829	150
9161343813	9161343071	7549410362	916845817932	916664122829	150
2700490432	2700490049	7972510682	270415911946	270863409281	150
2700490432	2700490049	7972510682	270415911946	270863409281	150
6785986358	6785986363	2895510952	678033667089	678722297980	150
6785986358	6785986363	2895510952	678033667089	678722297980	150
8126067700	8126067775	6831610335	812259323142	812867806374	150
8126067700	8126067775	6831610335	812259323142	812867806374	150
1676938460	1676938091	5727410208	167063991946	167574093765	150
1676938460	1676938091	5727410208	167063991946	167574093765	150
8759895438	8759895694	4288410733	875509494499	875124067716	150
8759895438	8759895694	4288410733	875509494499	875124067716	150
3827292612	3827292689	8400610014	382962374723	382066327758	150
3827292612	3827292689	8400610014	382962374723	382066327758	150
3041754410	3041754239	6750610537	304591025034	304963408324	150
3041754410	3041754239	6750610537	304591025034	304963408324	150
5423157360	5423157758	9061510489	542107536848	542380540051	150
5423157360	5423157758	9061510489	542107536848	542380540051	150
8383889219	8383889179	4876510761	838806373445	838365657066	150
8383889219	8383889179	4876510761	838806373445	838365657066	150
979237264	979237413	9206510999	97509567014	97797328357	150
979237264	979237413	9206510999	97509567014	97797328357	150
3636980459	3636980191	3978510763	363285162618	363403556821	150
3636980459	3636980191	3978510763	363285162618	363403556821	150
4166115940	4166115647	5125500060	416776632851	416296911094	150
4166115940	4166115647	5125500060	416776632851	416296911094	150
7988784892	7988784730	5566500514	798939211887	798702845976	150
7988784892	7988784730	5566500514	798939211887	798702845976	150
1011981351	1011981208	985500740	101003198022	101396841836	150
1011981351	1011981208	985500740	101003198022	101396841836	150
7255969178	7255969530	8291510808	725834744032	725873698436	150
7255969178	7255969530	8291510808	725834744032	725873698436	150
2481584947	2481584576	1277410643	248773982339	248398023922	150
2481584947	2481584576	1277410643	248773982339	248398023922	150
3850584546	3850584440	5768410586	385853933857	385222410644	150
3850584546	3850584440	5768410586	385853933857	385222410644	150
3472348084	3472348603	6294510838	347649657597	347468249823	150
3472348084	3472348603	6294510838	347649657597	347468249823	150
4765244386	4765244118	7980610857	476573844193	476246532511	150
4765244386	4765244118	7980610857	476573844193	476246532511	150
9690483314	9690483082	6613510060	969083428197	969226199626	150

9690483314	9690483082	6613510060	969083428197	969226199626	150
5153141460	5153141287	8394510850	515993289858	515464251339	150
5153141460	5153141287	8394510850	515993289858	515464251339	150
1328238137	1328238339	4178510684	132884617520	132736330630	150
1328238137	1328238339	4178510684	132884617520	132736330630	150
2616379200	2616379083	2424510143	261342506694	261111405910	150
2616379200	2616379083	2424510143	261342506694	261111405910	150
8700107915	8700107249	9444510357	870498620901	870274287373	150
8700107915	8700107249	9444510357	870498620901	870274287373	150
6669657932	6669657267	7527410188	666575672706	666642797804	150
6669657932	6669657267	7527410188	666575672706	666642797804	150
9683788762	9683788990	5570610714	968043858978	968632186902	150
9683788762	9683788990	5570610714	968043858978	968632186902	150
3479613099	3479613866	3909410001	347006359021	347585654087	150
3479613099	3479613866	3909410001	347006359021	347585654087	150
2472030245	2472030735	7819410094	247895481202	247877344252	150
2472030245	2472030735	7819410094	247895481202	247877344252	150
3402156409	3402156520	7949510468	340307420415	340513877168	150
3402156409	3402156520	7949510468	340307420415	340513877168	150
3325736365	3325736719	3577510731	332219017788	332652609652	150
3325736365	3325736719	3577510731	332219017788	332652609652	150
2113571680	2113571667	5328410152	211960451306	211305147021	150
2113571680	2113571667	5328410152	211960451306	211305147021	150
7431528861	7431528344	7149410322	743385385451	743541546886	150
7431528861	7431528344	7149410322	743385385451	743541546886	150
3489048618	3489048890	3770510662	348737782058	348525294014	150
3489048618	3489048890	3770510662	348737782058	348525294014	150
2554627899	2554627883	7635500210	255136659157	255801856970	150
2554627899	2554627883	7635500210	255136659157	255801856970	150
461107816	461107840	987410810	46362642807	46686736969	150
461107816	461107840	987410810	46362642807	46686736969	150
2484870275	2484870888	9251610475	248894248284	248923476631	150
2484870275	2484870888	9251610475	248894248284	248923476631	150
5527235480	5527235649	987510867	552380033946	552736373802	150
5527235480	5527235649	987510867	552380033946	552736373802	150
5517593346	5517593089	919410097	551051882984	551257337160	150
5517593346	5517593089	919410097	551051882984	551257337160	150
5556240662	5556240539	4235500168	555703418034	555214313742	150
5556240662	5556240539	4235500168	555703418034	555214313742	150
6395865386	6395865275	4087410725	639570679581	639415404162	150
6395865386	6395865275	4087410725	639570679581	639415404162	150
4700165712	4700165001	227410151	470206688324	470182646394	150
4700165712	4700165001	227410151	470206688324	470182646394	150
9842832612	9842832673	4219510097	984708636499	984661559895	150
9842832612	9842832673	4219510097	984708636499	984661559895	150
6261138687	6261138181	4358510508	626546017180	626713835666	150
6261138687	6261138181	4358510508	626546017180	626713835666	150

1603687221	1603687003	2707510051	160370313169	160230108348	150
1603687221	1603687003	2707510051	160370313169	160230108348	150
8196359329	8196359826	8641610415	819206224180	819945999856	150
8196359329	8196359826	8641610415	819206224180	819945999856	150
4441106678	4441106514	7388410746	444622597066	444709472438	150
4441106678	4441106514	7388410746	444622597066	444709472438	150
5367300733	5367300326	5690610924	536500698535	536767118993	150
5367300733	5367300326	5690610924	536500698535	536767118993	150
6185937891	6185937346	4755510514	618275744374	618541923221	150
6185937891	6185937346	4755510514	618275744374	618541923221	150
8949064820	8949064952	101510894	894874455738	894858867433	150
8949064820	8949064952	101510894	894874455738	894858867433	150
4418803878	4418803335	6987410816	441187677442	441640996708	150
4418803878	4418803335	6987410816	441187677442	441640996708	150
9118561750	9118561460	1079410605	911552427548	911243640905	150
9118561750	9118561460	1079410605	911552427548	911243640905	150
3722197821	3722197912	7793510872	372043621674	372321134384	150
3722197821	3722197912	7793510872	372043621674	372321134384	150
4963471027	4963471503	3968510664	496589969480	496588588959	150
4963471027	4963471503	3968510664	496589969480	496588588959	150
9840352274	9840352264	4269410528	984232752499	984392732984	150
9840352274	9840352264	4269410528	984232752499	984392732984	150
8766672033	8766672889	2917410122	876227674451	876388960797	150
8766672033	8766672889	2917410122	876227674451	876388960797	150
1901623417	1901623297	118410031	190110010123	190039301579	150
1901623417	1901623297	118410031	190110010123	190039301579	150
8202610651	8202610593	9585510828	820881964867	820251220407	150
8202610651	8202610593	9585510828	820881964867	820251220407	150
7917478128	7917478616	6458410461	791681479933	791854849255	150
7917478128	7917478616	6458410461	791681479933	791854849255	150
6008812553	6008812506	279410624	600757893999	600943311252	150
6008812553	6008812506	279410624	600757893999	600943311252	150
2460509995	2460509910	6459410451	246028737910	246215722395	150
2460509995	2460509910	6459410451	246028737910	246215722395	150
9603325805	9603325824	3027410133	960603103403	960409974936	150
9603325805	9603325824	3027410133	960603103403	960409974936	150
1186893314	1186893052	689510828	118525608887	118768518725	150
1186893314	1186893052	689510828	118525608887	118768518725	150
2457509925	2457509953	4823510179	245038892082	245527133950	150
2457509925	2457509953	4823510179	245038892082	245527133950	150
3685505684	3685505034	6596410886	368569597626	368312473219	150
3685505684	3685505034	6596410886	368569597626	368312473219	150
6226399798	6226399361	5327510213	622401084292	622425956812	150
6226399798	6226399361	5327510213	622401084292	622425956812	150
901019797	901019132	6418510121	90740246427	90508186147	150
901019797	901019132	6418510121	90740246427	90508186147	150
9611084567	9611084514	57510481	961184221187	961684594838	150

9611084567	9611084514	57510481	961184221187	961684594838	150
5207689817	5207689657	1891510861	520934672062	520355647328	150
5207689817	5207689657	1891510861	520934672062	520355647328	150
6983702586	6983702157	9577410680	698534908322	698191223883	150
6983702586	6983702157	9577410680	698534908322	698191223883	150
2625040240	2625040636	9291610874	262584703293	262781833522	150
2625040240	2625040636	9291610874	262584703293	262781833522	150
3210018226	3210018669	1047410327	321081758648	321753255632	150
3210018226	3210018669	1047410327	321081758648	321753255632	150
7291910850	7291910546	8060510500	729644532204	729148590738	150
7291910850	7291910546	8060510500	729644532204	729148590738	150
6616012373	6616012693	4496410874	661204209863	661122036868	150
6616012373	6616012693	4496410874	661204209863	661122036868	150
5036505800	5036505923	969910000	503729196095	503894716388	150
5036505800	5036505923	969910000	503729196095	503894716388	150
8091915664	8091915103	5079510673	809413503576	809435999998	150
8091915664	8091915103	5079510673	809413503576	809435999998	150
6978940638	6978940671	6033510201	697216425658	697070248827	150
6978940638	6978940671	6033510201	697216425658	697070248827	150
8796876228	8796876313	5345500277	879047274586	879449320848	150
8796876228	8796876313	5345500277	879047274586	879449320848	150
1909468571	1909468396	382510716	190851451640	190770520730	150
1909468571	1909468396	382510716	190851451640	190770520730	150
8968944292	8968944617	9226410156	896234199397	896017543273	150
8968944292	8968944617	9226410156	896234199397	896017543273	150
356993757	356993049	9985500751	35134416239	35645121516	150
356993757	356993049	9985500751	35134416239	35645121516	150
4582030350	4582030136	5517410087	458838136376	458832954253	150
4582030350	4582030136	5517410087	458838136376	458832954253	150
1200030930	1200030183	632510246	120654624271	120750020900	150
1200030930	1200030183	632510246	120654624271	120750020900	150
6876907924	6876907809	8054510417	687443958267	687312509699	150
6876907924	6876907809	8054510417	687443958267	687312509699	150
7665195965	7665195935	4629510237	766746171249	766411747386	150
7665195965	7665195935	4629510237	766746171249	766411747386	150
9582150864	9582150060	5875510748	958878284405	958310613421	150
9582150864	9582150060	5875510748	958878284405	958310613421	150
2374306628	2374306914	8529410164	237129507100	237531801707	150
2374306628	2374306914	8529410164	237129507100	237531801707	150
5169826463	5169826564	3478410653	516291487824	516537360469	150
5169826463	5169826564	3478410653	516291487824	516537360469	150
3467489268	3467489579	7468410558	346597928777	346324154352	150
3467489268	3467489579	7468410558	346597928777	346324154352	150
8590532982	8590532259	1236500180	859852825738	859128458684	150
8590532982	8590532259	1236500180	859852825738	859128458684	150
6507173292	6507173460	3085500645	650876454582	650925866375	150
6507173292	6507173460	3085500645	650876454582	650925866375	150

2426510000	2426510950	2426510215	242279221093	242406411636	150
2426510000	2426510950	2426510215	242279221093	242406411636	150
4428020784	4428020661	535500193	442861780317	442751794260	150
4428020784	4428020661	535500193	442861780317	442751794260	150
355323211	355323753	1167410534	35013194635	35070047696	150
355323211	355323753	1167410534	35013194635	35070047696	150
2128961053	2128961227	3871610728	212656100561	212672992964	150
2128961053	2128961227	3871610728	212656100561	212672992964	150
5167571961	5167571498	7233500201	516588671029	516739494627	150
5167571961	5167571498	7233500201	516588671029	516739494627	150
1095580099	1095580661	8463510540	109272651813	109838956748	150
1095580099	1095580661	8463510540	109272651813	109838956748	150
9645848981	9645848605	228410138	964960089449	964320660892	150
9645848981	9645848605	228410138	964960089449	964320660892	150
1789430255	1789430448	3177510691	178342339436	178059029122	150
1789430255	1789430448	3177510691	178342339436	178059029122	150
4326939997	4326939160	9727410212	432820278819	432047076527	150
4326939997	4326939160	9727410212	432820278819	432047076527	150
7340969389	7340969727	5557410478	734089343535	734537197469	150
7340969389	7340969727	5557410478	734089343535	734537197469	150
2686043366	2686043725	3549410358	268034745889	268572782489	150
2686043366	2686043725	3549410358	268034745889	268572782489	150
3474317658	3474317646	3883510777	347756042953	347960744761	150
3474317658	3474317646	3883510777	347756042953	347960744761	150
8406305483	8406305636	1445500283	840784545874	840873446873	150
8406305483	8406305636	1445500283	840784545874	840873446873	150
7105958982	7105958335	8390610898	710083117134	710290174143	150
7105958982	7105958335	8390610898	710083117134	710290174143	150
9721546662	9721546037	1727510249	972841415057	972853453182	150
8824686291	8824686433	3982510778	882647334633	882892558838	150
8824686291	8824686433	3982510778	882647334633	882892558838	150
606653839	606653173	8817410118	60994455742	60571814797	150
606653839	606653173	8817410118	60994455742	60571814797	150
8109486712	8109486267	2667410586	810656250944	810667057712	150
8109486712	8109486267	2667410586	810656250944	810667057712	150
138390290	138390532	5738510348	13272507460	13981726422	150
138390290	138390532	5738510348	13272507460	13981726422	150
4343188805	4343188929	5116410043	434597490520	434918345541	150
4343188805	4343188929	5116410043	434597490520	434918345541	150
5287368712	5287368864	9787410799	528504484774	528063314502	150
5287368712	5287368864	9787410799	528504484774	528063314502	150
1254606897	1254606080	539510322	125425029621	125330222934	150
1254606897	1254606080	539510322	125425029621	125330222934	150
837285563	837285882	2955510534	83258872802	83240626765	150
837285563	837285882	2955510534	83258872802	83240626765	150
7718542976	7718542412	3379410637	771475808533	771697954237	150
7718542976	7718542412	3379410637	771475808533	771697954237	150

596912131	596912579	6528410173	59980283680	59180641087	150
596912131	596912579	6528410173	59980283680	59180641087	150
5717666997	5717666700	110610076	571542175959	571434431483	150
5717666997	5717666700	110610076	571542175959	571434431483	150
3672202556	3672202457	8659510538	367369126614	367848126348	150
3672202556	3672202457	8659510538	367369126614	367848126348	150
6783025132	6783025098	6287510804	678415733478	678191086478	150
6783025132	6783025098	6287510804	678415733478	678191086478	150
5772727149	5772727140	8926500157	577022770261	577283657037	150
5772727149	5772727140	8926500157	577022770261	577283657037	150
7268303348	7268303425	9028410127	726841224129	726873808770	150
7268303348	7268303425	9028410127	726841224129	726873808770	150
3790077792	3790077840	4101610973	379886378014	379477163372	150
3790077792	3790077840	4101610973	379886378014	379477163372	150
2145656424	2145656155	7598410866	214172194481	214313350464	150
2145656424	2145656155	7598410866	214172194481	214313350464	150
6039218534	6039218356	6537410286	603035721947	603265540438	150
6039218534	6039218356	6537410286	603035721947	603265540438	150
9436018020	9436018276	2385810848	943820799642	943499986878	150
9436018020	9436018276	2385810848	943820799642	943499986878	150
2387998316	2387998262	4070610663	238530119654	238106394699	150
2387998316	2387998262	4070610663	238530119654	238106394699	150
9710889237	9710889418	7846500346	971424796925	971325233669	150
9710889237	9710889418	7846500346	971424796925	971325233669	150
8944767079	8944767866	7135510241	894154872686	894255861920	150
8944767079	8944767866	7135510241	894154872686	894255861920	150
2591276184	2591276526	9708410000	259053243267	259147572722	150
2591276184	2591276526	9708410000	259053243267	259147572722	150
4970993333	4970993568	3327410164	497836799895	497594033632	150
4970993333	4970993568	3327410164	497836799895	497594033632	150
6687155968	6685048980	5064510516	668270908550	668372589780	150
6687155968	6685048980	5064510516	668270908550	668372589780	150
3413144161	3413144342	8894510900	341889624388	341959240999	150
3413144161	3413144342	8894510900	341889624388	341959240999	150
8993308382	8993308540	3081510683	899349701549	899096027221	150
8993308382	8993308540	3081510683	899349701549	899096027221	150
2321132758	2321132392	9157410442	232976256824	232362999893	150
2321132758	2321132392	9157410442	232976256824	232362999893	150
7296150747	7296150688	3446410371	729503271888	729989513942	150
5464338145	5464338080	5187410736	546975289337	546592862240	150
5464338145	5464338080	5187410736	546975289337	546592862240	150
8398221665	8398221558	5218410047	839195064193	839352932785	150
8398221665	8398221558	5218410047	839195064193	839352932785	150
1936104503	1936104243	6923510191	193161021348	193154099272	150
1936104503	1936104243	6923510191	193161021348	193154099272	150
5991539734	5996296005	3369410537	599492366174	599979073039	150
5991539734	5996296005	3369410537	599492366174	599979073039	150

4487031267	4487031394	7909510069	448980563293	448233678261	150
4487031267	4487031394	7909510069	448980563293	448233678261	150
7801893180	7806129065	5927410228	780755734720	780031224114	150
7801893180	7806129065	5927410228	780755734720	780031224114	150
7194122753	7190444825	950510481	719714448082	719352588133	150
7194122753	7190444825	950510481	719714448082	719352588133	150
4291664035	4294741238	4679910000	429579118675	429817751660	150
4291664035	4294741238	4679910000	429579118675	429817751660	150
6472119247	6477423177	4779410677	647715877810	647435903192	150
6472119247	6477423177	4779410677	647715877810	647435903192	150
5780215438	5784810203	1259910000	578807126112	578565554666	150
5780215438	5784810203	1259910000	578807126112	578565554666	150
9204127469	9202229352	9439410254	920222423413	920927070446	150
2341462163	2343398965	1460510533	234233891062	234881154022	150
2341462163	2343398965	1460510533	234233891062	234881154022	150
1199423839	1196989894	7856500446	119511868719	119851769600	150
1199423839	1196989894	7856500446	119511868719	119851769600	150
6762950280	6762914393	5047510387	676604309913	676158662499	150
2022945130	2026559726	3783510767	202283457285	202192744113	150
2022945130	2026559726	3783510767	202283457285	202192744113	150
3364515638	3363812684	5815500030	336021658592	336872542109	150
3364515638	3363812684	5815500030	336021658592	336872542109	150
6945374978	6942709779	4229910000	694688992788	694723435872	150
6945374978	6942709779	4229910000	694688992788	694723435872	150
3778973022	3777840825	6690510851	377876201541	377755298980	150
3778973022	3777840825	6690510851	377876201541	377755298980	150
3860500316	3863599613	6505510970	386000980341	386647268544	150
3860500316	3863599613	6505510970	386000980341	386647268544	150
3266756797	3264279360	1718410091	326665456913	326473212327	150
3266756797	3264279360	1718410091	326665456913	326473212327	150
6474285568	6474027676	3611610119	647535283495	647270821337	150
6474285568	6474027676	3611610119	647535283495	647270821337	150
7676080961	7677413565	9890510874	767525022829	767143008900	150
7676080961	7677413565	9890510874	767525022829	767143008900	150
700686599	701572005	8828410206	70124331695	70940558236	150
700686599	701572005	8828410206	70124331695	70940558236	150
2521102638	2520437504	4967510672	252720623572	252571603155	150
2521102638	2520437504	4967510672	252720623572	252571603155	150
4937572902	4932163028	6036410234	493171075323	493547223659	150
4937572902	4932163028	6036410234	493171075323	493547223659	150
6512200606	6513710588	7701542012	651581295062	651322237632	150
6512200606	6513710588	7701542012	651581295062	651322237632	150
8497631597	8492433863	5155510451	849630726631	849528920869	150
8497631597	8492433863	5155510451	849630726631	849528920869	150
4458134393	4455140495	818510155	445459668466	445113341801	150
4458134393	4455140495	818510155	445459668466	445113341801	150
9383699130	9383823510	1738510343	938463058532	938331611765	150

9383699130	9383823510	1738510343	938463058532	938331611765	150
7499211063	7497071492	279510688	749322583453	749022734464	150
7499211063	7497071492	279510688	749322583453	749022734464	150
305330259	300325459	830510272	30086835112	30822696020	150
305330259	300325459	830510272	30086835112	30822696020	150
9590958071	9594063967	953510483	959130478382	959801698083	150
9590958071	9594063967	953510483	959130478382	959801698083	150
6359495754	6352474866	2157510493	635961382548	635479566459	150
6359495754	6352474866	2157510493	635961382548	635479566459	150
6440637861	6447746637	3116510084	644974675496	644497451236	150
6440637861	6447746637	3116510084	644974675496	644497451236	150
1714856381	1710208477	907799912	171203918404	171392743779	150
1714856381	1710208477	907799912	171203918404	171392743779	150
7172518877	7171272659	8247410353	717638762545	717013481053	150
7172518877	7171272659	8247410353	717638762545	717013481053	150
1174123650	1173118790	8967410620	117694320328	117413236371	150
1174123650	1173118790	8967410620	117694320328	117413236371	150
1806503225	1806402325	6452510432	180431790083	180615796537	150
1806503225	1806402325	6452510432	180431790083	180615796537	150
2924599853	2922951500	6547510438	292709122970	292687250025	150
5303147999	5302713223	1559410456	530108799215	530047817551	150
5303147999	5302713223	1559410456	530108799215	530047817551	150
1041939392	1046931586	3454510454	104726802407	104258843551	150
1041939392	1046931586	3454510454	104726802407	104258843551	150
9546809030	9546968992	3096510881	954693459713	954012042914	150
9269645987	9264481459	6706410003	926450256847	926384647185	150
9269645987	9264481459	6706410003	926450256847	926384647185	150
2259324010	2254982594	588410759	225945524413	225471736220	150
2259324010	2254982594	588410759	225945524413	225471736220	150
8879163277	8870423977	8319410046	887974402863	887936853676	150
8879163277	8870423977	8319410046	887974402863	887936853676	150
5761959754	5765510095	3722510157	576674899260	576415322489	150
5761959754	5765510095	3722510157	576674899260	576415322489	150
9577747001	9572531877	1018410022	957396428276	957893138033	150
9577747001	9572531877	1018410022	957396428276	957893138033	150
2400583150	2406256221	5208410946	240178974198	240994924136	150
2400583150	2406256221	5208410946	240178974198	240994924136	150
1230116283	1237432406	6349410341	123655622439	123615729713	150
1230116283	1237432406	6349410341	123655622439	123615729713	150
4741918270	4744884312	2161610558	474008731050	474562862984	150
4741918270	4744884312	2161610558	474008731050	474562862984	150
9373601049	9377942068	708510046	937064259771	937776373217	150
9373601049	9377942068	708510046	937064259771	937776373217	150
9235761502	9232993791	8460610607	923327014908	923917914142	150
9235761502	9232993791	8460610607	923327014908	923917914142	150
7610778484	7614476852	5548510428	761119151886	761231206796	150
7610778484	7614476852	5548510428	761119151886	761231206796	150

5393912911	5391110491	6921510182	539485190247	539079691751	150
5393912911	5391110491	6921510182	539485190247	539079691751	150
103871756	102193946	6261610572	10954367575	10830144526	150
103871756	102193946	6261610572	10954367575	10830144526	150
7990181748	7997676569	2195500766	799005113089	799627120507	150
7990181748	7997676569	2195500766	799005113089	799627120507	150
583837331	580307370	688410769	58319708456	58144985549	150
583837331	580307370	688410769	58319708456	58144985549	150
4125373326	4120253203	6151610463	412888293491	412462727791	150
4125373326	4120253203	6151610463	412888293491	412462727791	150
294521852	297143327	9808410010	29303480732	29051531125	150
294521852	297143327	9808410010	29303480732	29051531125	150
9117778969	9116819974	9673510662	911473782784	911291383434	150
15385825	19295912	9499410847	1587633908	1303213652	150
15385825	19295912	9499410847	1587633908	1303213652	150
1231512001	1231322675	5398410845	123951795150	123481663833	150
1231512001	1231322675	5398410845	123951795150	123481663833	150
4978412630	4970545096	2318410054	497421034099	497501496835	150
4978412630	4970545096	2318410054	497421034099	497501496835	150
7200135379	7209040461	6881610831	720370981251	720581161472	150
7200135379	7209040461	6881610831	720370981251	720581161472	150
6664629828	6666555508	3614510065	666517734003	666617466544	150
6664629828	6666555508	3614510065	666517734003	666617466544	150
5543945510	5542312730	9099410808	554877236659	554569627324	150
5543945510	5542312730	9099410808	554877236659	554569627324	150
974557495	974182029	4491610889	97300726382	97659036083	150
974557495	974182029	4491610889	97300726382	97659036083	150
6197688433	6193169346	4780610834	619884525449	619869624516	150
6197688433	6193169346	4780610834	619884525449	619869624516	150
682399390	681911228	2129711369	68384411047	68583636658	150
8081433241	8085802987	9079410613	808491675699	808614162743	150
8081433241	8085802987	9079410613	808491675699	808614162743	150
1791379202	1797918207	5791510855	179583354727	179015782280	150
1791379202	1797918207	5791510855	179583354727	179015782280	150
3774184177	3771326684	842510366	377219383980	377637366454	150
3774184177	3771326684	842510366	377219383980	377637366454	150
7394426752	7392029730	615510078	739163076193	739569490441	150
7394426752	7392029730	615510078	739163076193	739569490441	150
7935447961	7931307746	2449410347	793740438425	793381544402	150
7935447961	7931307746	2449410347	793740438425	793381544402	150
6731097422	6732178275	3657510544	673994169340	673138451212	150
6731097422	6732178275	3657510544	673994169340	673138451212	150
5727130808	5722523692	8455510486	572173328721	572718256345	150
5727130808	5722523692	8455510486	572173328721	572718256345	150
6889423431	6880409656	5167891929	688527787910	688771249893	150
6889423431	6880409656	5167891929	688527787910	688771249893	150
8329667234	8328511550	4737510357	832034686925	832935569734	150

