STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF COMMUNITY UTILITIES OF INDIANA, INC. FOR APPROVAL OF (1) EXPENDITURES FOR CONSTRUCTION OF ADDITIONS AND IMPROVEMENTS TO PETITIONER'S WASTEWATER UTILITY PROPERTIES, AND (2) THE INCLUSION OF THE VALUE OF SUCH NEW FACILITIES, INCLUDING PLAN DEVELOPMENT AND IMPLEMENTATION COSTS, IN PETITIONER'S RATE BASE IN FUTURE CASES.	)))))))))	**CAUSE NO. 45389**

PETITIONER'S RESPONSE TO COMMISSION DOCKET ENTRY QUESTIONS DATED OCTOBER 28, 2020

Petitioner Community Utilities of Indiana, Inc. ("CUII" or "Petitioner"), hereby submits the attached response to the questions posed in the Indiana Utility Regulatory Commission's ("Commission") October 28, 2020 Docket Entry.

Respectfully submitted,

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COMMUNITY UTILITIES OF INDIANA, INC. ("CUII")

Data Request IURC DR 1-1

Do you believe the stormwater system serving LOFS residents is significantly impacting the volume of inflow being received by (or into) the CUII wastewater collection system? If so, please describe the impacts on the CUII system.

Response:
These responses consider both inflow and infiltration. These responses relate to the LOFS stormwater system, and not any private-side (homeowner) discharges.

Yes, we do believe the stormwater system serving LOFS residents is a contributing factor to the I&I observed in the wastewater collection system. In Mr. Carbonaro's testimony, particularly at p. 27, starting at line 14, Mr. Carbonaro explains the migration of stormwater to the sanitary sewer. The referenced Water Environment Federation (WEF) Manual of Practice identifies that stormwater must be collected and transported away from sanitary sewers. WEF further states water allowed to pond in grassy surface areas over sanitary sewers can lead to migration of uncontrolled stormwater into the sanitary sewer trench, which can then lead to migration into the sanitary sewer through defects. Unkept stormwater culverts can prohibit stormwater flow and add to the ponding of water, which can further influence the migration of stormwater into the sanitary sewer system. A significant portion of the Company's sewer mains are located under the stormwater ditches, and their manholes are located within the ditches. Laterals cross under ditches to reach the sewer main and can also accumulate uncontrolled stormwater.

The 2018 Sanitary Sewer Evaluation Survey, performed by RJN, provided as Attachment SC-11 with Mr. Carbonaro's Direct Testimony, quantified I&I from identified defects. All possible inspections were completed in one of the basins (Basin M11a), including manhole inspections, smoke testing, lateral televising, and review of sewer main televising data. RJN performed flow monitoring for flow quantification. The defects identified accounted for 91% of the excess flow measured. In Basin M11a, sewer main defects accounted for approximately 15.3% of the excess flow, manhole defects accounted for 44.1% of the excess flow, utility-side lateral defects accounted for 19.4% of excess flow, and customer-side lateral defects accounted for 21.1% of excess flow. Note that migration of uncontrolled stormwater can still occur to other defects if a certain defect is remedied. Further, the 2018 SSES had varying levels of success in identifying corresponding defects for each basin, ranging from 28.5% to 99.5% of excess flow identified.Further, RJN also quantified the Groundwater Infiltration (GWI) rate, essentially the baseline sewer flow in absence of usage, for example, identified from overnight flow when minimal water is used by homes. The GWI percentage ranged from 30% to 64% in the basins monitored. Stormwater infiltration from ditches would cause higher local groundwater. Higher groundwater in the area could contribute to the GWI rate.

Regarding inflow, the Company is not aware of any un-remediated, direct areas of inflow (e.g. stormwater flowing directly from the ditch overland into a manhole). However, the Company cannot definitively say that such areas do not exist. In Mr. Carbonaro's Rebuttal Testimony on p. 13, starting at line 17, he responded to the OUCC's recommendation to conduct wet weather inspections. While such inspections would be useful to identify areas of direct inflow, the

Company believes these inspections are generally impractical. When manholes are inspected, the Company does look for any evidence of direct inflow, and those are remediated as needed.