8329667234	8328511550	4737510357	832034686925	832935569734	150
8879410000	8879410052	8879410691	887667698969	887779076068	150
8879410000	8879410051	8879410691	887042433010	887779076068	150
8879410000	8879410051	8879410691	887042433010	887779076068	150
9727510000	9727510957	9727510257	972714092173	972384242735	150
9727510000	9727510956	9727510257	972992308953	972384242735	150
9727510000	9727510956	9727510257	972992308953	972384242735	150
175310000	175310941	175310604	17332412890	17983222460	150
7414900000	7414900037	7414900075	741566567180	741355100916	150
7414900000	7414900037	7414900075	741566567180	741355100916	150
9764478372	9764478525	4825110268	976326146619	976674909286	150
9764478372	9764478525	4825110268	976326146619	976674909286	150
175310000	175310942	175310604	17677390458	17983222460	150
7414900000	7414900038	7414900075	741987798204	741355100916	150
9764478372	9764478393	4825110268	976394969207	976674909286	150
4104900000	4104900863	4104900944	410613995735	410646266624	150
4104900000	4104900863	4104900944	410613995735	410646266624	150
4104900000	4104900864	4104900944	410333508249	410646266624	150
4996310000	4996310143	4996310860	499207364814	499030362451	150
4996310000	4996310143	4996310860	499207364814	499030362451	150
5993900000	5993900831	5993900925	599952203095	599913291031	150
5993900000	5993900831	5993900925	599952203095	599913291031	150
4996310000	4996310144	4996310860	499816815364	499030362451	150
5993900000	5993900832	5993900925	599975763069	599913291031	150
6853935263	6853935037	4986059804	685369413603	685898674263	150
7847401518	7847401171	6409857011	784892471270	784868810223	150
5447935942	5447935844	9417310009	544877365563	544807824801	150
5447935942	5447935844	9417310009	544877365563	544807824801	150
7847401518	7847401474	6409857011	784929129806	784868810223	150
6853935263	6853935012	4986059804	685208985936	685898674263	150
5447935942	5447935802	9417310009	544239585212	544807824801	150
5310000	5310799	5310858	461912700	480306752	150
36500000	36500783	36500159	3635251490	3821502660	150
3500000	3500851	3500879	992160930	441108666	150
64500000	64500151	64500438	6922232755	6071234305	150
71500000	71500569	71500591	7485641352	7711378921	150
93500000	93500172	93500762	9170859106	9504255159	150
84600000	84600285	84600663	8834068617	8123563353	150
72500000	72500628	72500581	7057500862	7652180170	150
91500000	91500925	91500784	9195432542	9978786130	150
94500000	94500097	94500729	9467830392	9169454689	150
85400000	85400373	85400709	8725337982	8489161895	150
213400000	213400054	213400039	21045139459	21722235994	150
204400000	204400562	204400924	20913327271	20028044305	150
229400000	229400465	229400136	22698493562	22831501160	150
237400000	237400228	237400264	23350291772	23755601594	150
227400000	227400082	227400166	22111922230	22957237918	150

183500000	183500872	183500674	18515314977	18971467105	150
184400000	184400210	184400707	18361975672	18839261786	150
200500000	200500441	200500929	20741744725	20117103549	150
233500000	233500275	233500194	23520754561	23326608253	150
173400000	173400391	173400620	17653279605	17030401928	150
129400000	129400452	129400126	12532844782	12385924413	150
130500000	130500797	130500215	13479731010	13589553284	150
123610000	123610978	123610141	12986906356	12746770979	150
134400000	134400927	134400212	13969487498	13684310112	150
135400000	135400767	135400215	13887393761	13260259413	150
137610000	137610566	137610193	13660554119	13576127208	150
150500000	150500003	150500411	15760653833	15069531595	150
342500000	342500608	342500312	34923200936	34168535442	150
343400000	343400751	343400343	34991202957	34910028501	150
358610000	358610467	358610399	35938836800	35117556765	150
360500000	360500152	360500531	36024250214	36607031588	150
331500000	331500098	331500225	33743756906	33602845644	150
355500000	355500653	355500373	35265775519	35196620031	150
310610000	310610447	310610096	31769899253	31501354070	150
362400000	362400123	362400551	36685706572	36943055351	150
365400000	365400200	365400539	36306867901	36984121505	150
362500000	362500675	362500511	36447017355	36583232219	150
363500000	363500456	363500499	36991045361	36906386326	150
274500000	274500364	274500551	27845495396	27724412743	150
283500000	283500890	283500684	28727690743	28084292377	150
254500000	254500825	254500358	25710129525	25475396559	150
442500000	442500627	442500322	44317738952	44902022251	150
435400000	435400825	435400247	43337728307	43574124278	150
466400000	466400569	466400562	46412654683	46922088197	150
467400000	467400489	467400581	46157054588	46919169461	150
484500000	484500997	484500670	48594951967	48787065044	150
447400000	447400279	447400381	44338177672	44859371651	150
418400000	418400079	418400073	41517937650	41296024009	150
375400000	375400357	375400639	37678900778	37897365771	150
424400000	424400818	424400143	42351015917	42464669193	150
408410000	408410878	408410961	40043954169	40565111273	150
383500000	383500907	383500694	38264086301	38074770566	150
402500000	402500112	402500922	40614877031	40859225290	150
385400000	385400421	385400739	38675650195	38035198261	150
594810000	594810967	594810031	59351483789	59963678295	150
611500000	611500878	611500056	61003793123	61013186506	150
597400000	597400780	597400886	59045297858	59463385800	150
616400000	616400869	616400066	61963586989	61122398302	150
592400000	592400312	592400870	59792474716	59316459539	150
534400000	534400868	534400252	53801404661	53618607719	150
551500000	551500425	551500441	55511641193	55544960890	150
505500000	505500565	505500879	50896090656	50761973810	150

709400000	709400293	709400988	70762331575	70284645502	150
721500000	721500999	721500164	72357059285	72656702627	150
684500000	684500034	684500689	68921004406	68277097101	150
681500000	681500752	681500749	68602342630	68384068001	150
624400000	624400849	624400162	62793299420	62618999470	150
653400000	653400887	653400472	65507396939	65017876330	150
619400000	619400370	619400078	61446305263	61659329335	150
670500000	670500320	670500660	67605458836	67371396880	150
652500000	652500550	652500441	65459123662	65733328371	150
630500000	630500764	630500263	63981279052	63810007259	150
827400000	827400170	827400224	82984410091	82024808532	150
844500000	844500756	844500320	84863559429	84572597472	150
860500000	860500242	860500580	86995131680	86035104727	150
822500000	822500466	822500161	82268198584	82657336477	150
824500000	824500489	824500126	82595267196	82613559154	150
764400000	764400971	764400568	76110962659	76355565673	150
800500000	800500552	800500988	80130859418	80727456290	150
801500000	801500745	801500976	80299069233	80142976311	150
770500000	770500339	770500670	77857960684	77393381810	150
794500000	794500444	794500798	79540349974	79144091146	150
768400000	768400770	768400593	76833864698	76304887672	150
756700000	756700949	756700472	75913625450	75141650561	150
754500000	754500908	754500408	75134176028	75935644638	150
943500000	943500780	943500360	94202865392	94915865964	150
969400000	969400147	969400600	96833486303	96052740694	150
985400000	985400517	985400797	98586410533	98172585759	150
935400000	935400852	935400298	93949166033	93427160459	150
945400000	945400029	945400400	94293833465	94694237900	150
979400000	979400310	979400698	97344722405	97677150896	150
936400000	936400184	936400296	93183574870	93028160357	150
912500000	912500287	912500070	91160661303	91103814062	150
905400000	905400425	905400984	90836446992	90174971416	150
922400000	922400066	922400217	92442751207	92194823950	150
907400000	907400121	907400038	90683855281	90740638039	150
924400000	924400897	924400192	92959409544	92645776068	150
925500000	925500942	925500135	92780634536	92607138108	150
868400000	868400792	868400603	86363792158	86651960693	150
897410000	897410778	897410900	89533183324	89709084331	150
930500000	930500808	930500292	93524534298	93896161777	150
887700000	887700654	887700777	88511910741	88899084527	150
1102500000	1102500056	1102500893	110683437414	110963534178	150
1094500000	1094500099	1094500730	109992184318	109954034717	150
1096400000	1096400930	1096400837	109942234781	109647058144	150
1073400000	1073400378	1073400611	107033078661	107013902358	150
1057400000	1057400378	1057400442	105929369564	105057035154	150
1004500000	1004500362	1004500862	100150958302	100153103874	150
1008400000	1008400863	1008400935	100802721272	100475368436	150

1052400000	1052400298	1052400422	105384014176	105717034709	150
1020500000	1020500629	1020500108	102437233744	102122228148	150
1193400000	1193400218	1193400819	119214346969	119773870792	150
1193500000	1193500191	1193500774	119212698436	119085831349	150
1205500000	1205500522	1205500850	120208296519	120732575285	150
1235610000	1235610753	1235610233	123336363720	123904696675	150
1236400000	1236400070	1236400225	123149918310	123961448258	150
1214500000	1214500013	1214500975	121312563188	121568176096	150
1215500000	1215500666	1215500956	121125203478	121559258913	150
1192400000	1192400240	1192400831	119859217210	119793315627	150
1184310000	1184310412	1184310670	118283170987	118869254662	150
1184500000	1184500947	1184500643	118692446056	118107403271	150
1124400000	1124400776	1124400114	112628857346	112714781495	150
1141500000	1141500152	1141500304	114716728542	114040022450	150
1165700000	1165700776	1165700524	116049874555	116583148296	150
1132400000	1132400102	1132400238	113631640778	113909898408	150
1333500000	1333500291	1333500205	133479794381	133106627598	150
1352500000	1352500492	1352500413	135676202372	135025024412	150
1349400000	1349400859	1349400345	134443173769	134448174881	150
1328400000	1328400189	1328400164	132468482047	132401695487	150
1365700000	1365700816	1365700544	136892954308	136334076411	150
1310500000	1310500638	1310500039	131397252639	131790930894	150
1354400000	1354400748	1354400430	135895864547	135433048240	150
1324500000	1324500214	1324500078	132905790428	132601474314	150
1287400000	1287400658	1287400759	128996666504	128304223105	150
1303500000	1303500902	1303500909	130111956934	130012525574	150
1264500000	1264500192	1264500459	126902416275	126265383895	150
1265700000	1265700796	1265700534	126058495544	126615874287	150
1281500000	1281500680	1281500710	128372762194	128384677796	150
1284500000	1284500963	1284500652	128489582299	128977267406	150
1255500000	1255500639	1255500364	125639619810	125991565846	150
1273400000	1273400409	1273400631	127658167911	127267733763	150
1258400000	1258400597	1258400448	125453122601	125781030158	150
1477400000	1477400521	1477400681	147796480162	147857642933	150
1483500000	1483500929	1483500705	148900946364	148210822124	150
1442410000	1442410075	1442410360	144266872768	144056726461	150
1594500000	1594500414	1594500779	159254117038	159304764502	150
1590500000	1590500618	1590500847	159046729419	159528589821	150
1512400000	1512400006	1512400079	151107764933	151012871129	150
1515500000	1515500709	1515500991	151569466381	151934572184	150
1552500000	1552500533	1552500432	155514694454	155889649995	150
1526500000	1526500708	1526500110	152284251621	152133321941	150
1553400000	1553400872	1553400463	155335903084	155906808660	150
1494800000	1494800765	1494800886	149959435896	149950811771	150
1521500000	1521500963	1521500146	152098009737	152312331855	150
1708700000	1708700939	1708700965	170964806911	170590994104	150
1724500000	1724500471	1724500117	172868607669	172194989066	150

1702400000	1702400871	1702400000	170283887834	170496124371	150
1697410000	1697410752	1697410881	169903182873	169466886772	150
1722400000	1722400035	1722400198	172592145701	172788687769	150
1734400000	1734400905	1734400273	173890564460	173635584075	150
1693500000	1693500285	1693500823	169745891703	169471861812	150
1675400000	1675400312	1675400670	167433975282	167048005608	150
1657410000	1657410403	1657410484	165847382095	165937001756	150
1665400000	1665400247	1665400570	166303794563	166009904182	150
1620500000	1620500723	1620500167	162496258307	162450592688	150
1633500000	1633500560	1633500234	163568321365	163365938194	150
1649400000	1649400844	1649400375	164938833687	164279586261	150
1626500000	1626500723	1626500120	162949903847	162074876539	150
1824400000	1824400883	1824400183	182378008293	182641076356	150
1809400000	1809400310	1809400999	180923137093	180784090874	150
1842500000	1842500401	1842500363	184864527307	184577928843	150
1815400000	1815400581	1815400082	181954654190	181735996344	150
1808410000	1808410835	1808410002	180656357441	180835257465	150
1745400000	1745400997	1745400381	174248067780	174071335249	150
1777400000	1777400574	1777400710	177610213882	177927444013	150
1795400000	1795400614	1795400878	179768855172	179028151451	150
1774400000	1774400149	1774400668	177543174595	177173058955	150
1758400000	1758400557	1758400496	175764514434	175358827050	150
1934500000	1934500688	1934500234	193229715444	193389259052	150
1965400000	1965400297	1965400600	196375721700	196938097114	150
1947400000	1947400363	1947400432	194679663098	194949841294	150
1974400000	1974400180	1974400688	197327923935	197646524150	150
1988400000	1988400077	1988400812	198942197534	198704514080	150
1914400000	1914400745	1914400095	191077531956	191505610611	150
1927400000	1927400184	1927400235	192189393482	192797151811	150
1887400000	1887400660	1887400818	188800261727	188648391799	150
1888400000	1888400060	1888400802	188532634396	188718703399	150
1895400000	1895400631	1895400888	189473284848	189572252935	150
1880500000	1880500493	1880500779	188436187471	188070834728	150
1878400000	1878400877	1878400703	187138313473	187346779795	150
1874400000	1874400165	1874400678	187191437906	187206750087	150
1910500000	1910500613	1910500098	191791865328	191408834200	150
1913700000	1913700347	1913700138	191567331529	191497121354	150
1869400000	1869400131	1869400591	186759893019	186014776667	150
1900500000	1900500568	1900500999	190372079551	190169371217	150
2093600000	2093600876	2093600770	209657950769	209797284597	150
2057410000	2057410462	2057410425	205673782913	205707197383	150
2072400000	2072400253	2072400623	207475714240	207237219677	150
2056400000	2056400404	2056400414	205713357411	205976261810	150
2105310000	2105310822	2105310870	210563990753	210462926162	150
2113500000	2113500039	2113500989	211015904894	211741881188	150
2051500000	2051500325	2051500393	205644944831	205235577958	150
2084310000	2084310394	2084310661	208845759206	208034774479	150

2054500000	2054500794	2054500341	205035396275	205930949613	150
2042500000	2042500553	2042500284	204763541581	204690699284	150
2013400000	2013400023	2013400021	201243145949	201543340517	150
2023400000	2023400183	2023400120	202573965793	202876140611	150
1990500000	1990500693	1990500887	199716819696	199521716517	150
2015400000	2015400446	2015400996	201446489963	201222930337	150
2015500000	2015500647	2015500934	201228841732	201647923138	150
2032400000	2032400088	2032400229	203860167543	203858933340	150
2004500000	2004500364	2004500863	200197605161	200141828870	150
2187410000	2187410669	2187410733	218398078712	218911029674	150
2223700000	2223700404	2223700167	222440256399	222902409888	150
2228400000	2228400173	2228400155	222320459127	222191073275	150
2230500000	2230500816	2230500227	223534865163	223012112999	150
2224400000	2224400793	2224400125	222116138483	222456726564	150
2222400000	2222400948	2222400149	222790470606	222627398755	150
2235400000	2235400789	2235400227	223981536531	223403513135	150
2171600000	2171600218	2171600595	217261750639	217162663605	150
2172400000	2172400270	2172400634	217523225583	217832499120	150
2125400000	2125400593	2125400113	212718043199	212397097398	150
2352210000	2352210533	2352210503	235501494569	235009824735	150
2323610000	2323610017	2323610162	232880731406	232031081887	150
2334500000	2334500583	2334500176	233855807059	233277698041	150
2284310000	2284310383	2284310681	228441978781	228550978361	150
2297400000	2297400730	2297400858	229818863498	229198963063	150
2293500000	2293500211	2293500785	229104790321	229956697102	150
2294400000	2294400250	2294400818	229259706698	229242708685	150
2257400000	2257400298	2257400463	225593947965	225477302613	150
2454500000	2454500865	2454500380	245818314883	245373382028	150
2463400000	2463400285	2463400552	246038029284	246083173602	150
2464500000	2464500230	2464500480	246921748488	246787095313	150
2434500000	2434500603	2434500185	243606250239	243292605101	150
2443400000	2443400689	2443400355	244804641686	244607016547	150
2459400000	2459400976	2459400454	245984960090	245590241588	150
2413500000	2413500089	2413500019	241027815148	241044082784	150
2404400000	2404400600	2404400946	240463810164	240127916102	150
2394500000	2394500152	2394500760	239987318302	239813923122	150
2411500000	2411500850	2411500038	241348535858	241867755009	150
2424500000	2424500410	2424500089	242562385170	242630884198	150
2388400000	2388400973	2388400754	238918183894	238965098002	150
2367400000	2367400476	2367400573	236584156648	236595982678	150
2367410000	2367410521	2367410556	236971656295	236239255828	150
2374400000	2374400090	2374400629	237082948496	237078135821	150
2571500000	2571500670	2571500643	257567022054	257891024378	150
2583400000	2583400121	2583400762	258657322148	258989848130	150
2583600000	2583600771	2583600720	258887840404	258929380164	150
2606400000	2606400764	2606400968	260530503087	260866403923	150
2563500000	2563500496	2563500519	256942557166	256241253741	150

2534500000	2534500620	2534500195	253412589636	253884684424	150
2525400000	2525400660	2525400155	252190493757	252938395658	150
2505400000	2505400361	2505400947	250838004377	250780621586	150
2535400000	2535400846	2535400259	253061224192	253029451004	150
2699400000	2699400497	2699400871	269701989616	269716470226	150
2693400000	2693400298	2693400869	269998002010	269367820695	150
2677700000	2677700117	2677700661	267573102679	267748380874	150
2729400000	2729400545	2729400188	272411686170	272921074112	150
2713700000	2713700329	2713700119	271059039168	271929948035	150
2637400000	2637400161	2637400306	263476548785	263634786703	150
2650500000	2650500001	2650500464	265524330077	265041024160	150
2625500000	2625500891	2625500107	262077142999	262338915773	150
2642500000	2642500671	2642500344	264403665957	264698258712	150
2672400000	2672400839	2672400684	267520828620	267085865493	150
2852500000	2852500588	2852500463	285379252588	285911109573	150
2832400000	2832400094	2832400305	283744582156	283694717247	150
2835400000	2835400901	2835400290	283651074681	283250708838	150
2857400000	2857400399	2857400523	285529782257	285666191719	150
2832500000	2832500516	2832500264	283064992998	283610278460	150
2783400000	2783400156	2783400781	278023990629	278818401138	150
2783500000	2783500976	2783500734	278802620886	278562707509	150
2786400000	2786400885	2786400807	278595604932	278245191296	150
2759400000	2759400030	2759400482	275952415862	275274950897	150
2749400000	2749400862	2749400386	274418041662	274433101422	150
2765400000	2765400266	2765400581	276099836928	276755364380	150
2956400000	2956400553	2956400511	295310599883	295012076339	150
2972500000	2972500783	2972500674	297897273599	297638834413	150
2957410000	2957410454	2957410515	295346714973	295427736783	150
2924500000	2924500510	2924500138	292928435677	292738339880	150
2952500000	2952500606	2952500473	295434581681	295001747143	150
2931500000	2931500214	2931500285	293723183748	293548583333	150
2968400000	2968400814	2968400615	296437955667	296096461526	150
2889400000	2889400370	2889400790	288742544901	288373164146	150
3094400000	3094400218	3094400799	309867693548	309189031469	150
3097410000	3097410660	3097410824	309598310298	309553763108	150
3068400000	3068400613	3068400528	306882091945	306443474718	150
3104500000	3104500384	3104500874	310801962397	310646510540	150
3107400000	3107400003	3107400959	310422635712	310175818890	150
3070500000	3070500221	3070500603	307449306030	307778033301	150
3046400000	3046400206	3046400310	304387519840	304916223492	150
3055500000	3055500612	3055500345	305042591437	305631055784	150
3048400000	3048400386	3048400333	304801432215	304652000308	150
2984400000	2984400200	2984400788	298705668926	298206109083	150
3004400000	3004400535	3004400908	300743067903	300217504147	150
3021610000	3021610802	3021610158	302131780818	302550052861	150
3038400000	3038400318	3038400234	303367118340	303034824110	150
2991500000	2991500017	2991500874	299780314808	299250189914	150

3024500000	3024500158	3024500051	302819433073	302483969434	150
2993500000	2993500344	2993500853	299573127950	299173378431	150
3009400000	3009400182	3009400922	300414887572	300337365077	150
2997400000	2997400847	2997400926	299056511016	299368143955	150
2994500000	2994500476	2994500820	299401337039	299147961847	150
3202400000	3202400787	3202400953	320644768294	320487055432	150
3218400000	3218400052	3218400056	321529286225	321871530116	150
3221500000	3221500990	3221500118	322855890216	322336434703	150
3192500000	3192500855	3192500792	319563693939	319168130845	150
3208400000	3208400896	3208400957	320875446208	320511080146	150
3194410000	3194410107	3194410822	319180493286	319384052419	150
3197400000	3197400715	3197400850	319219946868	319960291654	150
3216400000	3216400810	3216400029	321057063381	321650487929	150
3166400000	3166400588	3166400533	316300084730	316080491512	150
3131500000	3131500067	3131500208	313514723405	313220525992	150
3138400000	3138400338	3138400244	313490999656	313186832886	150
3154400000	3154400720	3154400412	315136974316	315692922024	150
3148400000	3148400402	3148400343	314724825451	314284287097	150
3127400000	3127400069	3127400159	312701996357	312047617750	150
3316400000	3316400823	3316400039	331218435082	331626142318	150
3317400000	3317400184	3317400081	331045619444	331978570224	150
3350500000	3350500952	3350500435	335359097290	335661621554	150
3307400000	3307400032	3307400981	330216215608	330212002665	150
3326400000	3326400987	3326400138	332461522811	332363523980	150
3336400000	3336400093	3336400236	333418745847	333585050607	150
3354700000	3354700464	3354700458	335293726677	335229702843	150
3329400000	3329400488	3329400149	332944587065	332768442487	150
3300500000	3300500463	3300500942	330223775661	330936454674	150
3282400000	3282400943	3282400743	328233714618	328781652560	150
3292400000	3292400261	3292400843	329816610631	329785827780	150
3287410000	3287410688	3287410744	328835275237	328006717134	150
3287700000	3287700540	3287700720	328617792596	328050279181	150
3238400000	3238400356	3238400254	323207474092	323644095307	150
3254700000	3254700445	3254700448	325711151204	325154118596	150
3234500000	3234500567	3234500168	323348490470	323292716194	150
3293400000	3293400238	3293400830	329651191510	329749257282	150
3293500000	3293500213	3293500786	329587515701	329292009311	150
3231500000	3231500085	3231500218	323320465034	323116563044	150
3458610000	3458610359	3458610412	345756339322	345298084541	150
3468400000	3468400720	3468400566	346105983931	346424906275	150
3405400000	3405400345	3405400938	340236568526	340598657758	150
3382500000	3382500714	3382500715	338120956879	338375456944	150
3383400000	3383400088	3383400743	338583270876	338938680729	150
3387510000	3387510490	3387510811	338621527808	338215060306	150
3410500000	3410500660	3410500051	341639692456	341198235785	150
3580500000	3580500511	3580500751	358290105417	358847382210	150
3584400000	3584400274	3584400749	358462764909	358278313804	150

3574500000	3574500427	3574500584	357722184789	357829535457	150
3565400000	3565400234	3565400562	356102696896	356541405766	150
3538400000	3538400407	3538400284	353600336080	353197263185	150
3522400000	3522400001	3522400180	352756604277	352968846864	150
3508410000	3508410896	3508410974	350000798647	350835181107	150
3525500000	3525500877	3525500098	352133431514	352920861135	150
3545400000	3545400966	3545400363	354727247703	354735205018	150
3504400000	3504400614	3504400957	350337260244	350914184065	150
3713400000	3713400134	3713400092	371784797799	371827690040	150
3725400000	3725400702	3725400177	372435520169	372015568219	150
3725710000	3725710618	3725710109	372607642179	372235721493	150
3684500000	3684500040	3684500692	368470128831	368973924108	150
3704400000	3704400645	3704400977	370314820378	370370743637	150
3714400000	3714400719	3714400077	371138149933	371246091437	150
3671500000	3671500568	3671500654	367308444102	367938910879	150
3618400000	3618400116	3618400096	361525871942	361803286335	150
3653400000	3653400893	3653400475	365065557019	365224526076	150
3613400000	3613400120	3613400082	361442810056	361380192660	150
3802400000	3802400891	3802400012	380110279738	380291024606	150
3846400000	3846400370	3846400393	384620152652	384429149041	150
3854500000	3854500934	3854500421	385071611661	385109312405	150
3792500000	3792500961	3792500852	379209643068	379452467242	150
3740500000	3740500942	3740500375	374633307235	374645587605	150
3794400000	3794400338	3794400869	379375354864	379055280021	150
3950500000	3950500096	3950500494	395099200466	395950485689	150
3935400000	3935400857	3935400301	393888521631	393400687359	150
3959400000	3959400069	3959400503	395998704679	395225894918	150
3984500000	3984500087	3984500722	398600798599	398459678684	150
3982400000	3982400054	3982400813	398005449415	398199244962	150
3955700000	3955700743	3955700506	395411526782	395312113286	150
3926400000	3926400027	3926400197	392676329557	392713692111	150
3938400000	3938400472	3938400323	393208638986	393478529685	150
3904500000	3904500961	3904500947	390890712952	390442054206	150
3897700000	3897700786	3897700879	389024486939	389056314526	150
3884500000	3884500073	3884500712	388598956014	388978940451	150
3901500000	3901500764	3901500989	390543622465	390858061561	150
3891500000	3891500000	3891500865	389428818053	389814995712	150
3894500000	3894500463	3894500811	389423776167	389054454585	150
4054700000	4054700406	4054700429	405291109578	405591884673	150
4083500000	4083500860	4083500668	408390019815	408800974968	150
4042400000	4042400131	4042400326	404557105846	404522302190	150
4047400000	4047400228	4047400346	404699500890	404007386104	150
4093400000	4093400208	4093400812	409583874820	409825319172	150
4069400000	4069400086	4069400514	406975018797	406359426622	150
4094310000	4094310531	4094310762	409819456904	409632667380	150
3987410000	3987410641	3987410813	398604799607	398519467732	150
3987700000	3987700677	3987700790	398241321316	398695382099	150

4210500000	4210500626	4210500032	421886455843	421630048711	150
4165400000	4165400173	4165400523	416047838007	416917554127	150
4164400000	4164400880	4164400512	416227812238	416999174350	150
4198400000	4198400120	4198400835	419944230583	419457529622	150
4209510000	4209510207	4209510995	420540122794	420366473269	150
4219400000	4219400316	4219400042	421735442270	421407676045	150
4173500000	4173500707	4173500581	417073400105	417545745644	150
4103400000	4103400411	4103400934	410026370848	410377976428	150
4322400000	4322400970	4322400161	432484698514	432979926372	150
4136400000	4136400060	4136400218	413903881779	413522825863	150
4123400000	4123400203	3123400131	412313834425	412008738643	150
4152410000	4152410192	4152410437	415756720739	415584436885	150
4124610000	4124610946	4124610137	412766652853	412601246919	150
4156400000	4156400424	4156400427	415562069439	415833924352	150
4309400000	4309400237	4309400953	430017623069	430721748012	150
4312400000	4312400976	3312400062	431632351666	431141559525	150
4294800000	4294800740	4294800869	429957252343	429173420378	150
4344400000	4344400003	4344400334	434215279645	434363641859	150
4301500000	4301500762	4301500930	430205876316	430605544406	150
4323700000	4323700425	4323700178	432879331572	432592815612	150
4279410000	4279410104	4279410628	427077236461	427963066121	150
4257500000	4257500331	4257500368	425143586264	425380249807	150
4259400000	4259400947	4259400437	425161860873	425121175481	150
4261500000	4261500430	4261500515	426331896849	426928728391	150
4232500000	4232500409	4232500205	423803477585	423508848780	150
4255500000	4255500643	4255500367	425021120929	425569655479	150
4253400000	4253400825	4253400436	425302651453	425031406365	150
4426500000	4426500696	4426500103	442402833047	442916323878	150
4458400000	4458400641	4458400470	445758759625	445147179072	150
4444500000	4444500694	4444500285	444272061956	444548472518	150
4431500000	4431500125	4431500238	443654528550	443361913840	150
4440500000	4440500895	4440500346	444540072195	444189484356	150
4456700000	4456700903	4456700446	445904000173	445103212291	150
4438400000	4438400393	4438400275	443404605473	443628105396	150
4457400000	4457400334	4457400485	445227984617	445579708536	150
4395400000	4395400551	4395400841	439231510223	439572157195	150
4391500000	4391500898	4391500816	439034334544	439611449460	150
4564400000	4564400944	4564400552	456300673339	456062142588	150
4558400000	4558400657	4558400480	455563224565	455721874297	150
4567400000	4567400514	4567400595	456500274487	456695666270	150
4568500000	4568500511	4568500516	456175635268	456030165775	150
4577400000	4577400543	4577400694	457324737102	457062807877	150
4565710000	4565710007	4565710485	456275218295	456681728801	150
4543400000	4543400711	4543400367	454381977712	454427032811	150
4587400000	4587400718	4587400792	458667060420	458385971272	150
4484310000	4484310422	4484310702	448819880047	448324813959	150
4476400000	4476400751	4476400670	447858481744	447325884900	150