Data Request IURC DR 1-2

Does inflow from the LOFS stormwater system contribute to the frequency of sanitary sewer overflows from the CUII wastewater collection system? If so, please explain how you determined this to be the case.

Response:

The Company cannot definitively answer this question "yes" or "no" given the nature of the question. As explained in Response to IURC DR 1-1, the Company believes the LOFS stormwater system is a contributing factor to I&I. Whether the additional amount of I&I from the LOFS system has caused SSOs that would have otherwise not occurred is unknown. In principle, any additional I&I increases the risk, and likely the frequency, of SSOs.

Data Request IURC DR 1-3

Through its smoke testing efforts, has CUII ever confirmed a direct or cross-connection between the wastewater collection system and the LOFS stormwater system? If so, please provide supporting documentation related to those results.

Response:

No. Current operations staff at the Company is not aware of any direct or cross-connections identified between the collection system and LOFS stormwater system through smoke testing. We do not know if previous operations staff identified and corrected issues from previous smoke testing. The Company has previously raised manholes in ditches and other areas that collect stormwater, however, it's unknown if those manholes were identified from visual observation, smoke testing, dye testing, or other means.

Data Request IURC DR 1-4

Through its dye-flooding testing efforts, has CUII ever confirmed a direct or cross-connection between the wastewater collection system and the LOFS stormwater system? If so, please provide supporting documentation related to those results.

Response:

No. Current operations staff at the Company is not aware of any direct or cross-connections identified between the collection system and LOFS stormwater system through dye testing. We do not know if previous operations staff identified and corrected issues from previous dye-flooding testing. The Company has previously raised manholes in ditches and other areas that collect stormwater, however, it's unknown if those manholes were identified from visual observation, smoke testing, dye testing, or other means.

Data Request IURC DR 1-5

Has CUII ever conducted dye-flood testing, televising, or any other observation of the LOFS stormwater system during a wet weather event? If so, please provide supporting documentation related to those results.

Response:

Yes. The Company's routine sewer televising is typically conducted regardless of whether the weather is dry or wet. Some amount of the routine sewer televising has been conducted during wet weather events. However, the Company's engineers do not review or sort those videos separately from others. Any observations of inflow or infiltration are noted as defects for rehabilitation. The Company provided all sewer televising reports in the Company's Response to LOFS DR 1-2C. A summary of all defects identified from televising was provided in the Company's Response to LOFS DR 1-2B, a copy of which is provided as IURC DR 1-5 Attachment 1.

Data Request IURC DR 1-6

CUII has conducted two different flow monitoring studies since 2017. Please describe the type of meters employed and identify the specific sensors that each meter has.

Response:

The Company owns and uses Teledyne ISCO 2150 Area Velocity flow meters for flow monitoring. These meters were employed for all flow monitoring conducted from 2017 to present. To clarify, the Company has conducted three different flow monitoring studies since 2017 (Strand study in 2017, RJN study in 2018, and RHMG monitoring in 2019). The sensors are ultrasonic.

Additional information on the Teledyne meters is provided as IURC DR 1-6 Attachment 1.

Data Request IURC DR 1-7

If the wastewater treatment plant is designed to operate at 75% capacity, which includes allowances for customer growth of 1.5%, and if the additional capacity is not for the treatment of I&I, please explain what the intended purpose of the remaining 25% of the plant capacity is.

Response:

The Company and its engineers believe that wastewater treatment plants operate best when designed to run at approximately 75% capacity based on average daily flow over a year. The Company provided some explanation of this in the Rebuttal Testimony of Sean Carbonaro on p. 31, starting on line 14. The remaining 25% capacity is not included exclusively for additional connections, but rather to allow for fluctuations in hydraulic and/or organic loading over time (e.g. flow may be higher in some months than others). Historically, average daily flows over a month have approached and reached approximately 1.5 MGD. In this situation, the proposed facility would be operating at or near 100% capacity for that month.

Wastewater treatment plants are not intended to run at 100% capacity on a continuous, long-term basis (over several years). IDEM's Sewer Ban/Sewer Ban Early Warning system supports this position, as facilities are placed on notice and may receive a sewer ban if the facility exceeds 90% of its hydraulic or organic design capacities.