4469500000	4469500678	4469500528	446500109428	446683272556	150
4494500000	4494500402	4494500772	449074528583	449711714228	150
4473400000	4473400446	4473400654	447592404782	447936769230	150
4502400000	4502400837	4502400984	450461309237	450273109165	150
4683400000	4683400140	4683400773	468060411494	468905490033	150
4710500000	4710500585	4710500081	471267605735	471216908259	150
4715400000	4715400569	4715400073	471729964940	471008362097	150
4594800000	4594800781	4594800900	459928270627	459046844028	150
4600500000	4600500512	4600500973	460413032337	460766528279	150
4615500000	4615500729	4615500006	461230221614	461648790093	150
4634400000	4634400893	4634400266	463665852843	463971089864	150
4609400000	4609400283	4609400982	460359739911	460929985384	150
4595400000	4595400585	4595400861	459573454972	459548456038	150
4607400000	4607400083	4607400012	460322149542	460900946770	150
4807400000	4807400114	4807400032	480651873610	480298318370	150
4815400000	4815400588	4815400085	481702526994	481015207735	150
4817400000	4817400029	4817400130	481686791586	481974694028	150
4834500000	4834500677	4834500227	483740860021	483152216978	150
4829400000	4829400616	4829400200	482740924968	482038622941	150
4784800000	4784800667	4784800820	478146494072	478037317902	150
4767400000	4767400548	4767400615	476814621510	476585926026	150
4719400000	4719400393	4719400092	471624328766	471503405568	150
4720500000	4720500742	4720500179	472623003873	472602704977	150
4744500000	4744500745	4744500314	474195461309	474435178852	150
4923500000	4923500224	4923500168	492215907485	492286973023	150
4929400000	4929400635	4929400209	492929239716	492118158962	150
4939400000	4939400804	4939400308	493703881763	493622629673	150
4915500000	4915500778	4915500039	491164751864	491730187310	150
4908400000	4908400003	4908400027	490828623668	490440388389	150
4934400000	4934400938	4934400294	493366638989	493665189104	150
4957400000	4957400422	4957400535	495767148351	495913432697	150
4922400000	4922400073	4922400221	492623644218	492711666238	150
4904400000	4904400679	4904400998	490426264428	490944739679	150
4882600000	4882600824	4882600758	488087314238	488518130175	150
4902400000	4902400910	4902400023	490575282258	490771102108	150
4845400000	4845400018	4845400394	484554075457	484486522047	150
4903400000	4903400011	4903400013	490573243008	490796081840	150
4844400000	4844400093	4844400384	484871172775	484845999667	150
4873400000	4873400504	4873400694	487769725150	487791281703	150
4852400000	4852400038	4852400505	485386350847	485176372932	150
5059400000	5059400913	5059400419	505415312076	505574956430	150
5062400000	5062400076	5062400526	506858837599	506025062743	150
5025400000	5025400627	5025400105	502343354470	502570026472	150
5043500000	5043500636	5043500277	504593182183	504397750512	150
5008700000	5008700826	5008700901	500327415063	500716016174	150
4989400000	4989400389	4989400802	498065090550	498276860721	150
5014500000	5014500983	5014500959	501863100950	501414743156	150

4971500000	4971500628	4971500684	497827327452	497276812638	150
4964400000	4964400028	4964400591	496196344537	496854859966	150
5194310000	5194310552	5194310773	519422567951	519400036294	150
5194500000	5194500125	5194500744	519342402335	519702390555	150
5182400000	5182400928	5182400735	518792244991	518025273969	150
5197410000	5197410681	5197410836	519606818156	519308061025	150
5157400000	5157400284	5157400456	515189050606	515886557728	150
5205310000	5205310849	5205310883	520078435746	520514049811	150
5160500000	5160500130	5160500516	516917798951	516411597579	150
5193600000	5193600901	5193600783	519572285521	519969604272	150
5152210000	5152210501	5152210486	515834510995	515369635955	150
5133400000	5133400564	5133400231	513157556607	513004450489	150
5136610000	5136610473	5136610214	513326928512	513840346726	150
5147400000	5147400247	5147400356	514980439298	514157380418	150
5094800000	5094800710	5094800851	509984075647	509147888836	150
5102500000	5102500066	5102500897	510292919197	510976701563	150
5122400000	5122400934	5122400142	512880555053	512249196168	150
5314500000	5314500039	5314500988	531599736644	531068300619	150
5325500000	5325500847	5325500080	532008754791	532658315706	150
5287510000	5287510477	5287510803	528088439812	528261326021	150
5273500000	5273500727	5273500592	527855712324	527025328462	150
5305400000	5305400330	5305400930	530311906258	530981475666	150
5209400000	5209400221	5209400944	520633331971	520494858995	150
5211500000	5211500823	5211500021	521465070252	521918840797	150
5419400000	5419400347	5419400063	541685895114	541699064688	150
5436610000	5436610519	5436610242	543001398908	543055190542	150
5407400000	5407400051	5407400994	540941110571	540493281623	150
5412500000	5412500198	5412500025	541054939882	541767918023	150
5406400000	5406400736	5406400951	540388619846	540396480979	150
5413400000	5413400091	5413400064	541899324610	541764487810	150
5426400000	5426400004	5426400150	542595393522	542523276891	150
5457500000	5457500368	5457500389	545490787646	545492574965	150
5339400000	5339400703	5339400250	533554759334	533041355420	150
5348400000	5348400443	5348400365	534147781956	534977970132	150
5351500000	5351500394	5351500426	535148159714	535804568856	150
5354500000	5354500854	5354500373	535179579088	535462714793	150
5334400000	5334400845	5334400237	533060891798	533443507004	150
5392600000	5392600827	5392600809	539354817107	539405629001	150
5573400000	5573400460	5573400665	557817159181	557835232037	150
5573500000	5573500779	5573500621	557131679188	557848114331	150
5544400000	5544400042	5544400355	554107411835	554510434942	150
5574400000	5574400125	5574400652	557534343533	557220436475	150
5546400000	5546400324	5546400364	554853330910	554077867418	150
5568400000	5568400742	5568400578	556190809757	556711517442	150
5534400000	5534400877	5534400257	553804901160	553547736594	150
5556400000	5556400493	5556400471	555956024072	555852648607	150
5523700000	5523700462	5523700198	552177859097	552494536344	150

5572400000	5572400829	5572400677	557549956783	557791374562	150
5505500000	5505500573	5505500884	550014272310	550653358199	150
5512500000	5512500220	5512500034	551222599881	551937618596	150
5471500000	5471500655	5471500636	547992282116	547868516129	150
5474400000	5474400109	5474400642	547173170042	547032860409	150
5492600000	5492600848	5492600819	549918624374	549949381268	150
5519400000	5519400361	5519400073	551845556082	551709774173	150
5504500000	5504500458	5504500912	550306264072	550916962421	150
5693500000	5693500291	5693500827	569822278918	569553991383	150
5662500000	5662500570	5662500546	566949342910	566522793302	150
5627400000	5627400149	5627400209	562008115502	562621515417	150
5588400000	5588400012	5588400776	558157435033	558229621132	150
5615400000	5615400552	5615400064	561640149363	561879475623	150
5631500000	5631500167	5631500259	563174298895	563002492397	150
5644500000	5644500734	5644500305	564244422067	564744664118	150
5644700000	5644700330	5644700393	564393756832	564322612365	150
5635410000	5635410472	5635410277	563758861905	563382924344	150
5626400000	5626400033	5626400169	562411469875	562935191529	150
5799400000	5799400515	5799400884	579471818607	579574432296	150
5784500000	5784500060	5784500704	578513914805	578014111165	150
5784600000	5784600675	5784600737	578599130650	578463260720	150
5813400000	5813400154	5813400104	581684203394	581915354634	150
5794500000	5794500451	5794500803	579981549689	579763796966	150
5784400000	5784400175	5784400771	578460243877	578004912539	150
5736400000	5736400161	5736400280	573438545945	573326125583	150
5725500000	5725500915	5725500120	572263768185	572430266456	150
5728400000	5728400268	5728400206	572740608155	572372301576	150
5751500000	5751500472	5751500467	575391676712	575160215158	150
5761500000	5761500524	5761500566	576978787967	576081572317	150
5932400000	5932400116	5932400317	593115529318	593327583089	150
5894800000	5894800828	5894800934	589686809673	589514243270	150
5897410000	5897410787	5897410905	589165529572	589856294266	150
5856400000	5856400540	5856400503	585136197760	585670071096	150
5884400000	5884400188	5884400781	588930328510	588515319398	150
5837400000	5837400200	5837400327	583124754628	583112138636	150
5857500000	5857500429	5857500430	585008157684	585359759884	150
5848400000	5848400533	5848400413	584023908831	584765669363	150
6040500000	6040500833	6040500308	604938003077	604114230976	150
6026400000	6026400943	6026400111	602645292651	602004415719	150
6024500000	6024500167	6024500054	602987190955	602223663476	150
6017400000	6017400144	6017400054	601176403113	601054864116	150
6034400000	6034400921	6034400208	603058073286	603521777554	150
5995400000	5995400654	5995400901	599843772851	599199831413	150
5999400000	5999400403	5999400904	599491146811	599046663580	150
5954400000	5954400848	5954400493	595391130186	595071409551	150
5994400000	5994400373	5994400891	599169163023	599940482024	150
6010500000	6010500594	6010500014	601102206039	601602307465	150

6149400000	6149400834	6149400330	614550996232	614609291101	150
6183400000	6183400057	6183400726	618878160876	618089570815	150
6159400000	6159400933	6159400430	615618622800	615279999295	150
6143500000	6143500657	6143500288	614823975917	614953498280	150
6192600000	6192600786	6192600790	619551261194	619880660623	150
6168400000	6168400654	6168400540	616781680346	616519785200	150
6162500000	6162500651	6162500497	616503989119	616786195764	150
6169400000	6169400104	6169400526	616460472871	616918368173	150
6169500000	6169500634	6169500500	616241297391	616282005745	150
6179400000	6179400189	6179400625	617583890584	617267857882	150
6142500000	6142500581	6142500298	614546394417	614310205648	150
6111500000	6111500806	6111500012	611495284200	611505974728	150
6128400000	6128400208	6128400149	612696149308	612569332379	150
6114400000	6114400715	6114400020	611239290939	611011697078	150
6075400000	6075400322	6075400615	607120206932	607741237377	150
6119400000	6119400302	6119400034	611840567582	611459305324	150
6092600000	6092600866	6092600780	609350771574	609819154538	150
6304400000	6304400590	6304400940	630933441789	630823148892	150
6314400000	6314400751	6314400040	631266154916	631500207369	150
6314500000	6314500041	6314500989	631654430021	631915259834	150
6320500000	6320500681	6320500142	632572372447	632300745126	150
6296400000	6296400965	6296400864	629349737964	629365759316	150
6291500000	6291500999	6291500808	629405828871	629822724972	150
6245400000	6245400917	6245400336	624255180493	624220515845	150
6256400000	6256400444	6256400440	625958817417	625010184861	150
6208410000	6208410855	6208410947	620446308832	620831207352	150
6204500000	6204500407	6204500886	620179952796	620627222921	150
6244500000	6244500660	6244500268	624869001695	624128728266	150
6227400000	6227400090	6227400172	622836222637	622826317183	150
6423610000	6423610044	6423610176	642620521320	642991720809	150
6425500000	6425500866	6425500091	642540364551	642661816893	150
6392400000	6392400285	6392400856	639661946653	639952601765	150
6387410000	6387410709	6387410757	638761470139	638443231579	150
6330500000	6330500836	6330500241	633921887351	633548025854	150
6349610000	6349610304	6349610295	634855043065	634372467704	150
6373500000	6373500747	6373500603	637265019200	637780262946	150
6554500000	6554500888	6554500394	655542786078	655601621045	150
6548400000	6548400483	6548400384	654201041644	654432555155	150
6557400000	6557400353	6557400497	655448728185	655821499879	150
6558610000	6558610378	6558610425	655861717983	655851382815	150
6563400000	6563400307	6563400566	656750033545	656617258922	150
6456710000	6456710831	6456710398	645202237536	645773340163	150
6481500000	6481500727	6481500735	648185185418	648406407695	150
6486510000	6486510401	6486510824	648638257449	648216282917	150
6445400000	6445400954	6445400356	644411603962	644654314155	150
6487400000	6487400703	6487400784	648177792380	648634979883	150
6449610000	6449610320	6449610305	644100582373	644893299082	150

6649610000	6649610355	6649610325	664507100294	664893895901	150
6666400000	6666400613	6666400590	666506995167	666787967504	150
6682400000	6682400011	6682400786	668592631365	668032693091	150
6684400000	6684400159	6684400762	668557777155	668167611943	150
6678400000	6678400849	6678400689	667683858982	667132010543	150
6629400000	6629400537	6629400182	662224635538	662820612142	150
6632400000	6632400196	6632400292	663961610830	663692684275	150
6648400000	6648400500	6648400394	664291426729	664316623693	150
6654400000	6654400802	6654400465	665201582240	665857204268	150
6689400000	6689400345	6689400774	668631067137	668077254511	150
6584500000	6584500028	6584500685	658097182727	658626656655	150
6614400000	6614400707	6614400070	661130630245	661274324801	150
6614500000	6614500094	6614500016	661147370821	661483002574	150
6601500000	6601500722	6601500962	660091186751	660141710844	150
6612500000	6612500241	6612500045	661509780856	661978893485	150
6764500000	6764500292	6764500511	676482921289	676630515816	150
6793500000	6793500312	6793500838	679813963280	679610864621	150
6805500000	6805500622	6805500915	680849415755	680052466713	150
6754400000	6754400817	6754400474	675829102406	675543467526	150
6783600000	6783600823	6783600744	678477439232	678205429510	150
6772500000	6772500757	6772500658	677325681371	677748641033	150
6782500000	6782500793	6782500757	678369324419	678668576184	150
6733400000	6733400660	6733400290	673786543003	673306833988	150
6743400000	6743400744	6743400389	674632326774	674664791421	150
6723500000	6723500191	6723500150	672583444696	672136911423	150
6692400000	6692400337	6692400886	669752405633	669605553785	150
6716400000	6716400897	6716400081	671825335274	671655745214	150
6707400000	6707400103	6707400024	670706483812	670776171656	150
6913400000	6913400172	6913400114	691432398339	691787685577	150
6876400000	6876400814	6876400716	687117779927	687896655270	150
6886400000	6886400906	6886400822	688548393687	688204550911	150
6861500000	6861500545	6861500577	686314876050	686013822373	150
6844500000	6844500766	6844500326	684313477763	684036745167	150
6862400000	6862400225	6862400607	686686421250	686970967644	150
6853400000	6853400936	6853400496	685297405340	685747445559	150
6853500000	6853500375	6853500456	685370259281	685682038959	150
7015400000	7015400456	7015400002	701955403407	701574074750	150
7015500000	7015500654	7015500940	701331702115	701963376052	150
7052210000	7052210488	7052210478	705058208982	705611923240	150
7052500000	7052500446	7052500389	705765677668	705540347685	150
7024400000	7024400768	7024400110	702815168899	702168228474	150
7019400000	7019400289	7019400025	701594338647	701393214792	150
7054500000	7054500803	7054500346	705140918793	705988180978	150
6991400000	6991400918	6991400926	699922174290	699234851544	150
6987400000	6987400685	6987400833	698015002601	698369981507	150
6958400000	6958400600	6958400521	695809979299	695950294410	150
7166700000	7166700024	7166700519	716042905318	716897131704	150

7167400000	7167400456	7167400558	716061956655	716083531493	150
7125400000	7125400601	7125400118	712501808433	712971841068	150
7162400000	7162400101	7162400538	716774867569	716341921122	150
7121610000	7121610831	7121610172	712678347073	712340531983	150
7123500000	7123500087	7123500092	712811062632	712129936849	150
7115400000	7115400472	7115400012	711144583064	711999362274	150
7115500000	7115500668	7115500952	711466501451	711782756826	150
7094500000	7094500108	7094500736	709864751264	709463957715	150
7085400000	7085400384	7085400716	708535927218	708970565431	150
7292500000	7292500878	7292500806	729365247659	729645355446	150
7298400000	7298400045	7298400847	729224433699	729877328180	150
7244400000	7244400991	7244400327	724226534943	724328565507	150
7287400000	7287400668	7287400765	728208075784	728513683036	150
7299400000	7299400443	7299400836	729648055297	729102891637	150
7246400000	7246400251	7246400336	724879813405	724857364779	150
7207400000	7207400023	7207400975	720856283236	720817614129	150
7202400000	7202400794	7202400957	720169981807	720488153656	150
7182500000	7182500824	7182500699	718805080318	718193681425	150
7208400000	7208400902	7208400961	720084627649	720895782467	150
7222610000	7222610265	7222610170	722974115597	722125694381	150
7225500000	7225500835	7225500072	722824476300	722022386298	150
7386510000	7386510385	7386510815	738946670324	738402483069	150
7421800000	7421800677	7421800122	742139919823	742679111855	150
7422500000	7422500401	7422500127	742557880095	742614882316	150
7397400000	7397400758	7397400873	739611973160	739262258607	150
7342400000	7342400186	7342400359	734972383829	734335464213	150
7332400000	7332400145	7332400264	733144829604	733987173170	150
7332500000	7332500433	7332500218	733119826421	733932917748	150
7338400000	7338400382	7338400268	733390902162	733660636583	150
7323400000	7323400240	7323400154	732410881760	732795277107	150
7352400000	7352400357	7352400458	735268616250	735553109831	150
7355500000	7355500664	7355500380	735451641572	735262029128	150
7514400000	7514400693	7514400061	751958207693	751453639861	150
7514500000	7514500077	7514500007	751681053092	751376050718	150
7509400000	7509400273	7509400975	750663308388	750291229605	150
7450500000	7450500976	7450500449	745941110488	745841137732	150
7483400000	7483400112	7483400757	748529589297	748646258644	150
7447400000	7447400291	7447400388	744170981517	744939122234	150
7432400000	7432400160	7432400274	743019109909	743314219551	150
7475400000	7475400289	7475400656	747354924275	747029168643	150
7472400000	7472400816	7472400669	747787233965	747945107125	150
7443500000	7443500704	7443500318	744352949732	744964755085	150
7488400000	7488400000	7488400769	748793587123	748137348237	150
7625400000	7625400688	7625400170	762230633976	762630719224	150
7626500000	7626500732	7626500126	762731198084	762532850482	150
7664500000	7664500276	7664500503	766574882627	766840428594	150
7635400000	7635400875	7635400274	763659562256	763387698916	150

7628400000	7628400253	7628400198	762056755159	762646536703	150
7656400000	7656400511	7656400484	765758159911	765839215774	150
7636400000	7636400145	7636400272	763313817047	763628999460	150
7598400000	7598400101	7598400877	759105248584	759106143143	150
7604500000	7604500916	7604500923	760108305591	760332877356	150
7569400000	7569400091	7569400567	756330507857	756458709194	150
7578400000	7578400833	7578400680	757471008339	757846727102	150
7596400000	7596400017	7596400897	759312174957	759230337678	150
7579400000	7579400259	7579400665	757938109430	757448465610	150
7567410000	7567410563	7567410581	756375241778	756654938355	150
7586510000	7586510425	7586510835	758040449006	758702361298	150
7612400000	7612400036	7612400094	761965257454	761777540225	150
7603500000	7603500965	7603500945	760898780205	760243627350	150
7763500000	7763500537	7763500544	776812418267	776355081240	150
7754500000	7754500922	7754500415	775088622025	775467729499	150
7792400000	7792400354	7792400897	779001865268	779412224713	150
7741500000	7741500277	7741500368	774316651800	774155804094	150
7715500000	7715500751	7715500020	771661451066	771665678970	150
7691400000	7691400876	7691400897	769537148620	769910831959	150
7673500000	7673500800	7673500632	767838416995	767831732178	150
7875400000	7875400352	7875400696	787297327934	787293356619	150
7827610000	7827610528	7827610171	782277407654	782796821802	150
7815500000	7815500768	7815500032	781310024212	781956302517	150
7884500000	7884500079	7884500716	788278086560	788233240026	150
7834400000	7834400928	7834400289	783902996966	783272129661	150
7874600000	7874600261	7874600650	787691781890	787635593526	150
7826500000	7826500763	7826500146	782140089641	782746295900	150
7881500000	7881500895	7881500772	788261907744	788592283605	150
7814500000	7814500130	7814500036	781560587162	781553104836	150
7909400000	7909400335	7909400015	790216771584	790098745264	150
7867400000	7867400435	7867400627	786250483383	786436891396	150
7803500000	7803500999	7803500965	780509728916	780630324509	150
7804400000	7804400666	7804400991	780580821440	780036661717	150
7871500000	7871500612	7871500677	787682144878	787851252858	150
8022400000	8022400921	8022400135	802542905162	802375578813	150
8022500000	8022500322	8022500088	802240130482	802392657107	150
7960500000	7960500213	7960500597	796360631863	796007785813	150
7925400000	7925400743	7925400202	792133593418	792364980204	150
7997410000	7997410806	7997410917	799159143371	799290115499	150
7953500000	7953500392	7953500467	795389835045	795977623824	150
8039400000	8039400658	8039400223	803250341418	803198229109	150
8001500000	8001500719	8001500904	800354022229	800005751890	150
7973500000	7973500849	7973500661	797217772564	797500533390	150
7926500000	7926500777	7926500156	792071355934	792498235987	150
7974400000	7974400190	7974400694	797963685188	797653709880	150
8055500000	8055500618	8055500350	805499129381	805489036876	150
8155400000	8155400082	8155400427	815464922540	815716488858	150

8151500000	8151500357	8151500409	815078150609	815181514991	150
8134400000	8134400939	8134400220	813697277099	813711867397	150
8152500000	8152500467	8152500400	815342466697	815522192961	150
8125500000	8125500819	8125500063	812344164728	812835326730	150
8083400000	8083400044	8083400718	808160831369	808842712667	150
8142400000	8142400152	8142400340	814813391287	814261336980	150
8074500000	8074500341	8074500539	807919582809	807321142120	150
8144500000	8144500645	8144500260	814425105286	814951828633	150
8062500000	8062500632	8062500489	806850112852	806082000267	150
8136610000	8136610478	8136610217	813625584877	813278973262	150
8108700000	8108700846	8108700914	810349504246	810451209140	150
8110610000	8110610426	8110610084	811564841399	811903581158	150
8082400000	8082400917	8082400728	808631375779	808679246461	150
8082500000	8082500809	8082500690	808152030153	808972711343	150
8214400000	8214400736	8214400032	821523669151	821301000500	150
8255400000	8255400100	8255400437	825040403472	825230233891	150
8205500000	8205500531	8205500857	820317167192	820117001754	150
8222500000	8222500360	8222500108	822863982950	822346915464	150
8236610000	8236610495	8236610227	823841063094	823456317892	150
8224400000	8224400802	8224400131	822619283829	822080820757	150
8284500000	8284500977	8284500659	828286435863	828500168335	150
8174400000	8174400068	8174400615	817225335877	817789410836	150
8223400000	8223400226	8223400145	822925774356	822931353089	150
8269500000	8269500650	8269500512	826673895035	826434834376	150
8295400000	8295400540	8295400835	829113050864	829168389715	150
8413500000	8413500099	8413500025	841464088951	841888324250	150
8333400000	8333400600	8333400252	833458258832	833108781129	150
8319400000	8319400338	8319400056	831108888848	831410149393	150
8402500000	8402500128	8402500930	840878755835	840162888350	150
8335400000	8335400821	8335400245	833532989379	833115489164	150
8324610000	8324610883	8324610160	832159404778	832746036944	150
8322500000	8322500382	8322500118	832753756984	832677918029	150
8397410000	8397410716	8397410858	839377052045	839175760479	150
8384400000	8384400250	7384400734	838995913139	838546838196	150
8303400000	8303400448	8303400958	830827771121	830999603155	150
8303500000	8303500916	8303500916	830383858781	830961231197	150
8532400000	8532400180	8532400284	853234979645	853891573900	150
8430500000	8430500744	8430500251	843852981674	843584902040	150
8536610000	8536610538	8536610255	853018953008	853072030312	150
8425400000	8425400654	8425400151	842370667549	842037325179	150
8433400000	8433400617	8433400262	843221542068	843975970666	150
8521500000	8521500977	8521500153	852785101249	852014563772	150
8653500000	8653500342	8653500438	865719830643	865607392680	150
8574500000	8574500438	8574500589	857801103507	857853919329	150
8561500000	8561500491	8561500549	856987007902	856052444626	150
8594500000	8594500427	8594500786	859461036030	859572639876	150
8611500000	8611500894	8611500064	861006056867	861684885688	150

8587700000	8587700613	8587700755	858421170345	858032450446	150
8643500000	8643500741	8643500338	864030008030	864205881428	150
8684310000	8684310464	8684310726	868637458785	868512438114	150
8775400000	8775400338	8775400687	877041075757	877343599230	150
8682500000	8682500778	8682500749	868539271383	868870622331	150
8722400000	8722400048	8722400205	872238847644	872708878379	150
8693400000	8693400309	8693400875	869803017876	869348701011	150
8748400000	8748400521	8748400406	874589336928	874890589271	150
8784310000	8784310481	8784310736	878637546892	878947624387	150
8712400000	8712400053	8712400105	871408796992	871179330545	150
8755400000	8755400112	8755400487	875979765510	875807945764	150
8741500000	8741500279	8741500369	874857950418	874989479089	150
8673400000	8673400478	8673400678	867181915435	867942452925	150
8787410000	8787410782	8787410798	878507106807	878225936377	150
8832500000	8832500525	8832500270	883725825843	883393128906	150
8883600000	8883600848	8883600756	888088459735	888193339142	150
8812400000	8812400070	8812400115	881608016590	881345005850	150
8912500000	8912500304	8912500078	891496232167	891812528348	150
8802500000	8802500203	8802500969	880166782107	880083205952	150
8846400000	8846400379	8846400399	884956989146	884447617986	150
8862500000	8862500611	8862500569	886035381387	886802305566	150
8833500000	8833500606	8833500260	883638338918	883518702696	150
8821800000	8821800747	8821800168	882569286478	882514973767	150
9044400000	9044400961	9044400309	904692656740	904372118773	150
9005400000	9005400396	9005400904	900949927090	900791845641	150
8977410000	8977410647	8977410719	897400423218	897655352553	150
8947500000	8947500294	8947500342	894810750884	894166447264	150
8979400000	8979400322	8979400706	897821487101	897736120577	150
9037400000	9037400213	9037400253	903853183879	903687666439	150
9025500000	9025500803	9025500054	902190870954	902536693967	150
8972400000	8972400904	8972400719	897158953692	897909849004	150
8974500000	8974500924	8974500630	897192931103	897433121826	150
9045400000	9045400887	9045400318	904702582638	904908292612	150
9020500000	9020500643	9020500116	902486662534	902047554089	150
9006400000	9006400677	9006400915	900145348010	900380066418	150
8948400000	8948400556	8948400426	894556887349	894338300946	150
9008410000	9008410828	9008410929	900034260327	900042711772	150
8967400000	8967400452	8967400638	896084828572	896634048970	150
9055400000	9055400064	9055400419	905281740979	905219429222	150
9055500000	9055500620	9055500351	905629535366	905228614179	150
9150500000	9150500928	9150500420	915063790303	915003589288	150
9124500000	9124500190	9124500066	912394902231	912770040115	150
9101500000	9101500739	9101500915	910674006123	910172587345	150
9105400000	9105400413	9105400914	910958249092	910731001185	150
9167410000	9167410500	9167410542	916085032969	916279633448	150
9132400000	9132400115	9132400246	913685560684	913530308770	150
9124810000	9124810468	9124810189	912962807447	912588954495	150

9077400000	9077400469	9077400649	907280993527	907299566913	150
9166400000	9166400600	9166400540	916421017154	916650167307	150
9094500000	9094500112	9094500738	909145593683	909699903678	150
9272400000	9272400301	9272400651	927267371402	927404817962	150
9274500000	9274500382	9274500560	927087488170	927455583628	150
9283400000	9283400079	9283400739	928351074538	928909632273	150
9269400000	9269400124	9269400539	926648595761	926628122805	150
9176400000	9176400698	9176400646	917265705472	917223531825	150
9205400000	9205400429	9205400924	920825259009	920097670109	150
9178400000	9178400867	9178400642	917248352943	917100833049	150
9235610000	9235610765	9235610241	923309419148	923694730260	150
9264500000	9264500206	9264500467	926343116800	926296335769	150
9213400000	9213400066	9213400048	921480864200	921050647717	150
9415500000	9415500705	9415500987	941226579913	941172591229	150
9310610000	9310610462	9310610105	931673308432	931753465058	150
9379400000	9379400227	9379400648	937385155218	937919940713	150
9365400000	9365400214	9365400548	936724593489	936846915903	150
9308400000	9308400923	9308400973	930516343118	930745409343	150
9381500000	9381500715	9381500728	938938906336	938986472298	150
9325500000	9325500854	9325500084	932760972749	932664459184	150
9355400000	9355400120	9355400448	935536180012	935400594613	150
9387600000	9387600953	9387600678	938413847109	938435292304	150
9305500000	9305500550	9305500868	930657505450	930814835315	150
9356400000	9356400468	9356400454	935150691377	935998844838	150
9429400000	9429400512	9429400165	942146810689	942089345030	150
9454500000	9454500874	9454500387	945805292282	945063080062	150
9504400000	9504400624	9504400963	950219749797	950970865738	150
9521600000	9521600740	9521600135	952934286173	952965314757	150
9521800000	9521800697	9521800135	952816273611	952254983479	150
9523400000	9523400273	9523400176	952935287088	952359228134	150
9465710000	9465710997	9465710480	946038636782	946249723433	150
9523500000	9523500161	9523500133	952665961167	952410194608	150
9452400000	9452400376	9452400470	945460768534	945733130754	150
9497410000	9497410732	9497410869	949984161015	949236856107	150
9543500000	9543500726	9543500329	954739143495	954147538264	150
9499400000	9499400478	9499400858	949530632043	949243247646	150
9425500000	9425500871	9425500094	942078155591	942814800177	150
9467410000	9467410550	9467410573	946338040358	946380838187	150
9453500000	9453500306	9453500419	945074741376	945226862095	150
9441500000	9441500225	9441500342	944284210108	944272141464	150
9542400000	9542400224	9542400381	954110417393	954413767115	150
9498400000	9498400085	9498400869	949172878566	949803592119	150
9644400000	9644400065	9644400369	964904965660	964854558249	150
9615500000	9615500737	9615500011	961030330013	961612039618	150
9617400000	9617400007	9617400115	961304904290	961024303179	150
9605500000	9605500597	9605500897	960681422417	960007086997	150
9677410000	9677410604	9677410690	967876992565	967121417857	150

9563500000	9563500507	9563500526	956872611702	956653785470	150
9637400000	9637400173	9637400313	963368550400	963329368597	150
9584310000	9584310447	9584310717	958058012574	958984032657	150
9557500000	9557500392	9557500405	955493563701	955749173781	150
9586400000	9586400868	9586400793	958440529610	958461581699	150
9657400000	9657400377	9657400510	965422852762	965388013888	150
9657410000	9657410417	9657410492	965738532752	965844572808	150
9657500000	9657500407	9657500414	965102847717	965513704723	150
9564400000	9564400952	9564400557	956556353895	956725629138	150
9608410000	9608410815	9608410990	960413157098	960697476101	150
9696400000	9696400037	9696400910	969378493013	969849595276	150
9798400000	9798400142	9798400899	979123164163	979934877165	150
9691500000	9691500971	9691500851	969987043298	969576653812	150
9708700000	9708700955	9708700973	970281547757	970549659052	150
9725400000	9725400711	9725400183	972939008594	972825541949	150
9785400000	9785400500	9785400786	978764802698	978698245107	150
9773500000	9773500818	9773500644	977408702813	977418278858	150
9771500000	9771500597	9771500669	977210751048	977294237058	150
9777410000	9777410618	9777410700	977755896232	977665039932	150
9684500000	9684500049	9684500698	968070395160	968782448985	150
9768500000	9768500499	9768500544	976665045891	976960681342	150
9714500000	9714500115	9714500028	971179172608	971835593632	150
9833400000	9833400682	9833400303	983303181216	983797448521	150
9822500000	9822500345	9822500170	982875966039	982717788879	150
9882400000	9882400048	9882400809	988552699924	988158079846	150
9840500000	9840500968	9840500391	984118492501	984593964096	150
9873500000	9873500836	9873500653	987237001055	987883806249	150
9903500000	9903500018	9903500976	990384009968	990587768929	150
9854500000	9854500132	9854500427	985213749073	985897051449	150
9883500000	9883500153	9883500751	988596361579	988032811103	150
9841500000	9841500300	9841500380	984070076856	984453706907	150
9812610000	9812610199	9812610132	981930308398	981496511304	150
9921500000	9921500045	9921500193	992673225782	992345317590	150
9898400000	9898400158	9898400909	989697748275	989605757756	150
9902500000	9902500223	9902500979	990071824024	990585041431	150
9965400000	9965400310	9965400608	996794151257	996347826956	150
9943500000	9943500796	9943500369	994710008305	994440976240	150
9980500000	9980500523	9980500796	998202705588	998358617436	150
9970500000	9970500417	9970500698	997244341482	997069785145	150
6914603845	6914603482	9739400293	691809962720	691152820537	150
1812610000	1812610278	4102400944	181751971284	181763764997	150
6961959135	6961959229	4993400900	696562566024	696640531267	150
1795631490	1795631136	5794800923	179960200052	179919325418	150
6242446723	6242446428	5444700373	624009869027	624987411174	150
5038454027	5038454430	8442400370	503175882064	503196050019	150
660321636	660321981	131800191	66267924317	66314153787	150
8916317444	8916317943	6742400398	891601954967	891972254968	150

7990492248	7990492317	1663400571	799857175388	799789097990	150
3587947405	3587947614	3877400722	358165532087	358756868998	150
7837516746	7837516070	2992910000	783879492102	783493291038	150
3108433950	3108433599	7270500627	310109477888	310163886564	150
3661423246	3661423984	9327400185	366354791832	366158263501	150
4456441102	4456441915	5638400296	445515846150	445495230600	150
1909400000	1909400205	3944400393	190089037789	190684372033	150
6822584129	6822584217	6279959514	682784124523	682231496246	150
1682572973	1682572406	9493910000	168433558730	168766627826	150
5591641389	5591641370	3500302483	559758519535	559513117600	150
5962931605	5962931645	593910000	596339440634	596659902621	150
5938040345	5938040663	4562500535	593369265782	593865484922	150
3074406251	3074406436	7493910000	307597877564	307033823938	150
3468500000	3468500482	3593910000	346886369821	346023482794	150
9714400000	9714400114	3468500504	971022169775	971101662429	150
9306853254	9306853526	4493910000	930209784161	930038732737	150
1938265261	1938265357	6983400804	193104807638	193936782114	150
7307920069	7307920637	3890500879	730695816330	730910172521	150
787379678	787379807	7494310805	78451466058	78802063907	150
6405346065	6405346140	4308700929	640327896893	640546287164	150
860681043	860681597	803400999	86335790840	86713089975	150
5323005453	5323005836	377400670	532402649714	532848624492	150
5917880508	5917880121	7427400193	591721218221	591978016126	150
3327542204	3327542864	8044500250	332356306086	332044888623	150
4756728920	4756728319	2493910000	475333910303	475689639348	150
539510000	539510348	2434400244	53153533366	53241688100	150
8923557979	8923557313	4693910000	892515502332	892368919259	150
5687410000	5687410151	5687410785	568236612232	568864874824	150
6288218585	6288218063	7212500007	628069140333	628764002184	150
6692304266	6692304267	3668500527	669197157898	669757545002	150
9396989969	9396989027	5153400427	939642333926	939397368821	150
9396562666	9396562114	2214400026	939903760288	939138448375	150
146134642	146134727	4944700421	14151531560	14981497038	150
8185050432	8185050972	9982600773	818778991103	818103132212	150
7109498414	7109498723	9714400083	710033793149	710569254152	150
301671542	301671041	5963500562	30351391863	30778666231	150
2328639796	2328639738	2256710375	232040241603	232112242391	150
8529758910	8529758833	4635610275	852320943858	852637439981	150
4705400000	4705400600	4705400969	470350862473	470457443405	150
7629452704	7629452199	7080500706	762248561637	762097535143	150
1187079622	1187079074	9444500290	118467793065	118799033555	150
4353505815	4353505369	1877700680	435399094087	435400664192	150
752065354	752065458	5433500219	75316042534	75263612273	150
886360793	886360607	9188400741	88253884058	88369886645	150
7468884616	7468884542	2344500274	746137529299	746632205058	150
2132177414	2132177243	4927610178	213954053748	213826292341	150
9481447987	9481447933	7510610123	948890459999	948057198691	150

34735206	34735912	1253500391	3467317653	3500082227	150
7865020696	7865020566	3169500497	786736572766	786350214902	150
6626374750	6626374846	1915400092	662360983578	662921557806	150
3568229578	3568229410	3747400414	356979149290	356677767324	150
2554016299	2554016655	7843910000	255881049429	255427392714	150
9498972037	9498972890	806400986	949536124254	949272154756	150
7912046471	7912046920	9258400456	791915526639	791076773571	150
7260179122	7260179613	7027400153	726839523220	726947912028	150
1834329175	1834329554	9711500075	183325280646	183029037513	150
8778880435	8778880698	2622500142	877568022548	877447934792	150
3855800000	3855800216	3855800549	385002404836	385707864233	150
7469819029	7469819203	8687400806	746942889410	746076941350	150
8117793302	8117793526	7953400507	811881766326	811262529610	150
3049930228	3049930658	2429400158	304520404274	304338000447	150
3577777726	3577777537	9643400382	357505213573	357781506959	150
7184449698	7184449600	1415400038	718314472576	718829496260	150
6368406081	6368406164	9539400273	636653167043	636354731002	150
3311506353	3311506698	9825400193	331383522598	331413944996	150
7612183434	7612183130	6587510834	761879029610	761336865876	150
9008114406	9008114538	2203400942	900052978451	900189391208	150
3211105863	3211105076	7911500092	321232983485	321765880399	150
950143014	950143740	7662400588	95782093277	95553103502	150
2291500000	2291500953	2291500804	229918056685	229088913644	150
5288643217	5288643350	78400623	528781962518	528259689578	150
9558510000	9558510189	9558510533	955519772447	955113179386	150
4628244270	4628244558	5797400911	462022344093	462608136524	150
6107927501	6107927024	1005500829	610510183361	610252081262	150
6469943206	6469943971	5012400034	646738766419	646115403456	150
8243142612	8243142234	900020000	824692256957	824956685599	150
1684031363	1684031724	9341500332	168448116219	168947139615	150
4998120265	4998120178	3891400913	499207153413	499014012300	150
1992824519	1992824121	6170500616	199156093764	199360979039	150
2394063707	2394063079	3515400050	239430276827	239034043145	150
4957341734	4957341859	691500842	495115250756	495541697442	150
3772973916	3772973125	1240500323	377202856566	377191554052	150
3859477176	3859477085	583500714	385098246572	385251324330	150
4216452858	4216452024	2389400740	421331421324	421097666533	150
1187510000	1187510760	1187510789	118335944598	118404158465	150
5820974667	5820974392	3508700947	582477205104	582906206663	150
1157766387	1157766041	9853910000	115110210554	115941738588	150
1849485482	1849485080	8181600701	184135450576	184338713187	150
7431115929	7431115830	3194400809	743292113902	743175688182	150
1640594010	1640594990	8816400093	164385547833	164857329284	150
534842740	534842609	1826500140	53698569538	53146750142	150
5824683407	5824683573	9674500600	582138717743	582284850417	150
4080000202	4080000728	4678794679	408005364951	408678128606	150
2929911695	2929911944	8905500929	292665220497	292319303817	150

3225915227	3225915082	8053910000	322116877986	322079546409	150
1737703506	1737703761	494500768	173437553327	173688154251	150
860955431	860955237	3774039950	86094241764	86801071042	150
2270553440	2270553368	823400197	227972921300	227063827817	150
9028287753	9028287521	8032500189	902292589421	902030106172	150
3449423855	3449423286	5232400252	344960833176	344921624892	150
4134323945	4134323797	7683600735	413713490626	413981373462	150
8316144173	8316144982	363400540	831538857282	831436402321	150
4081909931	4081909652	8624610190	408118816707	408818114419	150
2996296758	2996296172	4225400125	299717277611	299163879256	150
295108546	295108854	5912400122	29866006297	29130247168	150
6188243181	6188243474	3788400794	618764097791	618202612959	150
2568887174	2568887102	3462400564	256065272396	256509074134	150
5389070009	5389070642	4368400557	538871460175	538398464664	150
4307296393	4307296076	7962400618	430413416618	430290733095	150
4586601540	4586601765	8782400798	458946129393	458399494663	150
7769088994	7769088125	5324500082	776755869051	776349275132	150
8334998323	8334998116	9061500500	833120076463	833006795010	150
9160911166	9160911176	6556700458	916162128237	916416141043	150
476180784	476180872	5663500532	47436922560	47395833342	150
4817274682	4817274473	3655400472	481871281461	481620486880	150
9948554350	9948554209	7594400853	994206883399	994067269714	150
2024892767	2024892065	8863500555	202602450311	202737786091	150
5458611620	5458611712	8613500045	545390847892	545074416062	150
5779713638	5779713090	2484800789	577511291701	577177208893	150
9522238445	9522238355	4023610135	952669688434	952744662018	150
5548190456	5548190941	9977510777	554777129498	554673473113	150
6155796438	6155796117	955400499	615908189661	615362110025	150
2277522194	2277522874	725500115	227235360488	227207054613	150
4695262050	4695262344	821800158	469883054018	469774943261	150
4056520460	4056520284	983400798	405465187015	405566953974	150
3340405063	3340405158	4892133075	334644652557	334409811666	150
5915862624	5915862644	1909400009	591473448428	591719563221	150
6361334332	6361334858	1974500623	636480056620	636234345377	150
8160033997	8160033027	2454400441	816095454981	816286548684	150
3602874391	3602874323	423610170	360924587735	360816253077	150
6541228863	6541228325	7196400854	654556587408	654862873652	150
3656724977	3656724214	624500106	365633604263	365599281625	150
734659440	734659113	3108400947	73269314528	73921787286	150
3045254010	3045254775	6175400625	304308632517	304155796850	150
3007400000	3007400633	3007400948	300346517864	300146618333	150
4783465768	4783465792	1503500929	478611225312	478537790775	150
3511951149	3511951858	9470500649	351055948053	351479208630	150
5343745048	5343745914	8921800179	534572617352	534665434130	150
7304414570	7304414088	3035400208	730740844010	730905906596	150
2377433853	2377433292	5088400727	237395675972	237139100990	150
609064725	609064642	1397410851	60504973723	60032321685	150

3834923739	3834923153	6998510967	383158939132	383349908247	150
4890019334	4890019176	2223610153	489630125245	489477103350	150
4023500000	4023500287	4023500079	402671774517	402625021674	150
7374500000	7374500416	7374500569	737349537041	737520162312	150
6867891671	6867891979	8192400838	686272855307	686191441030	150
8072952763	8072952965	8185400727	807320595131	807885063753	150
6272479059	6272479515	5171500606	627367419041	627445869584	150
7057055560	7057055940	1919400109	705785273825	705944601005	150
8287700000	8287700631	8287700725	828800381547	828837554506	150
9261751370	9261751905	9432500230	926112348979	926275597799	150
3160804132	3160804606	6549610315	316522430346	316202268185	150
8113621759	8113621291	2263500491	811072754386	811702874296	150
3979830186	3979830517	7642400389	397814007414	397021056240	150
7048425168	7048425451	8079400617	704117704783	704120224142	150
5830271028	5830271030	7252210498	583624112923	583530328251	150
9378302415	9378302762	6271500617	937723277558	937734687762	150
7108955975	7108955712	1203500899	710151389427	710553798120	150
1959283798	1959283544	1818400114	195969557844	195076443602	150
425978838	425978722	7603400986	42803782582	42665552470	150
5462156427	5462156978	4582500735	546360567759	546034385243	150
9940702688	9940702866	6005500834	994295254309	994043598555	150
9288558063	9288558249	8172500599	928183772882	928287398663	150
906431738	906431536	3195400820	90015852578	90229631823	150
3980884202	3980884690	790500866	398520856128	398676619938	150
323237107	323237940	3493400850	32625494905	32979226484	150
7939546319	7939546589	8117400066	793882877302	793328882744	150
5643554489	5643554431	8493910000	564571410733	564349344870	150
1103890146	1103890956	4594310812	110936772326	110798092606	150
3991492439	3991492713	4618400097	399977590269	399362838012	150
6436510000	6436510873	1092400821	643959910783	643405933231	150
321192206	321192673	7855700500	32266345364	32062980640	150
3441217956	3441217417	4067400545	344740281420	344031768814	150
4145416964	4145416919	3937400335	414163520687	414002355215	150
8411677760	8411677531	9818400122	841669581326	841910166877	150
2729936476	2729936643	3913500068	272990319813	272885809102	150
5803499606	5803499996	3813500058	580633190567	580697267285	150
5030150273	5030150183	1943400404	503731171569	503793828731	150
2995688491	2995688412	6575400665	299494028617	299216046062	150
6967251933	6967251158	8023700153	696511062551	696885788357	150
1965352289	1965352590	6280500725	196102931148	196057937716	150
4791610000	4791610483	4636610261	479049872959	479700455536	150
9607389308	9607389098	2562400573	960325909932	960722777496	150
1598098759	1598098416	664500496	159831248191	159588538342	150
5637694705	5637694764	704500926	563554287930	563845332432	150
812253912	812253230	2377410654	81312769463	81433570605	150
3291516692	3291516831	4425400147	329244367076	329361719901	150
2414408952	2414408763	6273400636	241339755250	241548634816	150

8595852788	8595852829	5983600763	859876828966	859279832624	150
119239619	119239128	4234400226	11144730080	11769286199	150
6772400000	6772400909	6772400698	677783789948	677563613582	150
4812984699	4812984807	1105500840	481788468472	481182596468	150
4855828035	4855828970	7239400242	485290249086	485083480089	150
5992956164	5992956004	742410391	599415452953	599185239145	150
1236332230	1236332927	4305500863	123405762107	123894452438	150
5854531287	5854531755	3065400512	585387326257	585514441363	150
67515789	67515924	624610182	6489196309	6569672159	150
2368195815	2368195135	9912610142	236862574380	236140663276	150
3034558502	3034558533	5081500695	303701882755	303289163611	150
3149830333	3149830304	1694810043	314762454059	314544955563	150
3201030945	3201030601	4513400073	320100574382	320690694397	150
8283391987	8283391555	2602400992	828110963374	828713562684	150
5212909773	5212909326	43400314	521362664774	521915253104	150
9896400000	9896400170	9896400932	989944346098	989313048814	150
8424314367	8424314644	5621800142	842140472318	842901515584	150
5778142309	5778142250	1028400134	577485923274	577946021571	150
672105232	672105793	6864500519	67273714138	67290339452	150
777797263	777797873	9184400716	77547585926	77821069629	150
7082181799	7082181693	4881600765	708624756018	708275027949	150
9075572637	9075572303	3524400155	907709530811	907315076952	150
8136462003	8136462139	8684500697	813490082227	813269876702	150
1069025489	1069025337	4453810511	106716917553	106795598297	150
7172189345	7172189167	3018400036	717405845294	717803030350	150
6016761163	6016761298	7484500677	601053509093	601427370757	150
7655899501	7655899638	9871600672	765051291379	765735587121	150
1657433884	1657433176	4622400191	165271132111	165618736276	150
2068810960	2068810318	8505400953	206124509012	206799384598	150
602571905	602571121	2774500603	60278565243	60093036864	150
2317506479	2317506101	6118400049	231476249192	231768816750	150
9979694066	9979694524	1577410673	997013596299	997222706180	150
7718365231	7718365647	9872400710	771167142178	771118728091	150
7331557469	7331557893	4087700702	733754987262	733402151919	150
7854967941	7854967972	4321500129	785750001957	785128131954	150
1956406870	1956406109	1805500910	195649592933	195671621261	150
2432497356	2432497767	6892500865	243437051459	243361458291	150
1173644506	1173644536	1121810167	117703414163	117890822314	150
2629398992	2629398366	6146400324	262024267416	262379331501	150
9995430890	9995430963	6391500818	999235086313	999667533827	150
7400823730	7400823777	3399400842	740105864208	740837103109	150
3445055240	3445055688	1315500967	344410596304	344180814370	150
8260506275	8260506030	8416400054	826722499081	826655168243	150
593361599	593361027	7294500755	59616984740	59089401145	150
1247652036	1247652321	2484600704	124933645487	124162129408	150
9448961109	9448961496	6934310263	944075866314	944492641629	150
4484887830	4484887020	2365710464	448210520795	448793227849	150

557852882	557852916	4413700091	55031214523	55308313039	150
8773956956	8773956569	9686510847	877820276905	877230437807	150
3756677278	3756677011	1724400173	375271474643	375367139745	150
4675585833	4675585917	4838400315	467010744313	467883982446	150
5672983497	5672983484	9049400323	567186515887	567309331608	150
6185558823	6185558686	2053400414	618199941935	618197818301	150
6980206940	6980206629	6753400487	698227357807	698860269637	150
5975686716	5975686560	9774500610	597676086954	597954662971	150
7521304689	7521304097	6724500122	752308835067	752629582464	150
4829465554	4829465366	7867410610	482589400679	482708810670	150
5364202076	5364202788	1157500355	536425810528	536912887876	150
4590486798	4590486868	3537400297	459957593571	459540654811	150
4192438184	4192438983	9461500540	419875533792	419833627402	150
1439885878	1439885202	7756700479	143287615244	143714483789	150
1760536051	1760536512	2584500681	176820147310	176839795137	150
3527692440	3527692984	6428400179	352499953587	352662432449	150
3775154815	3775154592	2956700494	377187433432	377863118795	150
7736923478	7736923094	5452210516	773537437316	773940696712	150
7382297518	7382297155	7684600729	738083418343	738804147556	150
919954323	919954404	3000500912	91916440953	91983291718	150
2866033142	2866033440	4921500188	286645741091	286845742911	150
9082725958	9082725584	481600722	908144947881	908161730878	150
5470179654	5470179084	5639400279	547308802662	547438515870	150
3915450005	3915450222	7697400903	391462340548	391604191535	150
9866410437	9866410057	5427610130	986330877834	986767256712	150
6365426204	6365426058	6703500954	636446639082	636690415345	150
3969282512	3969282114	1036400205	396100034728	396034187089	150
3959393054	3959393811	1032500182	395759376468	395768315663	150
8858437578	8858437230	6509910000	885294374969	885675947133	150
6237420854	6237420804	758610439	623853461598	623470312934	150
1199630589	1199630497	5608400998	119613684478	119469204289	150
391221560	391221656	3959710427	39612026338	39597146175	150
1790458490	1790458662	942500372	179425197456	179591429824	150
1891788798	1891788763	453500410	189472397314	189815206634	150
9714461043	9714461960	9512400086	971524334179	971531430073	150
1614621879	1614621511	3493500806	161748380699	161338929521	150
2540237846	2540237147	1465710472	254991367442	254696485183	150
3497060505	3497060085	3357500377	349479569469	349581750566	150
8801303730	8801303664	3627610147	880035982630	880921936838	150
622720369	622720892	602500943	62056198157	62961567857	150
3395409960	3395409018	8793500840	339686199541	339684198013	150
416747747	416747686	3394400829	41905665458	41547570701	150
5663329285	5663329119	3735400280	566199299170	566235396283	150
9295781872	9295781907	4762500555	929464655398	929290832910	150
1376372024	1376372306	9642500351	137119094409	137160901114	150
9576571626	9576571412	4906400000	957663905703	957492561370	150
9537361969	9537361336	2654500400	953231406658	953296404888	150

9639831109	9639831640	727610154	963415810669	963175047337	150
8143137257	8143137442	5164500453	814251225695	814152426189	150
8268049761	8268049639	3996400937	826266652999	826184349024	150
170901252	170901530	8448400376	17404723208	17470102063	150
4203769051	4203769216	5385400744	420947189006	420164487667	150
2643148735	2643148361	3357400474	264830372535	264621050736	150
2893207297	2893207818	6589400764	289448039181	289052166551	150
3221201784	3221201055	7370500637	322598900815	322928433537	150
7098757588	7098757907	6702500957	709264838841	709629561155	150
4760182475	4760182894	7487700744	476533651846	476865285270	150
6831361794	6831361094	4386400766	683043799644	683294726775	150
8596701315	8596701886	5074500536	859185557844	859227775427	150
3292915577	3292915615	8581600740	329319303890	329994022641	150
1612186561	1612186681	7202500909	161740313443	161757768903	150
6746708053	6746708599	456710392	674149409247	674065855581	150
601986155	601986215	4112500994	60879118179	60736068945	150
381298561	381298002	6084500638	38992184613	38794226214	150
1689917178	1689917042	2061500493	168290063598	168939107277	150
6593118392	6593118228	6983500758	659375782363	659993301231	150
317789376	317789112	8747400419	31842238424	31752737006	150
2475415985	2475415105	6474500577	247349363867	247506180347	150
5831402813	5831402997	9243500301	583269987859	583296985776	150
3601788007	3601788030	2064400500	360396957230	360823681245	150
1260822933	1260822773	9112400048	126335626845	126365304419	150
8293378644	8293378314	7294310785	829086995593	829200283331	150
9223327335	9223327468	4220500130	922205408473	922619957466	150
7334619922	7334619595	8730500280	733922999316	733372355952	150
5055944711	5055944986	7375400646	505843770109	505922343595	150
3692409321	3692409936	9622500150	369208611022	369695989332	150
5044960703	5044960463	1114500965	504413665765	504439607030	150
4794924014	4794924767	2615400061	479766209521	479122014701	150
7882719585	7882719384	6404500905	788410091119	788050183928	150
8589408230	8589408377	9574400656	858449828799	858858753316	150
4006902381	4006902375	7892400907	400790795330	400254624699	150
5660425701	5660425453	1775400680	566163911433	566981632844	150
1199666866	1199666378	2206400928	119801281151	119073919689	150
9251570964	9251570431	4487510822	925743707968	925966202756	150
3736266034	3736266121	1812610124	373194619553	373003661612	150
6066582917	6066582922	9554400458	606139536232	606686907103	150
6956607408	6956607036	1524610173	695450293105	695951669036	150
3619758003	3619758154	3393500796	361590566497	361024953794	150
9702689515	9702689753	6493500809	970198563552	970787667502	150
6711602498	6711602554	6435610258	671386171562	671861520848	150
9677708679	9677708436	8315500974	967718738142	967110176839	150
6968303816	6968303757	4781500760	696706070425	696158322314	150
9397324728	9397324984	4156710367	939362802764	939582126026	150
8052082484	8052082502	126400115	805116565779	805244166435	150

7169839198	7169839720	1498400861	716444248574	716585006150	150
415671926	415671466	9237400273	41915690889	41609389018	150
5839009975	5839009799	1615500003	583689670492	583998816984	150
905973005	905973933	7977700695	90706724636	90513307732	150
3870353522	3870353827	9410610115	387384463311	387834652023	150
1754418408	1754418908	9058400437	175015760750	175846432991	150
6476482706	6476482671	6297700823	647982672032	647778111093	150
299813946	299813823	1455500384	29320667337	29756027145	150
1202091420	1202091629	9692400889	120408922988	120341540496	150
2169083837	2169083858	3472810712	216295989493	216120083290	150
5277404642	5277404965	1579400660	527280204636	527275559820	150
4021478198	4021478812	5003400925	402722326225	402726852041	150
2521993413	2521993326	6752500457	252254344075	252359215387	150
1920052532	1920052102	8598510929	192098182671	192797294304	150
2592667964	2592667668	5978400717	259809175196	259340261222	150
6486494972	6486494941	5576400682	648818549156	648636489650	150
1028493044	1028493047	1584600713	102193558823	102996530112	150
6805525905	6805525075	2315400028	680708474623	680983306849	150
3937531808	3937531464	3553810520	393660613815	393517619503	150
6279771702	6279771623	1264400519	627214562749	627105968950	150
9898647916	9898647340	7704500932	989113446026	989915195802	150
9784093578	9784093296	5870500684	978281364296	978790063761	150
2319702431	2319702802	8612610111	231881058444	231691921937	150
7652265810	7652265512	5356700438	765807517253	765643329572	150
1943464926	1943464666	6224810196	194470611762	194060527156	150
7073394845	7073394575	1222610164	707966630332	707815554971	150
2903670466	2903670304	8402810014	290261265457	290677988143	150
4746813363	4746813529	1292600795	474762216155	474482961998	150
9556271913	9556271234	5952400516	955624638857	955252012662	150
4206111782	4206111123	2446400350	420700597246	420908530835	150
6951266969	6951266824	7353400449	695675249061	695274047960	150
7839683285	7839683892	9304500898	783844464624	783334491461	150
1243328032	1243328967	1865400590	124230545460	124579108237	150
2212457735	2212457770	5698400885	221054074317	221294934628	150
2035716185	2035716938	8472500630	203938690186	203538806132	150
7629911440	7629911164	1942400412	762609817087	762977892136	150
4574249280	4574249446	3508400987	457746977467	457987203818	150
6318505589	6318505819	3695400870	631181248893	631873893140	150
7162901192	7162901848	1402810007	716133353390	716143601723	150
5424107592	5424107175	5905400989	542908247172	542514384283	150
458613328	458613210	3393600801	45326664178	45536141493	150
3065319771	3065319732	9086400740	306686577034	306009129925	150
6749767489	6749767298	6415400043	674340374309	674715353763	150
7901068091	7901068881	226400125	790020902364	790591465077	150
7752222700	7752222900	313500007	775482194846	775403846032	150
3134886624	3134886929	3511610109	313560250472	313947713620	150
2361653378	2361653119	284600683	236077929946	236199990759	150