Baxter & Woodman studied the construction cost of a WWTP with less capacity (1.3 MGD vs 1.6 MGD), as explained in the Direct Testimony of Sean Carbonaro on p. 46, line 13-22. Baxter & Woodman identified a construction cost reduction of $385,000 ($16,550,000 to $16,165,000) by reducing the proposed WWTP DAF from 1.6 MGD to 1.3 MGD. In other words, installation of a smaller plant would not substantially lower the costs of construction, but would increase the likelihood the facility would have to run near its maximum capacity on a continuous basis.

Data Request IURC DR 1-8

Please explain how the population of 11,147 was calculated, as indicated on the IDEM construction permit (see Parks testimony at page 28, footnote 57).

Response:

The IDEM Construction Permit for the WWTP Expansion, provided as Attachment SC-S2 with the Supplemental Testimony of Sean Carbonaro, identifies that the Design Population Equivalent is 11,146 (pg 2 of 9 of the Design Summary, pg 10 of the document). It appears Mr. Parks incorrectly cited this as a "population" of 11,147 people. In wastewater treatment design, Population Equivalent (PE) is a means of expressing the strength of organic material in wastewater. It does not necessarily correspond to a certain number of people. The number was calculated from influent sampling and flow data and a standard design value (0.17 CBOD/PE). CBOD is Carbonaceous Biochemical Oxygen Demand.

This PE value was not directly used in design of the WWTP Improvements. Rather, the WWTP Improvements were designed using influent sampling and flow monitoring data. The design waste strength parameters are provided on the same page of the permit. These values are consistent with standard municipal wastewater strength parameters. The selection of the design flow rates is explained throughout Mr. Carbonaro's Direct Testimony and Rebuttal Testimony. These design values were selected based on actual flow metering and influent sampling data, rather than simply population size.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing was served via electronic transmission this 2nd day of November, 2020, upon:

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UTILITIES INC - TWIN LAKES
RED ZONE DATA REVIEW - LEVEL 4 AND 5 DEFECTS

Exhibit B
Utilties, Inc. - Twin Lakes Capital Improvement Plan
Mainline Defect Sumary Table