556740005	556740189	755400479	55260736508	55671094353	150
7523705964	7523705963	24400104	752479604835	752219521131	150
8270828496	8270828337	4781600756	827397269351	827515251565	150
797008837	797008124	4302400964	79936089116	79963671695	150
2861354957	2861354873	1863400591	286101349825	286869453270	150
6941786504	6941786697	9923986872	694786018964	694501614649	150
7572705461	7572705109	4066700506	757022910174	757414655015	150
9773546721	9773546398	2564500489	977287174664	977525113007	150
5556162457	5556162339	143400324	555575580778	555506764817	150
9320121627	9320121851	2805400977	932941491419	932533124357	150
9830514990	9830514508	3826400187	983994656877	983580987235	150
2010996471	2010996635	7584083778	201986849663	201901107107	150
8040110254	8040110003	2555400461	804111086618	804437201308	150
6527755904	6527755244	1286400752	652863430857	652115646877	150
8417938804	8417938987	6163400526	841055456140	841133446117	150
2157465171	2157465459	1262445943	215761749052	215086145016	150
2937372781	2937372130	3784500702	293276668992	293091319133	150
9221967951	9221967659	2683500725	922105470937	922884871055	150
4672578169	4672578985	964400587	467631695721	467708594585	150
9543343810	9543343896	1721800148	954879164717	954874230225	150
607440288	607440537	1587410772	60162252932	60185330457	150
5742448164	5742448536	7014400011	574108702087	574750740549	150
9901932231	9901932653	7064500445	990340827362	990336157367	150
1925871790	1925871826	8592500837	192807478740	192753441126	150
5035827896	5035827193	7021610162	503449241129	503975168852	150
4127292557	4127292010	6632500248	412880832491	412800019048	150
5669446941	5669446554	1482500723	566622756929	566673450733	150
3671305679	3671305169	2884500711	367571733031	367944435292	150
8814278626	8814278659	5610610131	881166574290	881068136487	150
2598231748	2598231682	4496400883	259582301520	259127115885	150
8224431960	8224431698	9711610134	822268885443	822591697291	150
1494277598	1494277837	1035710136	149087702523	149312343395	150
6488079178	6488920206	8195400825	648860272819	648551990272	150
325460071	325510159	4497700841	32300404351	32967054066	150
9995218408	9998336958	3893400890	999452778256	999002558735	150
7997217557	7997217156	6190500813	799145799691	799741874317	150
8947540845	8947540293	2981600773	894435925200	894433387486	150
7854065303	7854065004	7634500210	785806361004	785559928551	150
9494450496	9494450865	4236500183	949672864787	949870105120	150
8963380503	8963380864	3340500335	896103204253	896505303568	150
1341233794	1345870787	3021810159	134042374873	134487569392	150
7080877032	7080877643	1593910000	708500098078	708998645718	150
1363559548	1362069451	3859710417	136790241053	136538367433	150
3273284424	3274042705	8917400144	327815136495	327300691405	150
3479591232	3473229860	9097700806	347564766922	347025536652	150
2872502750	2870079683	4364400532	287633565730	287508669196	150
4256414179	4251467050	9682600743	425628358583	425612136388	150

5703221598	5708688316	2252400443	570151313674	570649302786	150
3398833332	3392558237	9611610125	339838568709	339142553769	150
5437874690	5432013669	2591500834	543763253347	543021599693	150
2220579736	2220629574	7733500249	222133793525	222881490201	150
4323638805	4323496397	1896400923	432440278688	432295280004	150
2560142883	2566032382	7104500878	256635193169	256138556447	150
6440379371	6448796569	5393500798	644078969699	644397097500	150
6437228802	6434664072	9744700407	643909306699	643294019869	150
1883440304	1882105461	6390500832	188816968354	188740611518	150
6352372908	6356451796	6684500695	635234295679	635357580993	150
3651733632	3651453330	640500362	365447581903	365773419092	150
2016937143	2017712526	6306400942	201364790609	201050784020	150
6378052680	6371267045	6189400724	637926300723	637736537772	150
792074021	793255334	8381600720	79306015059	79345773871	150
647673209	642801535	6582400776	64826462212	64062971933	150
5372787505	5375437149	6009510977	537890460740	537057948941	150
9461085259	9461005044	4507400003	946974642855	946003636513	150
611080491	611802842	520500156	61886871129	61241165093	150
8427784452	8423639906	2495400849	842112405976	842961867481	150
3739115239	3730652373	8466400571	373348280161	373160187733	150
9021870302	9029331656	9924500145	902407444780	902678905355	150
1177550795	1179049560	7021500102	117929334858	117636140940	150
6595550681	6597129286	9392500818	659686590871	659313182636	150
693216885	698473457	763400580	69920441916	69175258922	150
1104682825	1108681680	3633400277	110145407425	110895725057	150
1740704394	1744858329	4605400959	174201607452	174498891303	150
2886752986	2881598385	4384600696	288625003647	288650398554	150
9489023164	9486423513	578400673	948924414430	948405734010	150
5219467972	5210304580	4016400010	521452194874	521231032178	150
4120623248	4124983909	5454700470	412804726278	412445059470	150
9898125792	9893189064	5505310913	989648473226	989797210076	150
9712997034	9714609284	9698510940	971019369957	971843664640	150
2109740012	2109276029	5780500773	210544978311	210367004706	150
2489974670	2487063619	4393400841	248876293377	248355975774	150
6990966966	6995377948	9798510950	699677915809	699530817433	150
447969037	442130204	6077410628	44528259290	44122720102	150
8090274192	8093353401	1572810720	809226628505	809754871075	150
5200366925	5207814966	6513700103	520812557722	520008112420	150
8625660722	8625621868	2593400859	862686376254	862118958790	150
8396062261	8391194393	3652400484	839064276398	839785404951	150
9079292021	9071385985	2394800877	907308456679	907817426768	150
5494811158	5497907068	4927400238	549118172037	549812531162	150
5096408837	5090752030	402400970	509785166413	509564244783	150
1188432652	1186241069	2325400134	118879773407	118013637065	150
799787574	790737878	994400886	79329846271	79432667533	150
9344815273	9345292852	5272500607	934988385436	934643447853	150
8793338137	8792500103	6646400376	879189958318	879418373213	150

2787453247	2783297836	7073500574	278147192717	278852239673	150
5310000	5310798	5310858	470575413	480306752	150
5310000	5310798	5310858	470575413	480306752	150
36500000	36500782	36500159	3663010728	3821502660	150
3500000	3500850	3500879	483774932	441108666	150
3500000	3500850	3500879	483774932	441108666	150
71500000	71500568	71500591	7105794418	7711378921	150
71500000	71500568	71500591	7105794418	7711378921	150
93500000	93500171	93500762	9724834845	9504255159	150
93500000	93500171	93500762	9724834845	9504255159	150
84600000	84600284	84600663	8806762858	8123563353	150
84600000	84600284	84600663	8806762858	8123563353	150
72500000	72500627	72500581	7627675863	7652180170	150
72500000	72500627	72500581	7627675863	7652180170	150
91500000	91500924	91500784	9950052260	9978786130	150
91500000	91500924	91500784	9950052260	9978786130	150
94500000	94500096	94500729	9365088446	9169454689	150
94500000	94500096	94500729	9365088446	9169454689	150
64500000	64500150	64500438	6958284849	6071234305	150
64500000	64500150	64500438	6958284849	6071234305	150
85400000	85400372	85400709	8889201353	8489161895	150
85400000	85400372	85400709	8889201353	8489161895	150
213400000	213400053	213400039	21119812921	21722235994	150
213400000	213400053	213400039	21119812921	21722235994	150
204400000	204400561	204400924	20982266813	20028044305	150
204400000	204400561	204400924	20982266813	20028044305	150
229400000	229400464	229400136	22895427558	22831501160	150
229400000	229400464	229400136	22895427558	22831501160	150
237400000	237400227	237400264	23543146044	23755601594	150
237400000	237400227	237400264	23543146044	23755601594	150
227400000	227400081	227400166	22546766423	22957237918	150
227400000	227400081	227400166	22546766423	22957237918	150
184400000	184400209	184400707	18949206787	18839261786	150
184400000	184400209	184400707	18949206787	18839261786	150
200500000	200500440	200500929	20070611175	20117103549	150
200500000	200500440	200500929	20070611175	20117103549	150
233500000	233500274	233500194	23710074940	23326608253	150
233500000	233500274	233500194	23710074940	23326608253	150
173400000	173400390	173400620	17117574917	17030401928	150
173400000	173400390	173400620	17117574917	17030401928	150
183500000	183500871	183500674	18042627716	18971467105	150
183500000	183500871	183500674	18042627716	18971467105	150
175310000	175310943	175310772	17087333421	17983222460	150
175310000	175310945	175310845	17809664169	17983222460	150
175310000	175310946	175310262	17288774555	17983222460	150
175310000	175310947	175310738	17603666260	17983222460	150
175310000	175310948	175310856	17301619493	17983222460	150

175310000	175310949	175310094	17850227276	17983222460	150
175310000	175310950	175310281	17629103210	17983222460	150
175310000	175310951	175310829	17140186480	17983222460	150
175310000	175310952	175310365	17305393960	17983222460	150
129400000	129400451	129400126	12280071906	12385924413	150
129400000	129400451	129400126	12280071906	12385924413	150
130500000	130500796	130500215	13819712163	13589553284	150
130500000	130500796	130500215	13819712163	13589553284	150
123610000	123610977	123610141	12791601924	12746770979	150
123610000	123610977	123610141	12791601924	12746770979	150
134400000	134400926	134400212	13986537939	13684310112	150
134400000	134400926	134400212	13986537939	13684310112	150
135400000	135400766	135400215	13223672196	13260259413	150
135400000	135400766	135400215	13223672196	13260259413	150
137610000	137610565	137610193	13039739115	13576127208	150
137610000	137610565	137610193	13039739115	13576127208	150
150500000	150500002	150500411	15351503131	15069531595	150
150500000	150500002	150500411	15351503131	15069531595	150
342500000	342500607	342500312	34908426317	34168535442	150
342500000	342500607	342500312	34908426317	34168535442	150
358610000	358610466	358610399	35420537083	35117556765	150
358610000	358610466	358610399	35420537083	35117556765	150
343400000	343400750	343400343	34638849248	34910028501	150
343400000	343400750	343400343	34638849248	34910028501	150
360500000	360500151	360500531	36832846033	36607031588	150
360500000	360500151	360500531	36832846033	36607031588	150
331500000	331500097	331500225	33143068418	33602845644	150
331500000	331500097	331500225	33143068418	33602845644	150
355500000	355500652	355500373	35813145130	35196620031	150
310610000	310610446	310610096	31161193888	31501354070	150
310610000	310610446	310610096	31161193888	31501354070	150
362400000	362400122	362400551	36205363919	36943055351	150
362400000	362400122	362400551	36205363919	36943055351	150
365400000	365400199	365400539	36308793999	36984121505	150
365400000	365400199	365400539	36308793999	36984121505	150
362500000	362500674	362500511	36549408436	36583232219	150
362500000	362500674	362500511	36549408436	36583232219	150
363500000	363500455	363500499	36242492029	36906386326	150
363500000	363500455	363500499	36242492029	36906386326	150
274500000	274500363	274500551	27383746893	27724412743	150
274500000	274500363	274500551	27383746893	27724412743	150
283500000	283500889	283500684	28882035473	28084292377	150
283500000	283500889	283500684	28882035473	28084292377	150
254500000	254500824	254500358	25983809713	25475396559	150
254500000	254500824	254500358	25983809713	25475396559	150
442500000	442500626	442500322	44880254771	44902022251	150
442500000	442500626	442500322	44880254771	44902022251	150

435400000	435400824	435400247	43182420149	43574124278	150
435400000	435400824	435400247	43182420149	43574124278	150
466400000	466400568	466400562	46855740445	46922088197	150
466400000	466400568	466400562	46855740445	46922088197	150
467400000	467400488	467400581	46812655289	46919169461	150
467400000	467400488	467400581	46812655289	46919169461	150
484500000	484500996	484500670	48292027688	48787065044	150
484500000	484500996	484500670	48292027688	48787065044	150
447400000	447400278	447400381	44781309117	44859371651	150
447400000	447400278	447400381	44781309117	44859371651	150
375400000	375400356	375400639	37241974212	37897365771	150
375400000	375400356	375400639	37241974212	37897365771	150
424400000	424400817	424400143	42731618095	42464669193	150
424400000	424400817	424400143	42731618095	42464669193	150
408410000	408410877	408410961	40622384426	40565111273	150
408410000	408410877	408410961	40622384426	40565111273	150
383500000	383500906	383500694	38079780722	38074770566	150
383500000	383500906	383500694	38079780722	38074770566	150
402500000	402500111	402500922	40335607088	40859225290	150
402500000	402500111	402500922	40335607088	40859225290	150
385400000	385400420	385400739	38567002943	38035198261	150
385400000	385400420	385400739	38567002943	38035198261	150
418400000	418400078	418400073	41726706563	41296024009	150
418400000	418400078	418400073	41726706563	41296024009	150
594810000	594810966	594810031	59258286953	59963678295	150
594810000	594810966	594810031	59258286953	59963678295	150
611500000	611500877	611500056	61023678811	61013186506	150
611500000	611500877	611500056	61023678811	61013186506	150
597400000	597400779	597400886	59178474196	59463385800	150
597400000	597400779	597400886	59178474196	59463385800	150
616400000	616400868	616400066	61146745278	61122398302	150
616400000	616400868	616400066	61146745278	61122398302	150
592400000	592400311	592400870	59687414845	59316459539	150
592400000	592400311	592400870	59687414845	59316459539	150
534400000	534400869	534400252	53389190178	53618607719	150
534400000	534400869	534400252	53389190178	53618607719	150
551500000	551500424	551500441	55056788532	55544960890	150
551500000	551500424	551500441	55056788532	55544960890	150
505500000	505500564	505500879	50815727591	50761973810	150
505500000	505500564	505500879	50815727591	50761973810	150
684500000	684500033	684500689	68443331608	68277097101	150
684500000	684500033	684500689	68443331608	68277097101	150
709400000	709400292	709400988	70504088327	70284645502	150
709400000	709400292	709400988	70504088327	70284645502	150
721500000	721500998	721500164	72342474747	72656702627	150
721500000	721500998	721500164	72342474747	72656702627	150
624400000	624400848	624400162	62480394603	62618999470	150

624400000	624400848	624400162	62480394603	62618999470	150
653400000	653400886	653400472	65603001579	65017876330	150
653400000	653400886	653400472	65603001579	65017876330	150
619400000	619400369	619400078	61381321961	61659329335	150
619400000	619400369	619400078	61381321961	61659329335	150
670500000	670500319	670500660	67478785400	67371396880	150
670500000	670500319	670500660	67478785400	67371396880	150
681500000	681500751	681500749	68767034133	68384068001	150
681500000	681500751	681500749	68767034133	68384068001	150
652500000	652500549	652500441	65487605789	65733328371	150
652500000	652500549	652500441	65487605789	65733328371	150
630500000	630500763	630500263	63133989349	63810007259	150
630500000	630500763	630500263	63133989349	63810007259	150
827400000	827400169	827400224	82893365727	82024808532	150
827400000	827400169	827400224	82893365727	82024808532	150
844500000	844500755	844500320	84126241401	84572597472	150
844500000	844500755	844500320	84126241401	84572597472	150
860500000	860500241	860500580	86828046183	86035104727	150
860500000	860500241	860500580	86828046183	86035104727	150
822500000	822500465	822500161	82254213831	82657336477	150
822500000	822500465	822500161	82254213831	82657336477	150
824500000	824500488	824500126	82634830990	82613559154	150
824500000	824500488	824500126	82634830990	82613559154	150
764400000	764400970	764400568	76456814663	76355565673	150
764400000	764400970	764400568	76456814663	76355565673	150
800500000	800500551	800500988	80349487120	80727456290	150
800500000	800500551	800500988	80349487120	80727456290	150
770500000	770500338	770500670	77307930804	77393381810	150
770500000	770500338	770500670	77307930804	77393381810	150
801500000	801500744	801500976	80068179704	80142976311	150
801500000	801500744	801500976	80068179704	80142976311	150
794500000	794500443	794500798	79605624758	79144091146	150
794500000	794500443	794500798	79605624758	79144091146	150
768400000	768400769	768400593	76015801992	76304887672	150
768400000	768400769	768400593	76015801992	76304887672	150
756700000	756700948	756700472	75135196680	75141650561	150
756700000	756700948	756700472	75135196680	75141650561	150
754500000	754500907	754500408	75080177648	75935644638	150
754500000	754500907	754500408	75080177648	75935644638	150
943500000	943500779	943500360	94982957936	94915865964	150
943500000	943500779	943500360	94982957936	94915865964	150
969400000	969400146	969400600	96737116728	96052740694	150
969400000	969400146	969400600	96737116728	96052740694	150
985400000	985400516	985400797	98171543142	98172585759	150
985400000	985400516	985400797	98171543142	98172585759	150
935400000	935400851	935400298	93827906250	93427160459	150
935400000	935400851	935400298	93827906250	93427160459	150

945400000	945400028	945400400	94657288233	94694237900	150
945400000	945400028	945400400	94657288233	94694237900	150
979400000	979400309	979400698	97911679345	97677150896	150
979400000	979400309	979400698	97911679345	97677150896	150
936400000	936400183	936400296	93515101814	93028160357	150
936400000	936400183	936400296	93515101814	93028160357	150
912500000	912500286	912500070	91049566149	91103814062	150
912500000	912500286	912500070	91049566149	91103814062	150
905400000	905400424	905400984	90522450652	90174971416	150
905400000	905400424	905400984	90522450652	90174971416	150
922400000	922400065	922400217	92252161952	92194823950	150
922400000	922400065	922400217	92252161952	92194823950	150
907400000	907400120	907400038	90030055817	90740638039	150
907400000	907400120	907400038	90030055817	90740638039	150
924400000	924400896	924400192	92536438065	92645776068	150
924400000	924400896	924400192	92536438065	92645776068	150
925500000	925500941	925500135	92369365586	92607138108	150
925500000	925500941	925500135	92369365586	92607138108	150
868400000	868400791	868400603	86048471030	86651960693	150
868400000	868400791	868400603	86048471030	86651960693	150
897410000	897410777	897410900	89659827095	89709084331	150
897410000	897410777	897410900	89659827095	89709084331	150
930500000	930500807	930500292	93454434445	93896161777	150
930500000	930500807	930500292	93454434445	93896161777	150
884800000	884800674	884800826	88811389315	88973842900	150
884800000	884800674	884800826	88811389315	88973842900	150
887700000	887700653	887700777	88864423652	88899084527	150
887700000	887700653	887700777	88864423652	88899084527	150
1102500000	1102500055	1102500893	110221553299	110963534178	150
1102500000	1102500055	1102500893	110221553299	110963534178	150
1094500000	1094500098	1094500730	109896056731	109954034717	150
1094500000	1094500098	1094500730	109896056731	109954034717	150
1096400000	1096400929	1096400837	109011803046	109647058144	150
1096400000	1096400929	1096400837	109011803046	109647058144	150
1073400000	1073400377	1073400611	107647575011	107013902358	150
1073400000	1073400377	1073400611	107647575011	107013902358	150
1057400000	1057400377	1057400442	105243382822	105057035154	150
1057400000	1057400377	1057400442	105243382822	105057035154	150
1004500000	1004500361	1004500862	100603128778	100153103874	150
1008400000	1008400862	1008400935	100878090141	100475368436	150
1008400000	1008400862	1008400935	100878090141	100475368436	150
1052400000	1052400297	1052400422	105669193638	105717034709	150
1052400000	1052400297	1052400422	105669193638	105717034709	150
1020500000	1020500628	1020500108	102062010505	102122228148	150
1020500000	1020500628	1020500108	102062010505	102122228148	150
1193400000	1193400217	1193400819	119087540584	119773870792	150
1193400000	1193400217	1193400819	119087540584	119773870792	150

1193500000	1193500190	1193500774	119453173881	119085831349	150
1193500000	1193500190	1193500774	119453173881	119085831349	150
1205500000	1205500521	1205500850	120413302806	120732575285	150
1205500000	1205500521	1205500850	120413302806	120732575285	150
1235610000	1235610752	1235610233	123928830172	123904696675	150
1235610000	1235610752	1235610233	123928830172	123904696675	150
1236400000	1236400069	1236400225	123120065279	123961448258	150
1236400000	1236400069	1236400225	123120065279	123961448258	150
1214500000	1214500012	1214500975	121335705215	121568176096	150
1214500000	1214500012	1214500975	121335705215	121568176096	150
1215500000	1215500665	1215500956	121482061743	121559258913	150
1215500000	1215500665	1215500956	121482061743	121559258913	150
1192400000	1192400239	1192400831	119538616242	119793315627	150
1192400000	1192400239	1192400831	119538616242	119793315627	150
1184310000	1184310411	1184310670	118998548141	118869254662	150
1184310000	1184310411	1184310670	118998548141	118869254662	150
1184500000	1184500946	1184500643	118605191595	118107403271	150
1184500000	1184500946	1184500643	118605191595	118107403271	150
1124400000	1124400775	1124400114	112237301962	112714781495	150
1124400000	1124400775	1124400114	112237301962	112714781495	150
1141500000	1141500151	1141500304	114903597641	114040022450	150
1141500000	1141500151	1141500304	114903597641	114040022450	150
1165700000	1165700775	1165700524	116316084929	116583148296	150
1165700000	1165700775	1165700524	116316084929	116583148296	150
1132400000	1132400101	1132400238	113673363337	113909898408	150
1132400000	1132400101	1132400238	113673363337	113909898408	150
1352500000	1352500491	1352500413	135759736399	135025024412	150
1352500000	1352500491	1352500413	135759736399	135025024412	150
1349400000	1349400858	1349400345	134189020582	134448174881	150
1349400000	1349400858	1349400345	134189020582	134448174881	150
1328400000	1328400188	1328400164	132747123874	132401695487	150
1328400000	1328400188	1328400164	132747123874	132401695487	150
1365700000	1365700815	1365700544	136126434737	136334076411	150
1365700000	1365700815	1365700544	136126434737	136334076411	150
1310500000	1310500637	1310500039	131402214108	131790930894	150
1310500000	1310500637	1310500039	131402214108	131790930894	150
1333500000	1333500290	1333500205	133063530740	133106627598	150
1333500000	1333500290	1333500205	133063530740	133106627598	150
1354400000	1354400747	1354400430	135957205137	135433048240	150
1354400000	1354400747	1354400430	135957205137	135433048240	150
1324500000	1324500213	1324500078	132712292019	132601474314	150
1324500000	1324500213	1324500078	132712292019	132601474314	150
1287400000	1287400657	1287400759	128790156439	128304223105	150
1287400000	1287400657	1287400759	128790156439	128304223105	150
1303500000	1303500901	1303500909	130032577783	130012525574	150
1264500000	1264500191	1264500459	126196155800	126265383895	150
1264500000	1264500191	1264500459	126196155800	126265383895	150

1281500000	1281500679	1281500710	128070712871	128384677796	150
1281500000	1281500679	1281500710	128070712871	128384677796	150
1265700000	1265700795	1265700534	126468106179	126615874287	150
1265700000	1265700795	1265700534	126468106179	126615874287	150
1284500000	1284500962	1284500652	128121721545	128977267406	150
1284500000	1284500962	1284500652	128121721545	128977267406	150
1255500000	1255500638	1255500364	125310947520	125991565846	150
1255500000	1255500638	1255500364	125310947520	125991565846	150
1273400000	1273400408	1273400631	127188462708	127267733763	150
1273400000	1273400408	1273400631	127188462708	127267733763	150
1258400000	1258400596	1258400448	125636656317	125781030158	150
1258400000	1258400596	1258400448	125636656317	125781030158	150
1477400000	1477400520	1477400681	147562109407	147857642933	150
1477400000	1477400520	1477400681	147562109407	147857642933	150
1483500000	1483500928	1483500705	148856922756	148210822124	150
1483500000	1483500928	1483500705	148856922756	148210822124	150
1442410000	1442410074	1442410360	144226925782	144056726461	150
1442410000	1442410074	1442410360	144226925782	144056726461	150
1594500000	1594500413	1594500779	159431274282	159304764502	150
1594500000	1594500413	1594500779	159431274282	159304764502	150
1590500000	1590500617	1590500847	159561122832	159528589821	150
1590500000	1590500617	1590500847	159561122832	159528589821	150
1512400000	1512400005	1512400079	151060385357	151012871129	150
1512400000	1512400005	1512400079	151060385357	151012871129	150
1515500000	1515500708	1515500991	151016332999	151934572184	150
1515500000	1515500708	1515500991	151016332999	151934572184	150
1552500000	1552500532	1552500432	155834828245	155889649995	150
1552500000	1552500532	1552500432	155834828245	155889649995	150
1526500000	1526500707	1526500110	152098303843	152133321941	150
1526500000	1526500707	1526500110	152098303843	152133321941	150
1553400000	1553400871	1553400463	155494439425	155906808660	150
1553400000	1553400871	1553400463	155494439425	155906808660	150
1494800000	1494800764	1494800886	149115034432	149950811771	150
1494800000	1494800764	1494800886	149115034432	149950811771	150
1521500000	1521500962	1521500146	152698293501	152312331855	150
1521500000	1521500962	1521500146	152698293501	152312331855	150
1708700000	1708700938	1708700965	170111982730	170590994104	150
1708700000	1708700938	1708700965	170111982730	170590994104	150
1724500000	1724500470	1724500117	172577748717	172194989066	150
1724500000	1724500470	1724500117	172577748717	172194989066	150
1702400000	1702400870	1702400000	170908911335	170496124371	150
1702400000	1702400870	1702400000	170908911335	170496124371	150
1694800000	1694800792	1694800907	169591145830	169541052957	150
1694800000	1694800792	1694800907	169591145830	169541052957	150
1697410000	1697410751	1697410881	169378214136	169466886772	150
1697410000	1697410751	1697410881	169378214136	169466886772	150
1722400000	1722400034	1722400198	172502957876	172788687769	150

1722400000	1722400034	1722400198	172502957876	172788687769	150
1734400000	1734400904	1734400273	173362119323	173635584075	150
1734400000	1734400904	1734400273	173362119323	173635584075	150
1693500000	1693500284	1693500823	169373279899	169471861812	150
1693500000	1693500284	1693500823	169373279899	169471861812	150
1675400000	1675400311	1675400670	167094506339	167048005608	150
1675400000	1675400311	1675400670	167094506339	167048005608	150
1657410000	1657410402	1657410484	165644843698	165937001756	150
1657410000	1657410402	1657410484	165644843698	165937001756	150
1665400000	1665400246	1665400570	166581386524	166009904182	150
1665400000	1665400246	1665400570	166581386524	166009904182	150
1620500000	1620500722	1620500167	162138736302	162450592688	150
1620500000	1620500722	1620500167	162138736302	162450592688	150
1633500000	1633500559	1633500234	163577354908	163365938194	150
1633500000	1633500559	1633500234	163577354908	163365938194	150
1649400000	1649400843	1649400375	164507472185	164279586261	150
1649400000	1649400843	1649400375	164507472185	164279586261	150
1626500000	1626500722	1626500120	162745508986	162074876539	150
1626500000	1626500722	1626500120	162745508986	162074876539	150
1824400000	1824400882	1824400183	182883430544	182641076356	150
1824400000	1824400882	1824400183	182883430544	182641076356	150
1809400000	1809400309	1809400999	180926115246	180784090874	150
1809400000	1809400309	1809400999	180926115246	180784090874	150
1842500000	1842500400	1842500363	184940478974	184577928843	150
1842500000	1842500400	1842500363	184940478974	184577928843	150
1815400000	1815400580	1815400082	181717421336	181735996344	150
1815400000	1815400580	1815400082	181717421336	181735996344	150
1808410000	1808410834	1808410002	180348685613	180835257465	150
1808410000	1808410834	1808410002	180348685613	180835257465	150
1745400000	1745400996	1745400381	174157655560	174071335249	150
1745400000	1745400996	1745400381	174157655560	174071335249	150
1777400000	1777400573	1777400710	177391454599	177927444013	150
1777400000	1777400573	1777400710	177391454599	177927444013	150
1795400000	1795400613	1795400878	179393394175	179028151451	150
1795400000	1795400613	1795400878	179393394175	179028151451	150
1774400000	1774400148	1774400668	177326284413	177173058955	150
1774400000	1774400148	1774400668	177326284413	177173058955	150
1758400000	1758400556	1758400496	175549074497	175358827050	150
1758400000	1758400556	1758400496	175549074497	175358827050	150
1934500000	1934500687	1934500234	193018515073	193389259052	150
1934500000	1934500687	1934500234	193018515073	193389259052	150
1965400000	1965400296	1965400600	196349920377	196938097114	150
1965400000	1965400296	1965400600	196349920377	196938097114	150
1947400000	1947400362	1947400432	194319537254	194949841294	150
1947400000	1947400362	1947400432	194319537254	194949841294	150
1974400000	1974400179	1974400688	197513622516	197646524150	150
1974400000	1974400179	1974400688	197513622516	197646524150	150

1988400000	1988400076	1988400812	198870069078	198704514080	150
1988400000	1988400076	1988400812	198870069078	198704514080	150
1914400000	1914400744	1914400095	191792814907	191505610611	150
1914400000	1914400744	1914400095	191792814907	191505610611	150
1927400000	1927400183	1927400235	192564605736	192797151811	150
1927400000	1927400183	1927400235	192564605736	192797151811	150
1887400000	1887400659	1887400818	188949707046	188648391799	150
1887400000	1887400659	1887400818	188949707046	188648391799	150
1888400000	1888400059	1888400802	188315188909	188718703399	150
1888400000	1888400059	1888400802	188315188909	188718703399	150
1880500000	1880500492	1880500779	188537186718	188070834728	150
1880500000	1880500492	1880500779	188537186718	188070834728	150
1895400000	1895400630	1895400888	189833714163	189572252935	150
1895400000	1895400630	1895400888	189833714163	189572252935	150
1878400000	1878400876	1878400703	187371172686	187346779795	150
1878400000	1878400876	1878400703	187371172686	187346779795	150
1874400000	1874400164	1874400678	187263195851	187206750087	150
1874400000	1874400164	1874400678	187263195851	187206750087	150
1910500000	1910500612	1910500098	191276443062	191408834200	150
1910500000	1910500612	1910500098	191276443062	191408834200	150
1913700000	1913700346	1913700138	191793540305	191497121354	150
1913700000	1913700346	1913700138	191793540305	191497121354	150
1869400000	1869400130	1869400591	186300326687	186014776667	150
1869400000	1869400130	1869400591	186300326687	186014776667	150
1900500000	1900500567	1900500999	190921389024	190169371217	150
1900500000	1900500567	1900500999	190921389024	190169371217	150
2093600000	2093600875	2093600770	209998420111	209797284597	150
2093600000	2093600875	2093600770	209998420111	209797284597	150
2057410000	2057410461	2057410425	205276505890	205707197383	150
2057410000	2057410461	2057410425	205276505890	205707197383	150
2072400000	2072400252	2072400623	207020615984	207237219677	150
2072400000	2072400252	2072400623	207020615984	207237219677	150
2056400000	2056400403	2056400414	205711578390	205976261810	150
2056400000	2056400403	2056400414	205711578390	205976261810	150
2105310000	2105310821	2105310870	210284569832	210462926162	150
2105310000	2105310821	2105310870	210284569832	210462926162	150
2113500000	2113500038	2113500989	211479486755	211741881188	150
2113500000	2113500038	2113500989	211479486755	211741881188	150
2051500000	2051500324	2051500393	205408144607	205235577958	150
2051500000	2051500324	2051500393	205408144607	205235577958	150
2084310000	2084310393	2084310661	208179763316	208034774479	150
2084310000	2084310393	2084310661	208179763316	208034774479	150
2054500000	2054500793	2054500341	205941089910	205930949613	150
2054500000	2054500793	2054500341	205941089910	205930949613	150
2042500000	2042500552	2042500284	204846357296	204690699284	150
2042500000	2042500552	2042500284	204846357296	204690699284	150
2013400000	2013400022	2013400021	201950792120	201543340517	150

2013400000	2013400022	2013400021	201950792120	201543340517	150
2023400000	2023400182	2023400120	202782131748	202876140611	150
2023400000	2023400182	2023400120	202782131748	202876140611	150
1990500000	1990500692	1990500887	199979311802	199521716517	150
1990500000	1990500692	1990500887	199979311802	199521716517	150
2015400000	2015400445	2015400996	201150843264	201222930337	150
2015400000	2015400445	2015400996	201150843264	201222930337	150
2015500000	2015500646	2015500934	201592265047	201647923138	150
2015500000	2015500646	2015500934	201592265047	201647923138	150
2032400000	2032400087	2032400229	203150480237	203858933340	150
2032400000	2032400087	2032400229	203150480237	203858933340	150
2004500000	2004500363	2004500863	200268266242	200141828870	150
2004500000	2004500363	2004500863	200268266242	200141828870	150
2187410000	2187410668	2187410733	218957295265	218911029674	150
2187410000	2187410668	2187410733	218957295265	218911029674	150
2223700000	2223700403	2223700167	222311424227	222902409888	150
2223700000	2223700403	2223700167	222311424227	222902409888	150
2228400000	2228400172	2228400155	222435565210	222191073275	150
2228400000	2228400172	2228400155	222435565210	222191073275	150
2230500000	2230500815	2230500227	223721202519	223012112999	150
2230500000	2230500815	2230500227	223721202519	223012112999	150
2224400000	2224400792	2224400125	222066317318	222456726564	150
2224400000	2224400792	2224400125	222066317318	222456726564	150
2222400000	2222400947	2222400149	222011870016	222627398755	150
2222400000	2222400947	2222400149	222011870016	222627398755	150
2235400000	2235400788	2235400227	223267690556	223403513135	150
2235400000	2235400788	2235400227	223267690556	223403513135	150
2171600000	2171600217	2171600595	217283096427	217162663605	150
2171600000	2171600217	2171600595	217283096427	217162663605	150
2172400000	2172400269	2172400634	217108574558	217832499120	150
2172400000	2172400269	2172400634	217108574558	217832499120	150
2125400000	2125400592	2125400113	212878789868	212397097398	150
2125400000	2125400592	2125400113	212878789868	212397097398	150
2352210000	2352210532	2352210503	235946066421	235009824735	150
2352210000	2352210532	2352210503	235946066421	235009824735	150
2323610000	2323610016	2323610162	232620344920	232031081887	150
2334500000	2334500582	2334500176	233965735027	233277698041	150
2334500000	2334500582	2334500176	233965735027	233277698041	150
2284310000	2284310382	2284310681	228316824873	228550978361	150
2284310000	2284310382	2284310681	228316824873	228550978361	150
2297400000	2297400729	2297400858	229726666419	229198963063	150
2297400000	2297400729	2297400858	229726666419	229198963063	150
2293500000	2293500210	2293500785	229223236454	229956697102	150
2293500000	2293500210	2293500785	229223236454	229956697102	150
2294400000	2294400249	2294400818	229744926225	229242708685	150
2257400000	2257400297	2257400463	225654546221	225477302613	150
2257400000	2257400297	2257400463	225654546221	225477302613	150

2454500000	2454500864	2454500380	245294202208	245373382028	150
2454500000	2454500864	2454500380	245294202208	245373382028	150
2463400000	2463400284	2463400552	246578175488	246083173602	150
2463400000	2463400284	2463400552	246578175488	246083173602	150
2464500000	2464500229	2464500480	246546578745	246787095313	150
2464500000	2464500229	2464500480	246546578745	246787095313	150
2434500000	2434500602	2434500185	243381613146	243292605101	150
2434500000	2434500602	2434500185	243381613146	243292605101	150
2443400000	2443400688	2443400355	244564718502	244607016547	150
2443400000	2443400688	2443400355	244564718502	244607016547	150
2459400000	2459400975	2459400454	245413445361	245590241588	150
2459400000	2459400975	2459400454	245413445361	245590241588	150
2413500000	2413500088	2413500019	241730526287	241044082784	150
2413500000	2413500088	2413500019	241730526287	241044082784	150
2404400000	2404400599	2404400946	240961502632	240127916102	150
2404400000	2404400599	2404400946	240961502632	240127916102	150
2394500000	2394500151	2394500760	239347033468	239813923122	150
2394500000	2394500151	2394500760	239347033468	239813923122	150
2411500000	2411500849	2411500038	241053259992	241867755009	150
2411500000	2411500849	2411500038	241053259992	241867755009	150
2424500000	2424500409	2424500089	242113707192	242630884198	150
2424500000	2424500409	2424500089	242113707192	242630884198	150
2388400000	2388400972	2388400754	238730384347	238965098002	150
2388400000	2388400972	2388400754	238730384347	238965098002	150
2367400000	2367400475	2367400573	236460917975	236595982678	150
2367400000	2367400475	2367400573	236460917975	236595982678	150
2367410000	2367410520	2367410556	236302719270	236239255828	150
2367410000	2367410520	2367410556	236302719270	236239255828	150
2374400000	2374400089	2374400629	237944645672	237078135821	150
2374400000	2374400089	2374400629	237944645672	237078135821	150
2571500000	2571500669	2571500643	257876943042	257891024378	150
2571500000	2571500669	2571500643	257876943042	257891024378	150
2583400000	2583400120	2583400762	258506757342	258989848130	150
2583400000	2583400120	2583400762	258506757342	258989848130	150
2583600000	2583600770	2583600720	258862877783	258929380164	150
2583600000	2583600770	2583600720	258862877783	258929380164	150
2606400000	2606400763	2606400968	260317242447	260866403923	150
2606400000	2606400763	2606400968	260317242447	260866403923	150
2563500000	2563500495	2563500519	256507125704	256241253741	150
2563500000	2563500495	2563500519	256507125704	256241253741	150
2534500000	2534500619	2534500195	253573519467	253884684424	150
2534500000	2534500619	2534500195	253573519467	253884684424	150
2525400000	2525400659	2525400155	252118387328	252938395658	150
2525400000	2525400659	2525400155	252118387328	252938395658	150
2505400000	2505400360	2505400947	250196491170	250780621586	150
2505400000	2505400360	2505400947	250196491170	250780621586	150
2535400000	2535400845	2535400259	253465696502	253029451004	150

2535400000	2535400845	2535400259	253465696502	253029451004	150
2699400000	2699400496	2699400871	269061372013	269716470226	150
2699400000	2699400496	2699400871	269061372013	269716470226	150
2693400000	2693400297	2693400869	269847572513	269367820695	150
2693400000	2693400297	2693400869	269847572513	269367820695	150
2677700000	2677700116	2677700661	267152138973	267748380874	150
2677700000	2677700116	2677700661	267152138973	267748380874	150
2729400000	2729400544	2729400188	272788173299	272921074112	150
2729400000	2729400544	2729400188	272788173299	272921074112	150
2713700000	2713700328	2713700119	271239798392	271929948035	150
2637400000	2637400160	2637400306	263818562922	263634786703	150
2637400000	2637400160	2637400306	263818562922	263634786703	150
2650500000	2650500000	2650500464	265670321746	265041024160	150
2650500000	2650500000	2650500464	265670321746	265041024160	150
2625500000	2625500890	2625500107	262808212940	262338915773	150
2625500000	2625500890	2625500107	262808212940	262338915773	150
2642500000	2642500670	2642500344	264413266557	264698258712	150
2642500000	2642500670	2642500344	264413266557	264698258712	150
2672400000	2672400838	2672400684	267466886696	267085865493	150
2672400000	2672400838	2672400684	267466886696	267085865493	150
2852500000	2852500587	2852500463	285455698930	285911109573	150
2852500000	2852500587	2852500463	285455698930	285911109573	150
2832400000	2832400093	2832400305	283883007820	283694717247	150
2832400000	2832400093	2832400305	283883007820	283694717247	150
2835400000	2835400900	2835400290	283849646696	283250708838	150
2835400000	2835400900	2835400290	283849646696	283250708838	150
2857400000	2857400398	2857400523	285213762718	285666191719	150
2857400000	2857400398	2857400523	285213762718	285666191719	150
2832500000	2832500515	2832500264	283942308279	283610278460	150
2832500000	2832500515	2832500264	283942308279	283610278460	150
2783400000	2783400155	2783400781	278190067857	278818401138	150
2783400000	2783400155	2783400781	278190067857	278818401138	150
2783500000	2783500975	2783500734	278826583080	278562707509	150
2783500000	2783500975	2783500734	278826583080	278562707509	150
2786400000	2786400884	2786400807	278222298116	278245191296	150
2786400000	2786400884	2786400807	278222298116	278245191296	150
2759400000	2759400029	2759400482	275364595673	275274950897	150
2759400000	2759400029	2759400482	275364595673	275274950897	150
2749400000	2749400861	2749400386	274896496176	274433101422	150
2749400000	2749400861	2749400386	274896496176	274433101422	150
2765400000	2765400265	2765400581	276134949413	276755364380	150
2765400000	2765400265	2765400581	276134949413	276755364380	150
2956400000	2956400552	2956400511	295621835608	295012076339	150
2956400000	2956400552	2956400511	295621835608	295012076339	150
2972500000	2972500782	2972500674	297618947497	297638834413	150
2972500000	2972500782	2972500674	297618947497	297638834413	150
2957410000	2957410453	2957410515	295403725166	295427736783	150

2957410000	2957410453	2957410515	295403725166	295427736783	150
2924500000	2924500509	2924500138	292041233402	292738339880	150
2952500000	2952500605	2952500473	295771335513	295001747143	150
2952500000	2952500605	2952500473	295771335513	295001747143	150
2931500000	2931500213	2931500285	293008956571	293548583333	150
2931500000	2931500213	2931500285	293008956571	293548583333	150
2968400000	2968400813	2968400615	296778399695	296096461526	150
2968400000	2968400813	2968400615	296778399695	296096461526	150
2889400000	2889400369	2889400790	288866375109	288373164146	150
2889400000	2889400369	2889400790	288866375109	288373164146	150
3097410000	3097410659	3097410824	309662320421	309553763108	150
3097410000	3097410659	3097410824	309662320421	309553763108	150
3068400000	3068400612	3068400528	306092882261	306443474718	150
3068400000	3068400612	3068400528	306092882261	306443474718	150
3104500000	3104500383	3104500874	310904269515	310646510540	150
3104500000	3104500383	3104500874	310904269515	310646510540	150
3107400000	3107400002	3107400959	310268997091	310175818890	150
3107400000	3107400002	3107400959	310268997091	310175818890	150
3070500000	3070500220	3070500603	307382848680	307778033301	150
3070500000	3070500220	3070500603	307382848680	307778033301	150
3046400000	3046400205	3046400310	304916244532	304916223492	150
3046400000	3046400205	3046400310	304916244532	304916223492	150
3055500000	3055500611	3055500345	305046706503	305631055784	150
3055500000	3055500611	3055500345	305046706503	305631055784	150
3094400000	3094400217	3094400799	309607208714	309189031469	150
3094400000	3094400217	3094400799	309607208714	309189031469	150
3048400000	3048400385	3048400333	304545094927	304652000308	150
3048400000	3048400385	3048400333	304545094927	304652000308	150
2984400000	2984400199	2984400788	298473768977	298206109083	150
3004400000	3004400534	3004400908	300119725861	300217504147	150
3004400000	3004400534	3004400908	300119725861	300217504147	150
3021610000	3021610801	3021610158	302370765336	302550052861	150
3021610000	3021610801	3021610158	302370765336	302550052861	150
3038400000	3038400317	3038400234	303061468792	303034824110	150
3038400000	3038400317	3038400234	303061468792	303034824110	150
2991500000	2991500016	2991500874	299468107140	299250189914	150
2991500000	2991500016	2991500874	299468107140	299250189914	150
3024500000	3024500157	3024500051	302359646970	302483969434	150
3024500000	3024500157	3024500051	302359646970	302483969434	150
2993500000	2993500343	2993500853	299690451418	299173378431	150
2993500000	2993500343	2993500853	299690451418	299173378431	150
3009400000	3009400181	3009400922	300730811843	300337365077	150
3009400000	3009400181	3009400922	300730811843	300337365077	150
2997400000	2997400846	2997400926	299657494615	299368143955	150
2997400000	2997400846	2997400926	299657494615	299368143955	150
2994500000	2994500475	2994500820	299139418507	299147961847	150
2994500000	2994500475	2994500820	299139418507	299147961847	150

3202400000	3202400786	3202400953	320849199414	320487055432	150
3202400000	3202400786	3202400953	320849199414	320487055432	150
3218400000	3218400051	3218400056	321284875838	321871530116	150
3218400000	3218400051	3218400056	321284875838	321871530116	150
3221500000	3221500989	3221500118	322285177298	322336434703	150
3192500000	3192500854	3192500792	319510413021	319168130845	150
3192500000	3192500854	3192500792	319510413021	319168130845	150
3208400000	3208400895	3208400957	320067319347	320511080146	150
3208400000	3208400895	3208400957	320067319347	320511080146	150
3194410000	3194410106	3194410822	319526961484	319384052419	150
3194410000	3194410106	3194410822	319526961484	319384052419	150
3197400000	3197400714	3197400850	319527088385	319960291654	150
3197400000	3197400714	3197400850	319527088385	319960291654	150
3216400000	3216400809	3216400029	321248812772	321650487929	150
3216400000	3216400809	3216400029	321248812772	321650487929	150
3166400000	3166400587	3166400533	316664025908	316080491512	150
3166400000	3166400587	3166400533	316664025908	316080491512	150
3131500000	3131500066	3131500208	313766143783	313220525992	150
3131500000	3131500066	3131500208	313766143783	313220525992	150
3138400000	3138400337	3138400244	313385312205	313186832886	150
3138400000	3138400337	3138400244	313385312205	313186832886	150
3154400000	3154400719	3154400412	315865325600	315692922024	150
3154400000	3154400719	3154400412	315865325600	315692922024	150
3148400000	3148400401	3148400343	314731056394	314284287097	150
3148400000	3148400401	3148400343	314731056394	314284287097	150
3127400000	3127400068	3127400159	312458309832	312047617750	150
3127400000	3127400068	3127400159	312458309832	312047617750	150
3316400000	3316400822	3316400039	331063510067	331626142318	150
3316400000	3316400822	3316400039	331063510067	331626142318	150
3317400000	3317400183	3317400081	331338311861	331978570224	150
3317400000	3317400183	3317400081	331338311861	331978570224	150
3350500000	3350500951	3350500435	335109322967	335661621554	150
3350500000	3350500951	3350500435	335109322967	335661621554	150
3307400000	3307400031	3307400981	330322416158	330212002665	150
3307400000	3307400031	3307400981	330322416158	330212002665	150
3326400000	3326400986	3326400138	332701816289	332363523980	150
3326400000	3326400986	3326400138	332701816289	332363523980	150
3354700000	3354700463	3354700458	335401142916	335229702843	150
3354700000	3354700463	3354700458	335401142916	335229702843	150
3336400000	3336400092	3336400236	333574790365	333585050607	150
3336400000	3336400092	3336400236	333574790365	333585050607	150
3329400000	3329400487	3329400149	332361333527	332768442487	150
3329400000	3329400487	3329400149	332361333527	332768442487	150
3300500000	3300500462	3300500942	330721319158	330936454674	150
3300500000	3300500462	3300500942	330721319158	330936454674	150
3282400000	3282400942	3282400743	328951981832	328781652560	150
3282400000	3282400942	3282400743	328951981832	328781652560	150

3292400000	3292400260	3292400843	329553216433	329785827780	150
3292400000	3292400260	3292400843	329553216433	329785827780	150
3287410000	3287410687	3287410744	328977553913	328006717134	150
3287410000	3287410687	3287410744	328977553913	328006717134	150
3287700000	3287700539	3287700720	328253299174	328050279181	150
3287700000	3287700539	3287700720	328253299174	328050279181	150
3238400000	3238400355	3238400254	323334360465	323644095307	150
3238400000	3238400355	3238400254	323334360465	323644095307	150
3254700000	3254700444	3254700448	325508651629	325154118596	150
3254700000	3254700444	3254700448	325508651629	325154118596	150
3231500000	3231500084	3231500218	323170164646	323116563044	150
3231500000	3231500084	3231500218	323170164646	323116563044	150
3293400000	3293400237	3293400830	329055619597	329749257282	150
3293400000	3293400237	3293400830	329055619597	329749257282	150
3293500000	3293500212	3293500786	329043897174	329292009311	150
3293500000	3293500212	3293500786	329043897174	329292009311	150
3234500000	3234500566	3234500168	323526353418	323292716194	150
3234500000	3234500566	3234500168	323526353418	323292716194	150
3458610000	3458610358	3458610412	345290122426	345298084541	150
3458610000	3458610358	3458610412	345290122426	345298084541	150
3468400000	3468400719	3468400566	346548274007	346424906275	150
3468400000	3468400719	3468400566	346548274007	346424906275	150
3405400000	3405400344	3405400938	340541136561	340598657758	150
3405400000	3405400344	3405400938	340541136561	340598657758	150
3382500000	3382500713	3382500715	338128205993	338375456944	150
3382500000	3382500713	3382500715	338128205993	338375456944	150
3383400000	3383400087	3383400743	338006293092	338938680729	150
3383400000	3383400087	3383400743	338006293092	338938680729	150
3387510000	3387510489	3387510811	338264506163	338215060306	150
3387510000	3387510489	3387510811	338264506163	338215060306	150
3410500000	3410500659	3410500051	341752294418	341198235785	150
3410500000	3410500659	3410500051	341752294418	341198235785	150
3580500000	3580500510	3580500751	358901318033	358847382210	150
3580500000	3580500510	3580500751	358901318033	358847382210	150
3584400000	3584400273	3584400749	358558358134	358278313804	150
3584400000	3584400273	3584400749	358558358134	358278313804	150
3574500000	3574500426	3574500584	357071291533	357829535457	150
3574500000	3574500426	3574500584	357071291533	357829535457	150
3565400000	3565400233	3565400562	356711240425	356541405766	150
3565400000	3565400233	3565400562	356711240425	356541405766	150
3538400000	3538400406	3538400284	353277744970	353197263185	150
3538400000	3538400406	3538400284	353277744970	353197263185	150
3522400000	3522400000	3522400180	352477637648	352968846864	150
3522400000	3522400000	3522400180	352477637648	352968846864	150
3508410000	3508410895	3508410974	350004173713	350835181107	150
3508410000	3508410895	3508410974	350004173713	350835181107	150
3525500000	3525500876	3525500098	352352695221	352920861135	150

3525500000	3525500876	3525500098	352352695221	352920861135	150
3545400000	3545400965	3545400363	354267348254	354735205018	150
3545400000	3545400965	3545400363	354267348254	354735205018	150
3504400000	3504400613	3504400957	350072244088	350914184065	150
3504400000	3504400613	3504400957	350072244088	350914184065	150
3713400000	3713400133	3713400092	371621487107	371827690040	150
3713400000	3713400133	3713400092	371621487107	371827690040	150
3725400000	3725400701	3725400177	372975079961	372015568219	150
3725400000	3725400701	3725400177	372975079961	372015568219	150
3725710000	3725710617	3725710109	372400075806	372235721493	150
3725710000	3725710617	3725710109	372400075806	372235721493	150
3684500000	3684500039	3684500692	368436441167	368973924108	150
3684500000	3684500039	3684500692	368436441167	368973924108	150
3704400000	3704400644	3704400977	370997391940	370370743637	150
3704400000	3704400644	3704400977	370997391940	370370743637	150
3714400000	3714400718	3714400077	371999013512	371246091437	150
3714400000	3714400718	3714400077	371999013512	371246091437	150
3671500000	3671500567	3671500654	367096489743	367938910879	150
3671500000	3671500567	3671500654	367096489743	367938910879	150
3618400000	3618400115	3618400096	361347910338	361803286335	150
3618400000	3618400115	3618400096	361347910338	361803286335	150
3653400000	3653400892	3653400475	365527098569	365224526076	150
3653400000	3653400892	3653400475	365527098569	365224526076	150
3613400000	3613400119	3613400082	361050858607	361380192660	150
3613400000	3613400119	3613400082	361050858607	361380192660	150
3802400000	3802400890	3802400012	380721724300	380291024606	150
3802400000	3802400890	3802400012	380721724300	380291024606	150
3846400000	3846400369	3846400393	384743688452	384429149041	150
3846400000	3846400369	3846400393	384743688452	384429149041	150
3854500000	3854500933	3854500421	385650958443	385109312405	150
3854500000	3854500933	3854500421	385650958443	385109312405	150
3792500000	3792500960	3792500852	379443802579	379452467242	150
3792500000	3792500960	3792500852	379443802579	379452467242	150
3740500000	3740500941	3740500375	374184883691	374645587605	150
3740500000	3740500941	3740500375	374184883691	374645587605	150
3794400000	3794400337	3794400869	379320138381	379055280021	150
3794400000	3794400337	3794400869	379320138381	379055280021	150
3950500000	3950500095	3950500494	395142674734	395950485689	150
3950500000	3950500095	3950500494	395142674734	395950485689	150
3935400000	3935400856	3935400301	393417904812	393400687359	150
3935400000	3935400856	3935400301	393417904812	393400687359	150
3959400000	3959400068	3959400503	395158812977	395225894918	150
3959400000	3959400068	3959400503	395158812977	395225894918	150
3984500000	3984500086	3984500722	398262690455	398459678684	150
3984500000	3984500086	3984500722	398262690455	398459678684	150
3982400000	3982400053	3982400813	398107745970	398199244962	150
3982400000	3982400053	3982400813	398107745970	398199244962	150

3955700000	3955700742	3955700506	395734876974	395312113286	150
3955700000	3955700742	3955700506	395734876974	395312113286	150
3926400000	3926400026	3926400197	392987074553	392713692111	150
3926400000	3926400026	3926400197	392987074553	392713692111	150
3938400000	3938400471	3938400323	393277211671	393478529685	150
3938400000	3938400471	3938400323	393277211671	393478529685	150
3904500000	3904500960	3904500947	390352662100	390442054206	150
3904500000	3904500960	3904500947	390352662100	390442054206	150
3897700000	3897700785	3897700879	389612897934	389056314526	150
3897700000	3897700785	3897700879	389612897934	389056314526	150
3884500000	3884500072	3884500712	388853089718	388978940451	150
3884500000	3884500072	3884500712	388853089718	388978940451	150
3901500000	3901500763	3901500989	390201238564	390858061561	150
3901500000	3901500763	3901500989	390201238564	390858061561	150
3891500000	3891500999	3891500865	389713072669	389814995712	150
3891500000	3891500999	3891500865	389713072669	389814995712	150
3894500000	3894500462	3894500811	389698308151	389054454585	150
3894500000	3894500462	3894500811	389698308151	389054454585	150
4083500000	4083500859	4083500668	408169258724	408800974968	150
4083500000	4083500859	4083500668	408169258724	408800974968	150
4042400000	4042400130	4042400326	404537509862	404522302190	150
4042400000	4042400130	4042400326	404537509862	404522302190	150
4047400000	4047400227	4047400346	404211006337	404007386104	150
4047400000	4047400227	4047400346	404211006337	404007386104	150
4093400000	4093400207	4093400812	409432193408	409825319172	150
4093400000	4093400207	4093400812	409432193408	409825319172	150
4069400000	4069400085	4069400514	406525262759	406359426622	150
4069400000	4069400085	4069400514	406525262759	406359426622	150
4094310000	4094310530	4094310762	409498825769	409632667380	150
4094310000	4094310530	4094310762	409498825769	409632667380	150
4054700000	4054700405	4054700429	405001472312	405591884673	150
3987410000	3987410640	3987410813	398792110239	398519467732	150
3987410000	3987410640	3987410813	398792110239	398519467732	150
3987700000	3987700676	3987700790	398295068833	398695382099	150
3987700000	3987700676	3987700790	398295068833	398695382099	150
4210500000	4210500625	4210500032	421659713333	421630048711	150
4210500000	4210500625	4210500032	421659713333	421630048711	150
4165400000	4165400172	4165400523	416955194946	416917554127	150
4165400000	4165400172	4165400523	416955194946	416917554127	150
4164400000	4164400879	4164400512	416235941804	416999174350	150
4164400000	4164400879	4164400512	416235941804	416999174350	150
4198400000	4198400119	4198400835	419604180943	419457529622	150
4198400000	4198400119	4198400835	419604180943	419457529622	150
4209510000	4209510206	4209510995	420407623551	420366473269	150
4209510000	4209510206	4209510995	420407623551	420366473269	150
4219400000	4219400315	4219400042	421983102037	421407676045	150
4219400000	4219400315	4219400042	421983102037	421407676045	150

4173500000	4173500706	4173500581	417886125448	417545745644	150
4173500000	4173500706	4173500581	417886125448	417545745644	150
4103400000	4103400410	4103400934	410505274102	410377976428	150
4103400000	4103400410	4103400934	410505274102	410377976428	150
4322400000	4322400969	4322400161	432085649182	432979926372	150
4322400000	4322400969	4322400161	432085649182	432979926372	150
4136400000	4136400059	4136400218	413746493854	413522825863	150
4136400000	4136400059	4136400218	413746493854	413522825863	150
4123400000	4123400202	3123400131	412650356997	412008738643	150
4123400000	4123400202	3123400131	412650356997	412008738643	150
4152410000	4152410191	4152410437	415560439471	415584436885	150
4152410000	4152410191	4152410437	415560439471	415584436885	150
4124610000	4124610945	4124610137	412037939819	412601246919	150
4124610000	4124610945	4124610137	412037939819	412601246919	150
4156400000	4156400423	4156400427	415800027455	415833924352	150
4156400000	4156400423	4156400427	415800027455	415833924352	150
4309400000	4309400236	4309400953	430669503924	430721748012	150
4309400000	4309400236	4309400953	430669503924	430721748012	150
4312400000	4312400975	3312400062	431350910361	431141559525	150
4312400000	4312400975	3312400062	431350910361	431141559525	150
4294800000	4294800739	4294800869	429261292673	429173420378	150
4294800000	4294800739	4294800869	429261292673	429173420378	150
4344400000	4344400002	4344400334	434470794202	434363641859	150
4344400000	4344400002	4344400334	434470794202	434363641859	150
4301500000	4301500761	4301500930	430790729683	430605544406	150
4301500000	4301500761	4301500930	430790729683	430605544406	150
4323700000	4323700424	4323700178	432735850738	432592815612	150
4323700000	4323700424	4323700178	432735850738	432592815612	150
4279410000	4279410103	4279410628	427961078500	427963066121	150
4279410000	4279410103	4279410628	427961078500	427963066121	150
4257500000	4257500330	4257500368	425757765529	425380249807	150
4257500000	4257500330	4257500368	425757765529	425380249807	150
4259400000	4259400946	4259400437	425713030035	425121175481	150
4259400000	4259400946	4259400437	425713030035	425121175481	150
4261500000	4261500429	4261500515	426606612929	426928728391	150
4261500000	4261500429	4261500515	426606612929	426928728391	150
4232500000	4232500408	4232500205	423446048280	423508848780	150
4232500000	4232500408	4232500205	423446048280	423508848780	150
4255500000	4255500642	4255500367	425415493924	425569655479	150
4255500000	4255500642	4255500367	425415493924	425569655479	150
4253400000	4253400824	4253400436	425363978380	425031406365	150
4253400000	4253400824	4253400436	425363978380	425031406365	150
4426500000	4426500695	4426500103	442680972038	442916323878	150
4426500000	4426500695	4426500103	442680972038	442916323878	150
4458400000	4458400640	4458400470	445332802746	445147179072	150
4458400000	4458400640	4458400470	445332802746	445147179072	150
4444500000	4444500693	4444500285	444779336132	444548472518	150

4444500000	4444500693	4444500285	444779336132	444548472518	150
4431500000	4431500124	4431500238	443215736093	443361913840	150
4431500000	4431500124	4431500238	443215736093	443361913840	150
4440500000	4440500894	4440500346	444186119997	444189484356	150
4440500000	4440500894	4440500346	444186119997	444189484356	150
4456700000	4456700902	4456700446	445714089629	445103212291	150
4438400000	4438400392	4438400275	443686837612	443628105396	150
4438400000	4438400392	4438400275	443686837612	443628105396	150
4457400000	4457400333	4457400485	445162925064	445579708536	150
4457400000	4457400333	4457400485	445162925064	445579708536	150
4395400000	4395400550	4395400841	439715903006	439572157195	150
4395400000	4395400550	4395400841	439715903006	439572157195	150
4391500000	4391500897	4391500816	439881443581	439611449460	150
4391500000	4391500897	4391500816	439881443581	439611449460	150
4564400000	4564400943	4564400552	456033218486	456062142588	150
4564400000	4564400943	4564400552	456033218486	456062142588	150
4558400000	4558400656	4558400480	455927315393	455721874297	150
4558400000	4558400656	4558400480	455927315393	455721874297	150
4567400000	4567400513	4567400595	456100402102	456695666270	150
4567400000	4567400513	4567400595	456100402102	456695666270	150
4568500000	4568500510	4568500516	456307514812	456030165775	150
4568500000	4568500510	4568500516	456307514812	456030165775	150
4577400000	4577400542	4577400694	457637785831	457062807877	150
4577400000	4577400542	4577400694	457637785831	457062807877	150
4565710000	4565710006	4565710485	456227514888	456681728801	150
4565710000	4565710006	4565710485	456227514888	456681728801	150
4543400000	4543400710	4543400367	454486866396	454427032811	150
4543400000	4543400710	4543400367	454486866396	454427032811	150
4587400000	4587400717	4587400792	458217329585	458385971272	150
4587400000	4587400717	4587400792	458217329585	458385971272	150
4484310000	4484310421	4484310702	448993101644	448324813959	150
4484310000	4484310421	4484310702	448993101644	448324813959	150
4476400000	4476400750	4476400670	447038233620	447325884900	150
4476400000	4476400750	4476400670	447038233620	447325884900	150
4469500000	4469500677	4469500528	446413820847	446683272556	150
4469500000	4469500677	4469500528	446413820847	446683272556	150
4494500000	4494500401	4494500772	449329418827	449711714228	150
4494500000	4494500401	4494500772	449329418827	449711714228	150
4473400000	4473400445	4473400654	447633577100	447936769230	150
4473400000	4473400445	4473400654	447633577100	447936769230	150
4502400000	4502400836	4502400984	450136995623	450273109165	150
4502400000	4502400836	4502400984	450136995623	450273109165	150
4683400000	4683400139	4683400773	468096556294	468905490033	150
4683400000	4683400139	4683400773	468096556294	468905490033	150
4710500000	4710500584	4710500081	471682689422	471216908259	150
4710500000	4710500584	4710500081	471682689422	471216908259	150
4715400000	4715400568	4715400073	471096272439	471008362097	150

4715400000	4715400568	4715400073	471096272439	471008362097	150
4594800000	4594800780	4594800900	459025993425	459046844028	150
4594800000	4594800780	4594800900	459025993425	459046844028	150
4600500000	4600500511	4600500973	460982422921	460766528279	150
4600500000	4600500511	4600500973	460982422921	460766528279	150
4615500000	4615500728	4615500006	461942750488	461648790093	150
4615500000	4615500728	4615500006	461942750488	461648790093	150
4634400000	4634400892	4634400266	463747729789	463971089864	150
4634400000	4634400892	4634400266	463747729789	463971089864	150
4609400000	4609400282	4609400982	460627028917	460929985384	150
4609400000	4609400282	4609400982	460627028917	460929985384	150
4595400000	4595400584	4595400861	459351784091	459548456038	150
4595400000	4595400584	4595400861	459351784091	459548456038	150
4607400000	4607400082	4607400012	460836549163	460900946770	150
4607400000	4607400082	4607400012	460836549163	460900946770	150
4807400000	4807400113	4807400032	480658718797	480298318370	150
4807400000	4807400113	4807400032	480658718797	480298318370	150
4815400000	4815400587	4815400085	481101593217	481015207735	150
4815400000	4815400587	4815400085	481101593217	481015207735	150
4817400000	4817400028	4817400130	481037759519	481974694028	150
4817400000	4817400028	4817400130	481037759519	481974694028	150
4834500000	4834500676	4834500227	483909377203	483152216978	150
4829400000	4829400615	4829400200	482021051972	482038622941	150
4829400000	4829400615	4829400200	482021051972	482038622941	150
4784800000	4784800666	4784800820	478493752944	478037317902	150
4784800000	4784800666	4784800820	478493752944	478037317902	150
4767400000	4767400547	4767400615	476017207861	476585926026	150
4767400000	4767400547	4767400615	476017207861	476585926026	150
4719400000	4719400392	4719400092	471635329837	471503405568	150
4719400000	4719400392	4719400092	471635329837	471503405568	150
4720500000	4720500741	4720500179	472749567037	472602704977	150
4720500000	4720500741	4720500179	472749567037	472602704977	150
4744500000	4744500744	4744500314	474846973218	474435178852	150
4744500000	4744500744	4744500314	474846973218	474435178852	150
4923500000	4923500223	4923500168	492353431194	492286973023	150
4923500000	4923500223	4923500168	492353431194	492286973023	150
4929400000	4929400634	4929400209	492438129415	492118158962	150
4929400000	4929400634	4929400209	492438129415	492118158962	150
4939400000	4939400803	4939400308	493903132010	493622629673	150
4939400000	4939400803	4939400308	493903132010	493622629673	150
4915500000	4915500777	4915500039	491664975331	491730187310	150
4908400000	4908400002	4908400027	490404053513	490440388389	150
4908400000	4908400002	4908400027	490404053513	490440388389	150
4934400000	4934400937	4934400294	493452819425	493665189104	150
4957400000	4957400421	4957400535	495657208140	495913432697	150
4957400000	4957400421	4957400535	495657208140	495913432697	150
4922400000	4922400072	4922400221	492448639215	492711666238	150

4922400000	4922400072	4922400221	492448639215	492711666238	150
4904400000	4904400678	4904400998	490067403369	490944739679	150
4904400000	4904400678	4904400998	490067403369	490944739679	150
4882600000	4882600823	4882600758	488546202066	488518130175	150
4882600000	4882600823	4882600758	488546202066	488518130175	150
4902400000	4902400909	4902400023	490617109310	490771102108	150
4902400000	4902400909	4902400023	490617109310	490771102108	150
4845400000	4845400017	4845400394	484177482807	484486522047	150
4845400000	4845400017	4845400394	484177482807	484486522047	150
4903400000	4903400010	4903400013	490486395580	490796081840	150
4903400000	4903400010	4903400013	490486395580	490796081840	150
4844400000	4844400092	4844400384	484901347246	484845999667	150
4844400000	4844400092	4844400384	484901347246	484845999667	150
4852400000	4852400037	4852400505	485489717384	485176372932	150
4852400000	4852400037	4852400505	485489717384	485176372932	150
4873400000	4873400503	4873400694	487767308126	487791281703	150
4873400000	4873400503	4873400694	487767308126	487791281703	150
5059400000	5059400912	5059400419	505730594376	505574956430	150
5059400000	5059400912	5059400419	505730594376	505574956430	150
5062400000	5062400075	5062400526	506366432634	506025062743	150
5062400000	5062400075	5062400526	506366432634	506025062743	150
5025400000	5025400626	5025400105	502298250424	502570026472	150
5025400000	5025400626	5025400105	502298250424	502570026472	150
5043500000	5043500635	5043500277	504577961393	504397750512	150
5043500000	5043500635	5043500277	504577961393	504397750512	150
5008700000	5008700825	5008700901	500041474752	500716016174	150
5008700000	5008700825	5008700901	500041474752	500716016174	150
4989400000	4989400388	4989400802	498004982384	498276860721	150
4989400000	4989400388	4989400802	498004982384	498276860721	150
5014500000	5014500982	5014500959	501321095637	501414743156	150
5014500000	5014500982	5014500959	501321095637	501414743156	150
4971500000	4971500627	4971500684	497064382269	497276812638	150
4971500000	4971500627	4971500684	497064382269	497276812638	150
4964400000	4964400027	4964400591	496137997082	496854859966	150
4964400000	4964400027	4964400591	496137997082	496854859966	150
5194310000	5194310551	5194310773	519785820830	519400036294	150
5194310000	5194310551	5194310773	519785820830	519400036294	150
5194500000	5194500124	5194500744	519932281248	519702390555	150
5194500000	5194500124	5194500744	519932281248	519702390555	150
5182400000	5182400927	5182400735	518608607289	518025273969	150
5182400000	5182400927	5182400735	518608607289	518025273969	150
5197410000	5197410680	5197410836	519607984648	519308061025	150
5197410000	5197410680	5197410836	519607984648	519308061025	150
5157400000	5157400283	5157400456	515872445254	515886557728	150
5157400000	5157400283	5157400456	515872445254	515886557728	150
5205310000	5205310848	5205310883	520402626104	520514049811	150
5205310000	5205310848	5205310883	520402626104	520514049811	150

5160500000	5160500129	5160500516	516137342464	516411597579	150
5160500000	5160500129	5160500516	516137342464	516411597579	150
5193600000	5193600900	5193600783	519798063295	519969604272	150
5193600000	5193600900	5193600783	519798063295	519969604272	150
5152210000	5152210500	5152210486	515655786628	515369635955	150
5152210000	5152210500	5152210486	515655786628	515369635955	150
5133400000	5133400563	5133400231	513549569772	513004450489	150
5136610000	5136610472	5136610214	513718558693	513840346726	150
5136610000	5136610472	5136610214	513718558693	513840346726	150
5147400000	5147400246	5147400356	514078916833	514157380418	150
5147400000	5147400246	5147400356	514078916833	514157380418	150
5094800000	5094800709	5094800851	509881402033	509147888836	150
5094800000	5094800709	5094800851	509881402033	509147888836	150
5102500000	5102500065	5102500897	510772613189	510976701563	150
5102500000	5102500065	5102500897	510772613189	510976701563	150
5122400000	5122400933	5122400142	512694475019	512249196168	150
5122400000	5122400933	5122400142	512694475019	512249196168	150
5314500000	5314500038	5314500988	531441684596	531068300619	150
5314500000	5314500038	5314500988	531441684596	531068300619	150
5325500000	5325500846	5325500080	532460675837	532658315706	150
5325500000	5325500846	5325500080	532460675837	532658315706	150
5287510000	5287510476	5287510803	528122308306	528261326021	150
5287510000	5287510476	5287510803	528122308306	528261326021	150
5273500000	5273500726	5273500592	527627745948	527025328462	150
5273500000	5273500726	5273500592	527627745948	527025328462	150
5305400000	5305400329	5305400930	530424088235	530981475666	150
5305400000	5305400329	5305400930	530424088235	530981475666	150
5209400000	5209400220	5209400944	520244665493	520494858995	150
5209400000	5209400220	5209400944	520244665493	520494858995	150
5211500000	5211500822	5211500021	521387411421	521918840797	150
5211500000	5211500822	5211500021	521387411421	521918840797	150
5419400000	5419400346	5419400063	541641778013	541699064688	150
5419400000	5419400346	5419400063	541641778013	541699064688	150
5436610000	5436610518	5436610242	543943396557	543055190542	150
5436610000	5436610518	5436610242	543943396557	543055190542	150
5407400000	5407400050	5407400994	540071792325	540493281623	150
5412500000	5412500197	5412500025	541572653432	541767918023	150
5412500000	5412500197	5412500025	541572653432	541767918023	150
5406400000	5406400735	5406400951	540894544146	540396480979	150
5406400000	5406400735	5406400951	540894544146	540396480979	150
5413400000	5413400090	5413400064	541986344191	541764487810	150
5413400000	5413400090	5413400064	541986344191	541764487810	150
5426400000	5426400003	5426400150	542482935603	542523276891	150
5426400000	5426400003	5426400150	542482935603	542523276891	150
5457500000	5457500367	5457500389	545511386345	545492574965	150
5457500000	5457500367	5457500389	545511386345	545492574965	150
5339400000	5339400702	5339400250	533364521286	533041355420	150

5339400000	5339400702	5339400250	533364521286	533041355420	150
5348400000	5348400442	5348400365	534158313246	534977970132	150
5348400000	5348400442	5348400365	534158313246	534977970132	150
5351500000	5351500393	5351500426	535885499938	535804568856	150
5351500000	5351500393	5351500426	535885499938	535804568856	150
5354500000	5354500853	5354500373	535551670612	535462714793	150
5354500000	5354500853	5354500373	535551670612	535462714793	150
5334400000	5334400844	5334400237	533948976945	533443507004	150
5334400000	5334400844	5334400237	533948976945	533443507004	150
5392600000	5392600828	5392600809	539364012654	539405629001	150
5392600000	5392600828	5392600809	539364012654	539405629001	150
5573400000	5573400459	5573400665	557588970324	557835232037	150
5573400000	5573400459	5573400665	557588970324	557835232037	150
5573500000	5573500778	5573500621	557977611065	557848114331	150
5573500000	5573500778	5573500621	557977611065	557848114331	150
5544400000	5544400041	5544400355	554931033509	554510434942	150
5544400000	5544400041	5544400355	554931033509	554510434942	150
5574400000	5574400124	5574400652	557822082737	557220436475	150
5574400000	5574400124	5574400652	557822082737	557220436475	150
5546400000	5546400323	5546400364	554229347482	554077867418	150
5546400000	5546400323	5546400364	554229347482	554077867418	150
5568400000	5568400741	5568400578	556182680017	556711517442	150
5568400000	5568400741	5568400578	556182680017	556711517442	150
5534400000	5534400876	5534400257	553346738323	553547736594	150
5534400000	5534400876	5534400257	553346738323	553547736594	150
5556400000	5556400492	5556400471	555474578735	555852648607	150
5556400000	5556400492	5556400471	555474578735	555852648607	150
5523700000	5523700461	5523700198	552675466423	552494536344	150
5572400000	5572400828	5572400677	557608226937	557791374562	150
5572400000	5572400828	5572400677	557608226937	557791374562	150
5505500000	5505500572	5505500884	550513518122	550653358199	150
5505500000	5505500572	5505500884	550513518122	550653358199	150
5512500000	5512500219	5512500034	551608249557	551937618596	150
5512500000	5512500219	5512500034	551608249557	551937618596	150
5471500000	5471500654	5471500636	547898756291	547868516129	150
5471500000	5471500654	5471500636	547898756291	547868516129	150
5474400000	5474400108	5474400642	547461184886	547032860409	150
5474400000	5474400108	5474400642	547461184886	547032860409	150
5492600000	5492600847	5492600819	549392513006	549949381268	150
5492600000	5492600847	5492600819	549392513006	549949381268	150
5519400000	5519400360	5519400073	551561951192	551709774173	150
5519400000	5519400360	5519400073	551561951192	551709774173	150
5504500000	5504500457	5504500912	550697664947	550916962421	150
5504500000	5504500457	5504500912	550697664947	550916962421	150
5693500000	5693500290	5693500827	569977794341	569553991383	150
5693500000	5693500290	5693500827	569977794341	569553991383	150
5684800000	5684800654	5684800811	568750281006	568005870899	150

5684800000	5684800654	5684800811	568750281006	568005870899	150
5662500000	5662500571	5662500546	566126021723	566522793302	150
5662500000	5662500571	5662500546	566126021723	566522793302	150
5627400000	5627400148	5627400209	562244531637	562621515417	150
5627400000	5627400148	5627400209	562244531637	562621515417	150
5588400000	5588400011	5588400776	558863142574	558229621132	150
5588400000	5588400011	5588400776	558863142574	558229621132	150
5615400000	5615400551	5615400064	561726329207	561879475623	150
5615400000	5615400551	5615400064	561726329207	561879475623	150
5631500000	5631500166	5631500259	563644470299	563002492397	150
5631500000	5631500166	5631500259	563644470299	563002492397	150
5644500000	5644500733	5644500305	564297378261	564744664118	150
5644700000	5644700329	5644700393	564857490209	564322612365	150
5644700000	5644700329	5644700393	564857490209	564322612365	150
5626400000	5626400032	5626400169	562151118289	562935191529	150
5626400000	5626400032	5626400169	562151118289	562935191529	150
5635410000	5635410471	5635410277	563998222601	563382924344	150
5635410000	5635410471	5635410277	563998222601	563382924344	150
5799400000	5799400514	5799400884	579930437347	579574432296	150
5799400000	5799400514	5799400884	579930437347	579574432296	150
5784600000	5784600674	5784600737	578514427372	578463260720	150
5784600000	5784600674	5784600737	578514427372	578463260720	150
5813400000	5813400153	5813400104	581669485897	581915354634	150
5813400000	5813400153	5813400104	581669485897	581915354634	150
5794500000	5794500450	5794500803	579344258653	579763796966	150
5794500000	5794500450	5794500803	579344258653	579763796966	150
5784400000	5784400174	5784400771	578028287836	578004912539	150
5784400000	5784400174	5784400771	578028287836	578004912539	150
5784500000	5784500059	5784500704	578889888284	578014111165	150
5784500000	5784500059	5784500704	578889888284	578014111165	150
5736400000	5736400160	5736400280	573280423662	573326125583	150
5736400000	5736400160	5736400280	573280423662	573326125583	150
5725500000	5725500914	5725500120	572232238467	572430266456	150
5725500000	5725500914	5725500120	572232238467	572430266456	150
5728400000	5728400267	5728400206	572978686519	572372301576	150
5728400000	5728400267	5728400206	572978686519	572372301576	150
5751500000	5751500471	5751500467	575882390449	575160215158	150
5751500000	5751500471	5751500467	575882390449	575160215158	150
5761500000	5761500523	5761500566	576855751333	576081572317	150
5761500000	5761500523	5761500566	576855751333	576081572317	150
5932400000	5932400115	5932400317	593220236360	593327583089	150
5932400000	5932400115	5932400317	593220236360	593327583089	150
5894800000	5894800827	5894800934	589916649030	589514243270	150
5894800000	5894800827	5894800934	589916649030	589514243270	150
5897410000	5897410786	5897410905	589958954605	589856294266	150
5897410000	5897410786	5897410905	589958954605	589856294266	150
5856400000	5856400539	5856400503	585333229963	585670071096	150

5856400000	5856400539	5856400503	585333229963	585670071096	150
5884400000	5884400187	5884400781	588329686143	588515319398	150
5884400000	5884400187	5884400781	588329686143	588515319398	150
5837400000	5837400199	5837400327	583636590270	583112138636	150
5837400000	5837400199	5837400327	583636590270	583112138636	150
5857500000	5857500428	5857500430	585928045658	585359759884	150
5857500000	5857500428	5857500430	585928045658	585359759884	150
5848400000	5848400532	5848400413	584218017603	584765669363	150
5848400000	5848400532	5848400413	584218017603	584765669363	150
6040500000	6040500832	6040500308	604338172279	604114230976	150
6040500000	6040500832	6040500308	604338172279	604114230976	150
6026400000	6026400942	6026400111	602420118237	602004415719	150
6026400000	6026400942	6026400111	602420118237	602004415719	150
6024500000	6024500166	6024500054	602255302695	602223663476	150
6024500000	6024500166	6024500054	602255302695	602223663476	150
6034400000	6034400920	6034400208	603540783382	603521777554	150
6034400000	6034400920	6034400208	603540783382	603521777554	150
6017400000	6017400143	6017400054	601184396974	601054864116	150
6017400000	6017400143	6017400054	601184396974	601054864116	150
5995400000	5995400653	5995400901	599272597720	599199831413	150
5995400000	5995400653	5995400901	599272597720	599199831413	150
5999400000	5999400402	5999400904	599185236957	599046663580	150
5999400000	5999400402	5999400904	599185236957	599046663580	150
5954400000	5954400847	5954400493	595719430732	595071409551	150
5954400000	5954400847	5954400493	595719430732	595071409551	150
5994400000	5994400372	5994400891	599587926813	599940482024	150
5994400000	5994400372	5994400891	599587926813	599940482024	150
6010500000	6010500593	6010500014	601321089661	601602307465	150
6010500000	6010500593	6010500014	601321089661	601602307465	150
6149400000	6149400833	6149400330	614795874782	614609291101	150
6149400000	6149400833	6149400330	614795874782	614609291101	150
6183400000	6183400056	6183400726	618681262579	618089570815	150
6183400000	6183400056	6183400726	618681262579	618089570815	150
6159400000	6159400932	6159400430	615860211994	615279999295	150
6159400000	6159400932	6159400430	615860211994	615279999295	150
6143500000	6143500656	6143500288	614060597467	614953498280	150
6143500000	6143500656	6143500288	614060597467	614953498280	150
6192600000	6192600785	6192600790	619743907053	619880660623	150
6192600000	6192600785	6192600790	619743907053	619880660623	150
6168400000	6168400655	6168400540	616210380261	616519785200	150
6168400000	6168400655	6168400540	616210380261	616519785200	150
6162500000	6162500650	6162500497	616821423366	616786195764	150
6162500000	6162500650	6162500497	616821423366	616786195764	150
6169400000	6169400103	6169400526	616972697012	616918368173	150
6169400000	6169400103	6169400526	616972697012	616918368173	150
6169500000	6169500633	6169500500	616132150809	616282005745	150
6179400000	6179400188	6179400625	617122840962	617267857882	150

6179400000	6179400188	6179400625	617122840962	617267857882	150
6142500000	6142500580	6142500298	614435381570	614310205648	150
6142500000	6142500580	6142500298	614435381570	614310205648	150
6111500000	6111500805	6111500012	611431226153	611505974728	150
6111500000	6111500805	6111500012	611431226153	611505974728	150
6128400000	6128400207	6128400149	612671147548	612569332379	150
6128400000	6128400207	6128400149	612671147548	612569332379	150
6114400000	6114400714	6114400020	611277691741	611011697078	150
6114400000	6114400714	6114400020	611277691741	611011697078	150
6075400000	6075400321	6075400615	607428971553	607741237377	150
6075400000	6075400321	6075400615	607428971553	607741237377	150
6119400000	6119400301	6119400034	611745307542	611459305324	150
6119400000	6119400301	6119400034	611745307542	611459305324	150
6092600000	6092600865	6092600780	609357675232	609819154538	150
6092600000	6092600865	6092600780	609357675232	609819154538	150
6304400000	6304400589	6304400940	630544424813	630823148892	150
6304400000	6304400589	6304400940	630544424813	630823148892	150
6320500000	6320500680	6320500142	632126397125	632300745126	150
6320500000	6320500680	6320500142	632126397125	632300745126	150
6314400000	6314400750	6314400040	631866626219	631500207369	150
6314400000	6314400750	6314400040	631866626219	631500207369	150
6314500000	6314500040	6314500989	631701695809	631915259834	150
6314500000	6314500040	6314500989	631701695809	631915259834	150
6296400000	6296400964	6296400864	629945541532	629365759316	150
6296400000	6296400964	6296400864	629945541532	629365759316	150
6291500000	6291500998	6291500808	629438220280	629822724972	150
6291500000	6291500998	6291500808	629438220280	629822724972	150
6245400000	6245400916	6245400336	624296878076	624220515845	150
6245400000	6245400916	6245400336	624296878076	624220515845	150
6256400000	6256400443	6256400440	625515184868	625010184861	150
6256400000	6256400443	6256400440	625515184868	625010184861	150
6208410000	6208410854	6208410947	620248249981	620831207352	150
6208410000	6208410854	6208410947	620248249981	620831207352	150
6204500000	6204500406	6204500886	620325682782	620627222921	150
6204500000	6204500406	6204500886	620325682782	620627222921	150
6244500000	6244500659	6244500268	624265764516	624128728266	150
6244500000	6244500659	6244500268	624265764516	624128728266	150
6227400000	6227400089	6227400172	622698512241	622826317183	150
6227400000	6227400089	6227400172	622698512241	622826317183	150
6423610000	6423610043	6423610176	642107159420	642991720809	150
6423610000	6423610043	6423610176	642107159420	642991720809	150
6425500000	6425500865	6425500091	642598376539	642661816893	150
6425500000	6425500865	6425500091	642598376539	642661816893	150
6392400000	6392400284	6392400856	639335248806	639952601765	150
6392400000	6392400284	6392400856	639335248806	639952601765	150
6387410000	6387410708	6387410757	638792974783	638443231579	150
6387410000	6387410708	6387410757	638792974783	638443231579	150

6330500000	6330500835	6330500241	633232976657	633548025854	150
6330500000	6330500835	6330500241	633232976657	633548025854	150
6349610000	6349610303	6349610295	634405097856	634372467704	150
6349610000	6349610303	6349610295	634405097856	634372467704	150
6373500000	6373500746	6373500603	637886421814	637780262946	150
6373500000	6373500746	6373500603	637886421814	637780262946	150
6554500000	6554500887	6554500394	655527480999	655601621045	150
6554500000	6554500887	6554500394	655527480999	655601621045	150
6548400000	6548400482	6548400384	654744860562	654432555155	150
6548400000	6548400482	6548400384	654744860562	654432555155	150
6557400000	6557400352	6557400497	655968737924	655821499879	150
6557400000	6557400352	6557400497	655968737924	655821499879	150
6558610000	6558610377	6558610425	655021193841	655851382815	150
6558610000	6558610377	6558610425	655021193841	655851382815	150
6484800000	6484800773	6484800793	648468768250	648309363160	150
6484800000	6484800773	6484800793	648468768250	648309363160	150
6563400000	6563400306	6563400566	656015058000	656617258922	150
6563400000	6563400306	6563400566	656015058000	656617258922	150
6456710000	6456710830	6456710398	645784665246	645773340163	150
6456710000	6456710830	6456710398	645784665246	645773340163	150
6481500000	6481500726	6481500735	648366715678	648406407695	150
6481500000	6481500726	6481500735	648366715678	648406407695	150
6486510000	6486510400	6486510824	648289694649	648216282917	150
6486510000	6486510400	6486510824	648289694649	648216282917	150
6445400000	6445400953	6445400356	644090570463	644654314155	150
6445400000	6445400953	6445400356	644090570463	644654314155	150
6487400000	6487400702	6487400784	648483955134	648634979883	150
6487400000	6487400702	6487400784	648483955134	648634979883	150
6449610000	6449610319	6449610305	644869818964	644893299082	150
6449610000	6449610319	6449610305	644869818964	644893299082	150
6649610000	6649610354	6649610325	664490536198	664893895901	150
6649610000	6649610354	6649610325	664490536198	664893895901	150
6666400000	6666400612	6666400590	666767789666	666787967504	150
6666400000	6666400612	6666400590	666767789666	666787967504	150
6682400000	6682400010	6682400786	668731211927	668032693091	150
6682400000	6682400010	6682400786	668731211927	668032693091	150
6684400000	6684400158	6684400762	668049109797	668167611943	150
6684400000	6684400158	6684400762	668049109797	668167611943	150
6678400000	6678400848	6678400689	667517768338	667132010543	150
6678400000	6678400848	6678400689	667517768338	667132010543	150
6629400000	6629400536	6629400182	662304240967	662820612142	150
6629400000	6629400536	6629400182	662304240967	662820612142	150
6632400000	6632400195	6632400292	663818256935	663692684275	150
6632400000	6632400195	6632400292	663818256935	663692684275	150
6648400000	6648400499	6648400394	664153597182	664316623693	150
6648400000	6648400499	6648400394	664153597182	664316623693	150
6654400000	6654400801	6654400465	665640425099	665857204268	150

6654400000	6654400801	6654400465	665640425099	665857204268	150
6689400000	6689400344	6689400774	668508293757	668077254511	150
6689400000	6689400344	6689400774	668508293757	668077254511	150
6584500000	6584500027	6584500685	658543729113	658626656655	150
6584500000	6584500027	6584500685	658543729113	658626656655	150
6614400000	6614400706	6614400070	661380589665	661274324801	150
6614400000	6614400706	6614400070	661380589665	661274324801	150
6614500000	6614500093	6614500016	661321095697	661483002574	150
6614500000	6614500093	6614500016	661321095697	661483002574	150
6601500000	6601500721	6601500962	660768962609	660141710844	150
6601500000	6601500721	6601500962	660768962609	660141710844	150
6612500000	6612500240	6612500045	661614795805	661978893485	150
6612500000	6612500240	6612500045	661614795805	661978893485	150
6793500000	6793500311	6793500838	679494530099	679610864621	150
6793500000	6793500311	6793500838	679494530099	679610864621	150
6805500000	6805500621	6805500915	680029604774	680052466713	150
6805500000	6805500621	6805500915	680029604774	680052466713	150
6754400000	6754400816	6754400474	675397802949	675543467526	150
6754400000	6754400816	6754400474	675397802949	675543467526	150
6783600000	6783600822	6783600744	678712120076	678205429510	150
6783600000	6783600822	6783600744	678712120076	678205429510	150
6772500000	6772500756	6772500658	677049820525	677748641033	150
6772500000	6772500756	6772500658	677049820525	677748641033	150
6782500000	6782500792	6782500757	678205680532	678668576184	150
6782500000	6782500792	6782500757	678205680532	678668576184	150
6764500000	6764500291	6764500511	676488511894	676630515816	150
6764500000	6764500291	6764500511	676488511894	676630515816	150
6733400000	6733400659	6733400290	673489053033	673306833988	150
6733400000	6733400659	6733400290	673489053033	673306833988	150
6743400000	6743400743	6743400389	674578137544	674664791421	150
6743400000	6743400743	6743400389	674578137544	674664791421	150
6723500000	6723500190	6723500150	672352799328	672136911423	150
6723500000	6723500190	6723500150	672352799328	672136911423	150
6692400000	6692400336	6692400886	669770881134	669605553785	150
6692400000	6692400336	6692400886	669770881134	669605553785	150
6716400000	6716400896	6716400081	671667283692	671655745214	150
6716400000	6716400896	6716400081	671667283692	671655745214	150
6707400000	6707400102	6707400024	670640716439	670776171656	150
6707400000	6707400102	6707400024	670640716439	670776171656	150
6913400000	6913400171	6913400114	691101933595	691787685577	150
6913400000	6913400171	6913400114	691101933595	691787685577	150
6876400000	6876400813	6876400716	687743944699	687896655270	150
6876400000	6876400813	6876400716	687743944699	687896655270	150
6886400000	6886400905	6886400822	688996803368	688204550911	150
6886400000	6886400905	6886400822	688996803368	688204550911	150
6861500000	6861500544	6861500577	686972113288	686013822373	150
6861500000	6861500544	6861500577	686972113288	686013822373	150

6844500000	6844500765	6844500326	684908069772	684036745167	150
6844500000	6844500765	6844500326	684908069772	684036745167	150
6862400000	6862400224	6862400607	686673378946	686970967644	150
6862400000	6862400224	6862400607	686673378946	686970967644	150
6853400000	6853400935	6853400496	685626178160	685747445559	150
6853400000	6853400935	6853400496	685626178160	685747445559	150
6853500000	6853500374	6853500456	685822599583	685682038959	150
6853500000	6853500374	6853500456	685822599583	685682038959	150
7015400000	7015400455	7015400002	701906479304	701574074750	150
7015400000	7015400455	7015400002	701906479304	701574074750	150
7015500000	7015500653	7015500940	701313713946	701963376052	150
7015500000	7015500653	7015500940	701313713946	701963376052	150
7052210000	7052210487	7052210478	705911818112	705611923240	150
7052210000	7052210487	7052210478	705911818112	705611923240	150
7052500000	7052500445	7052500389	705552622720	705540347685	150
7052500000	7052500445	7052500389	705552622720	705540347685	150
7024400000	7024400767	7024400110	702607548013	702168228474	150
7024400000	7024400767	7024400110	702607548013	702168228474	150
7019400000	7019400288	7019400025	701878038800	701393214792	150
7019400000	7019400288	7019400025	701878038800	701393214792	150
7054500000	7054500802	7054500346	705004732220	705988180978	150
7054500000	7054500802	7054500346	705004732220	705988180978	150
6987400000	6987400684	6987400833	698490591975	698369981507	150
6987400000	6987400684	6987400833	698490591975	698369981507	150
6958400000	6958400599	6958400521	695813436986	695950294410	150
6958400000	6958400599	6958400521	695813436986	695950294410	150
6991400000	6991400917	6991400926	699308568889	699234851544	150
6991400000	6991400917	6991400926	699308568889	699234851544	150
7166700000	7166700023	7166700519	716013654100	716897131704	150
7166700000	7166700023	7166700519	716013654100	716897131704	150
7167400000	7167400455	7167400558	716004695944	716083531493	150
7167400000	7167400455	7167400558	716004695944	716083531493	150
7125400000	7125400600	7125400118	712537539164	712971841068	150
7125400000	7125400600	7125400118	712537539164	712971841068	150
7162400000	7162400100	7162400538	716664350203	716341921122	150
7162400000	7162400100	7162400538	716664350203	716341921122	150
7121610000	7121610830	7121610172	712047051052	712340531983	150
7121610000	7121610830	7121610172	712047051052	712340531983	150
7123500000	7123500086	7123500092	712264918898	712129936849	150
7123500000	7123500086	7123500092	712264918898	712129936849	150
7115400000	7115400471	7115400012	711460483130	711999362274	150
7115400000	7115400471	7115400012	711460483130	711999362274	150
7115500000	7115500667	7115500952	711546882705	711782756826	150
7115500000	7115500667	7115500952	711546882705	711782756826	150
7094500000	7094500107	7094500736	709222304350	709463957715	150
7094500000	7094500107	7094500736	709222304350	709463957715	150
7085400000	7085400383	7085400716	708494545204	708970565431	150

7085400000	7085400383	7085400716	708494545204	708970565431	150
7298400000	7298400044	7298400847	729469744582	729877328180	150
7292500000	7292500877	7292500806	729538571067	729645355446	150
7292500000	7292500877	7292500806	729538571067	729645355446	150
7244400000	7244400990	7244400327	724722494957	724328565507	150
7244400000	7244400990	7244400327	724722494957	724328565507	150
7287400000	7287400667	7287400765	728179075434	728513683036	150
7287400000	7287400667	7287400765	728179075434	728513683036	150
7299400000	7299400442	7299400836	729675331308	729102891637	150
7299400000	7299400442	7299400836	729675331308	729102891637	150
7246400000	7246400250	7246400336	724031608881	724857364779	150
7246400000	7246400250	7246400336	724031608881	724857364779	150
7207400000	7207400022	7207400975	720494463710	720817614129	150
7207400000	7207400022	7207400975	720494463710	720817614129	150
7202400000	7202400793	7202400957	720457235861	720488153656	150
7202400000	7202400793	7202400957	720457235861	720488153656	150
7182500000	7182500823	7182500699	718620891413	718193681425	150
7182500000	7182500823	7182500699	718620891413	718193681425	150
7208400000	7208400901	7208400961	720104173317	720895782467	150
7208400000	7208400901	7208400961	720104173317	720895782467	150
7222610000	7222610264	7222610170	722887222587	722125694381	150
7222610000	7222610264	7222610170	722887222587	722125694381	150
7225500000	7225500834	7225500072	722827370940	722022386298	150
7225500000	7225500834	7225500072	722827370940	722022386298	150
7386510000	7386510384	7386510815	738831889343	738402483069	150
7386510000	7386510384	7386510815	738831889343	738402483069	150
7421800000	7421800676	7421800122	742401397526	742679111855	150
7421800000	7421800676	7421800122	742401397526	742679111855	150
7422500000	7422500400	7422500127	742586814557	742614882316	150
7422500000	7422500400	7422500127	742586814557	742614882316	150
7397400000	7397400757	7397400873	739339600919	739262258607	150
7397400000	7397400757	7397400873	739339600919	739262258607	150
7342400000	7342400185	7342400359	734007683513	734335464213	150
7342400000	7342400185	7342400359	734007683513	734335464213	150
7332400000	7332400144	7332400264	733662417440	733987173170	150
7332400000	7332400144	7332400264	733662417440	733987173170	150
7332500000	7332500432	7332500218	733120676838	733932917748	150
7332500000	7332500432	7332500218	733120676838	733932917748	150
7338400000	7338400381	7338400268	733405204603	733660636583	150
7338400000	7338400381	7338400268	733405204603	733660636583	150
7323400000	7323400239	7323400154	732351118173	732795277107	150
7323400000	7323400239	7323400154	732351118173	732795277107	150
7352400000	7352400356	7352400458	735416148718	735553109831	150
7352400000	7352400356	7352400458	735416148718	735553109831	150
7355500000	7355500663	7355500380	735418074635	735262029128	150
7355500000	7355500663	7355500380	735418074635	735262029128	150
7514400000	7514400692	7514400061	751950270033	751453639861	150

7514400000	7514400692	7514400061	751950270033	751453639861	150
7514500000	7514500076	7514500007	751737933582	751376050718	150
7514500000	7514500076	7514500007	751737933582	751376050718	150
7509400000	7509400272	7509400975	750861872673	750291229605	150
7509400000	7509400272	7509400975	750861872673	750291229605	150
7450500000	7450500975	7450500449	745318199423	745841137732	150
7450500000	7450500975	7450500449	745318199423	745841137732	150
7483400000	7483400111	7483400757	748448202435	748646258644	150
7483400000	7483400111	7483400757	748448202435	748646258644	150
7447400000	7447400290	7447400388	744821175925	744939122234	150
7447400000	7447400290	7447400388	744821175925	744939122234	150
7475400000	7475400288	7475400656	747513092207	747029168643	150
7475400000	7475400288	7475400656	747513092207	747029168643	150
7432400000	7432400159	7432400274	743897717426	743314219551	150
7432400000	7432400159	7432400274	743897717426	743314219551	150
7472400000	7472400815	7472400669	747501758509	747945107125	150
7472400000	7472400815	7472400669	747501758509	747945107125	150
7443500000	7443500703	7443500318	744589659573	744964755085	150
7443500000	7443500703	7443500318	744589659573	744964755085	150
7488400000	7488400999	7488400769	748870078552	748137348237	150
7488400000	7488400999	7488400769	748870078552	748137348237	150
7625400000	7625400687	7625400170	762116062058	762630719224	150
7625400000	7625400687	7625400170	762116062058	762630719224	150
7626500000	7626500731	7626500126	762380752670	762532850482	150
7664500000	7664500275	7664500503	766411143885	766840428594	150
7664500000	7664500275	7664500503	766411143885	766840428594	150
7628400000	7628400252	7628400198	762546020675	762646536703	150
7628400000	7628400252	7628400198	762546020675	762646536703	150
7656400000	7656400510	7656400484	765309271010	765839215774	150
7656400000	7656400510	7656400484	765309271010	765839215774	150
7636400000	7636400144	7636400272	763793982837	763628999460	150
7636400000	7636400144	7636400272	763793982837	763628999460	150
7635400000	7635400874	7635400274	763389681888	763387698916	150
7635400000	7635400874	7635400274	763389681888	763387698916	150
7598400000	7598400100	7598400877	759289934771	759106143143	150
7598400000	7598400100	7598400877	759289934771	759106143143	150
7604500000	7604500915	7604500923	760453123575	760332877356	150
7604500000	7604500915	7604500923	760453123575	760332877356	150
7569400000	7569400090	7569400567	756332588389	756458709194	150
7569400000	7569400090	7569400567	756332588389	756458709194	150
7578400000	7578400832	7578400680	757983995399	757846727102	150
7578400000	7578400832	7578400680	757983995399	757846727102	150
7596400000	7596400016	7596400897	759408742468	759230337678	150
7596400000	7596400016	7596400897	759408742468	759230337678	150
7579400000	7579400258	7579400665	757202624156	757448465610	150
7579400000	7579400258	7579400665	757202624156	757448465610	150
7567410000	7567410562	7567410581	756295836330	756654938355	150

7567410000	7567410562	7567410581	756295836330	756654938355	150
7586510000	7586510424	7586510835	758134026102	758702361298	150
7586510000	7586510424	7586510835	758134026102	758702361298	150
7612400000	7612400035	7612400094	761995436478	761777540225	150
7612400000	7612400035	7612400094	761995436478	761777540225	150
7603500000	7603500964	7603500945	760787327981	760243627350	150
7603500000	7603500964	7603500945	760787327981	760243627350	150
7584800000	7584800642	7584800804	758924509584	758577561148	150
7584800000	7584800642	7584800804	758924509584	758577561148	150
7754500000	7754500921	7754500415	775256606064	775467729499	150
7754500000	7754500921	7754500415	775256606064	775467729499	150
7792400000	7792400353	7792400897	779064135129	779412224713	150
7792400000	7792400353	7792400897	779064135129	779412224713	150
7741500000	7741500276	7741500368	774662515788	774155804094	150
7741500000	7741500276	7741500368	774662515788	774155804094	150
7763500000	7763500536	7763500544	776273881714	776355081240	150
7763500000	7763500536	7763500544	776273881714	776355081240	150
7691400000	7691400875	7691400897	769478918713	769910831959	150
7691400000	7691400875	7691400897	769478918713	769910831959	150
7673500000	7673500799	7673500632	767805116535	767831732178	150
7673500000	7673500799	7673500632	767805116535	767831732178	150
7715500000	7715500750	7715500020	771970602496	771665678970	150
7715500000	7715500750	7715500020	771970602496	771665678970	150
7875400000	7875400351	7875400696	787030002636	787293356619	150
7875400000	7875400351	7875400696	787030002636	787293356619	150
7960500000	7960500212	7960500597	796010949000	796007785813	150
7960500000	7960500212	7960500597	796010949000	796007785813	150
7827610000	7827610527	7827610171	782933457086	782796821802	150
7827610000	7827610527	7827610171	782933457086	782796821802	150
7815500000	7815500767	7815500032	781439678282	781956302517	150
7815500000	7815500767	7815500032	781439678282	781956302517	150
7884500000	7884500078	7884500716	788745978567	788233240026	150
7884500000	7884500078	7884500716	788745978567	788233240026	150
7834400000	7834400927	7834400289	783244070066	783272129661	150
7834400000	7834400927	7834400289	783244070066	783272129661	150
7874600000	7874600260	7874600650	787159587082	787635593526	150
7826500000	7826500762	7826500146	782818620617	782746295900	150
7826500000	7826500762	7826500146	782818620617	782746295900	150
7881500000	7881500894	7881500772	788122850493	788592283605	150
7881500000	7881500894	7881500772	788122850493	788592283605	150
7814500000	7814500129	7814500036	781443521223	781553104836	150
7814500000	7814500129	7814500036	781443521223	781553104836	150
7909400000	7909400334	7909400015	790830061296	790098745264	150
7909400000	7909400334	7909400015	790830061296	790098745264	150
7867400000	7867400434	7867400627	786621159541	786436891396	150
7867400000	7867400434	7867400627	786621159541	786436891396	150
7803500000	7803500998	7803500965	780048153061	780630324509	150

7803500000	7803500998	7803500965	780048153061	780630324509	150
7804400000	7804400667	7804400991	780659159079	780036661717	150
7804400000	7804400667	7804400991	780659159079	780036661717	150
7871500000	7871500611	7871500677	787029022492	787851252858	150
7871500000	7871500611	7871500677	787029022492	787851252858	150
8022400000	8022400920	8022400135	802672173845	802375578813	150
8022400000	8022400920	8022400135	802672173845	802375578813	150
8022500000	8022500321	8022500088	802158161550	802392657107	150
8022500000	8022500321	8022500088	802158161550	802392657107	150
7925400000	7925400742	7925400202	792043285571	792364980204	150
7925400000	7925400742	7925400202	792043285571	792364980204	150
7997410000	7997410805	7997410917	799124517078	799290115499	150
7997410000	7997410805	7997410917	799124517078	799290115499	150
7953500000	7953500391	7953500467	795256872432	795977623824	150
7953500000	7953500391	7953500467	795256872432	795977623824	150
8039400000	8039400657	8039400223	803069766648	803198229109	150
8039400000	8039400657	8039400223	803069766648	803198229109	150
8001500000	8001500718	8001500904	800301118488	800005751890	150
8001500000	8001500718	8001500904	800301118488	800005751890	150
7973500000	7973500848	7973500661	797457999218	797500533390	150
7973500000	7973500848	7973500661	797457999218	797500533390	150
7926500000	7926500776	7926500156	792169739045	792498235987	150
7926500000	7926500776	7926500156	792169739045	792498235987	150
7974400000	7974400189	7974400694	797238455553	797653709880	150
7974400000	7974400189	7974400694	797238455553	797653709880	150
8055500000	8055500617	8055500350	805715221243	805489036876	150
8055500000	8055500617	8055500350	805715221243	805489036876	150
8155400000	8155400081	8155400427	815719195039	815716488858	150
8155400000	8155400081	8155400427	815719195039	815716488858	150
8151500000	8151500356	8151500409	815940593484	815181514991	150
8151500000	8151500356	8151500409	815940593484	815181514991	150
8134400000	8134400938	8134400220	813586820610	813711867397	150
8134400000	8134400938	8134400220	813586820610	813711867397	150
8152500000	8152500466	8152500400	815634499854	815522192961	150
8152500000	8152500466	8152500400	815634499854	815522192961	150
8125500000	8125500818	8125500063	812003449265	812835326730	150
8125500000	8125500818	8125500063	812003449265	812835326730	150
8083400000	8083400043	8083400718	808403841793	808842712667	150
8083400000	8083400043	8083400718	808403841793	808842712667	150
8142400000	8142400151	8142400340	814140568786	814261336980	150
8142400000	8142400151	8142400340	814140568786	814261336980	150
8074500000	8074500340	8074500539	807580841427	807321142120	150
8074500000	8074500340	8074500539	807580841427	807321142120	150
8144500000	8144500644	8144500260	814245690008	814951828633	150
8144500000	8144500644	8144500260	814245690008	814951828633	150
8062500000	8062500631	8062500489	806305280858	806082000267	150
8062500000	8062500631	8062500489	806305280858	806082000267	150

8136610000	8136610477	8136610217	813212556927	813278973262	150
8136610000	8136610477	8136610217	813212556927	813278973262	150
8108700000	8108700845	8108700914	810706038793	810451209140	150
8108700000	8108700845	8108700914	810706038793	810451209140	150
8110610000	8110610425	8110610084	811295188197	811903581158	150
8110610000	8110610425	8110610084	811295188197	811903581158	150
8082400000	8082400916	8082400728	808281628984	808679246461	150
8082400000	8082400916	8082400728	808281628984	808679246461	150
8082500000	8082500808	8082500690	808257051572	808972711343	150
8082500000	8082500808	8082500690	808257051572	808972711343	150
8214400000	8214400735	8214400032	821553421187	821301000500	150
8214400000	8214400735	8214400032	821553421187	821301000500	150
8255400000	8255400099	8255400437	825033490935	825230233891	150
8255400000	8255400099	8255400437	825033490935	825230233891	150
8205500000	8205500530	8205500857	820616379833	820117001754	150
8205500000	8205500530	8205500857	820616379833	820117001754	150
8222500000	8222500359	8222500108	822948141637	822346915464	150
8222500000	8222500359	8222500108	822948141637	822346915464	150
8236610000	8236610494	8236610227	823636345788	823456317892	150
8236610000	8236610494	8236610227	823636345788	823456317892	150
8224400000	8224400801	8224400131	822952740979	822080820757	150
8224400000	8224400801	8224400131	822952740979	822080820757	150
8284500000	8284500976	8284500659	828741808492	828500168335	150
8284500000	8284500976	8284500659	828741808492	828500168335	150
8174400000	8174400067	8174400615	817335764983	817789410836	150
8174400000	8174400067	8174400615	817335764983	817789410836	150
8223400000	8223400225	8223400145	822569857402	822931353089	150
8223400000	8223400225	8223400145	822569857402	822931353089	150
8269500000	8269500649	8269500512	826854404117	826434834376	150
8269500000	8269500649	8269500512	826854404117	826434834376	150
8295400000	8295400539	8295400835	829507629924	829168389715	150
8295400000	8295400539	8295400835	829507629924	829168389715	150
8324610000	8324610882	8324610160	832012662103	832746036944	150
8324610000	8324610882	8324610160	832012662103	832746036944	150
8333400000	8333400599	8333400252	833290519216	833108781129	150
8333400000	8333400599	8333400252	833290519216	833108781129	150
8319400000	8319400337	8319400056	831393479571	831410149393	150
8319400000	8319400337	8319400056	831393479571	831410149393	150
8402500000	8402500127	8402500930	840414787177	840162888350	150
8402500000	8402500127	8402500930	840414787177	840162888350	150
8335400000	8335400820	8335400245	833546922830	833115489164	150
8335400000	8335400820	8335400245	833546922830	833115489164	150
8322500000	8322500381	8322500118	832465531898	832677918029	150
8322500000	8322500381	8322500118	832465531898	832677918029	150
8397410000	8397410715	8397410858	839962923790	839175760479	150
8397410000	8397410715	8397410858	839962923790	839175760479	150
8384400000	8384400249	7384400734	838198309838	838546838196	150

8384400000	8384400249	7384400734	838198309838	838546838196	150
8413500000	8413500098	8413500025	841879795573	841888324250	150
8413500000	8413500098	8413500025	841879795573	841888324250	150
8303400000	8303400447	8303400958	830778788277	830999603155	150
8303400000	8303400447	8303400958	830778788277	830999603155	150
8303500000	8303500915	8303500916	830130545547	830961231197	150
8303500000	8303500915	8303500916	830130545547	830961231197	150
8433400000	8433400616	8433400262	843283393505	843975970666	150
8433400000	8433400616	8433400262	843283393505	843975970666	150
8532400000	8532400179	8532400284	853219701669	853891573900	150
8532400000	8532400179	8532400284	853219701669	853891573900	150
8430500000	8430500743	8430500251	843613916730	843584902040	150
8430500000	8430500743	8430500251	843613916730	843584902040	150
8536610000	8536610537	8536610255	853833470212	853072030312	150
8536610000	8536610537	8536610255	853833470212	853072030312	150
8425400000	8425400653	8425400151	842214058277	842037325179	150
8425400000	8425400653	8425400151	842214058277	842037325179	150
8521500000	8521500976	8521500153	852157687903	852014563772	150
8521500000	8521500976	8521500153	852157687903	852014563772	150
8653500000	8653500341	8653500438	865318753650	865607392680	150
8653500000	8653500341	8653500438	865318753650	865607392680	150
8574500000	8574500437	8574500589	857083415552	857853919329	150
8574500000	8574500437	8574500589	857083415552	857853919329	150
8611500000	8611500893	8611500064	861994267794	861684885688	150
8611500000	8611500893	8611500064	861994267794	861684885688	150
8561500000	8561500490	8561500549	856849375786	856052444626	150
8561500000	8561500490	8561500549	856849375786	856052444626	150
8594500000	8594500426	8594500786	859940150822	859572639876	150
8594500000	8594500426	8594500786	859940150822	859572639876	150
8587700000	8587700612	8587700755	858061057661	858032450446	150
8643500000	8643500740	8643500338	864413353422	864205881428	150
8643500000	8643500740	8643500338	864413353422	864205881428	150
8684310000	8684310463	8684310726	868298437966	868512438114	150
8684310000	8684310463	8684310726	868298437966	868512438114	150
8775400000	8775400337	8775400687	877081546026	877343599230	150
8775400000	8775400337	8775400687	877081546026	877343599230	150
8682500000	8682500777	8682500749	868214102378	868870622331	150
8682500000	8682500777	8682500749	868214102378	868870622331	150
8722400000	8722400047	8722400205	872909164663	872708878379	150
8722400000	8722400047	8722400205	872909164663	872708878379	150
8693400000	8693400308	8693400875	869760336993	869348701011	150
8693400000	8693400308	8693400875	869760336993	869348701011	150
8748400000	8748400520	8748400406	874602315899	874890589271	150
8748400000	8748400520	8748400406	874602315899	874890589271	150
8784310000	8784310480	8784310736	878626145284	878947624387	150
8784310000	8784310480	8784310736	878626145284	878947624387	150
8712400000	8712400052	8712400105	871973533623	871179330545	150