Old Project Number	Project Number	Map Page	Redzone/Televised	Asset	Upstream MH	Downstream MH	Size	Gis Length (Feet)	Inspected Length (Feet)	Inspection Status	Material	O&M Quick	Struct Quick	Upstream Rim To Invert	Downstream Rim To Invert	Location	Defect (1-Lowest, 5-Highest) Mcu = Camera Underwater	Proposed Repair
MAINLINE SPOT REPAIRS AND LINING																		
1	1	A4	RZ	181 to 182	181	182	8"	407.99	425.7	Complete with Reversal		3225	5221	5		ROW	BROKEN SOIL VISIBLE (5) - 22' FROM MH 181 BROKEN (5)- 115' FROM MH 181 DEPOSITS (3) - 277' FROM MH 181	1A - REPLACE 5' OF PIPE (20'-25') 1B - REPLACE 5' OF PIPE (113'-118') S4 - REPLACE SERVICE 247' DS OF 181 - REVIEW SERVICE AFTER ~~**CIPP LINING - 426'**~~ **Lined 2018**
2	2	F1	RZ	527 to 526	527	526	8"	321.19	322.3	Complete with Reversal		5121	5141	3		ROW	FRACTURE MULTIPLE (4) & HOIL SOIL VISIBLE (5) - 6' & 9' FROM MH 527	2 - REPLACE 5' OF PIPE (5'-10") **CIPP LINING - 323'** -**2020**
3	3	B4	RZ	240 to 239	240	239	8"	190.55	203.8	Complete		5122	0		5.8	ROW	IINFILTRATION - GUSHER (5) & BROKEN (5) - 141' FROM MH 239	3 - REPLACE 10' OF PIPE (135'-145') **CIPP LINING - 204'**
4	4	B4	RZ	172 to 171	172	171	8"	274.09	277	Complete with Reversal		4627	2200	8.8		ESMT	HVV (5) 3.2' FROM MH 172 (MISSED BY RED ZONE) MCU (4) (72'-85') FROM MH 172 (POTENTIAL SAG) MCU (4) (134'-141') FROM MH 172 (POTENTIAL SAG) MCU (4) (177'-193') FROM MH 172 (POTENTIAL SAG) MCU (4) (255'-272') FROM MH 172 (POTENTIAL SAG)	4 - REPLACE 5' OF PIPE (3' -8') **CIPP LINING - 277'** **2020**
5	5	B3	RZ	248 to 249	248	249	8"	151.97	166.5	Complete		2111	5122		8	ROW	BROKEN (5) - 77' FROM MH 249	5 -REPLACE 5' OF PIPE (75'-80') ~~**CIPP LINING - 167'**~~ **Lined 2018**
6	6	C3	RZ	265 to 266	265	266	8"	93.17	93.4	Complete		3125	5100		12.9	ROW	BROKEN VOID VISIBLE (5) - 78' FROM MH 265	6 - REPLACE 5' OF PIPE (73'-83') ~~**CIPP LINING 94'**~~ **Lined 2018**
7	7	F2	RZ	495 to 494	495	494	10"	360.65	406.1	Complete with Reversal		4622	0	18.5		ROW	IG (5) (3') FROM MH 495 DAE (4) - 133' FROM MH 494 DAE (2) - 201' FROM MH 494 MCU (4) (305'-335') FROM MH 494 (POTENTIAL SAG) MCU (4) (380'-390') FROM MH 494 (POTENTIAL SAG)	7 - LINE FIRST 5' OUT OF MH 495 **CIPP LINING - 406'** **2020**
8	8	C2	RZ	302 to 328	302	328	10"	183.77	97.6	Complete		4400	3B00		13	ROW	H(5) - 90' FROM MH 302	8 - LINE 5' PIPE AT 90' FROM MH 302 (88'-93') ~~**CIPP LINING - 98'**~~ **Lined 2018**
9	9	A3	RZ	182 to 252	182	252	8"	347.28	87.6	Incomplete with Reversal		2500	4121	4.8		ROW	HOLE (4) - 4.2' FROM MH 182	CLEAN MH 252 9 - **REPLACE 5' OF PIPE (MH 182 -0'- 5')** - Cannot line as 182 is a cleanout
10	10	A3	RZ	254 to 253	254	253	8"	403.65	419.9	Complete		4126	0	7.2		ROW	INFILTRATION RUNNER (4) - 214' FROM MH 254	10 - **REPAIR PVC TO VCP PIPE CONNECTION** AT JOINT 214' FROM MH 54
11	11	E2	RZ	473 to 476	473	476	15"	352.98	358	Complete		4134	0			ROW	BROKEN TAP (2) - 339' FROM MH 473	11 - REPAIR BROKEN TAP CONNECTION 339' FROM MH 473 ~~**TOP HAT LINER**~~, **Lined 2018**
12	12	B3	RZ	264 to 265	264	265	12"	354.63	368.7	Complete		412E	2100	15.5		ROW	INFILTRATION RUNER (4) 97' FROM MH 264	STANDARD CLEANING (370') 12 - 5' SPOT REPAIR OR LINING (95'-100') ~~**CIPP LINE - 369'**~~ **Lined 2018**
13	13	B4	RZ	186 to 187	186	187	8"	290.94	291.7	Complete with Reversal		4133	2100		9.3	ESMT	INFILTRATION - RUNNER (4) - 15' FROM MH 187 DEPOSITS (4) 169' FROM MH 187	13 - SPOT LINING 5' (12'-17') FROM MH 187 CUT OUT DEPOSITS 169' FROM MH 187 **CIPP LINE - 292'**
14	14	C4	RZ	206 to 204	206	204	8"	414.01	434.8	Complete		4126	0		11.8	ESMT	INFILTRATION RUNNER (4) - 63' FROM MH 204	14 - **5' SPOT LINE JOINT AT 63' FROM MH 204** MONITOR DURING NEXT ROUND OF TELEVISING- IF DETERIORATES: REPAIR 15' PVC CONNECTIONS AT 108'&195' FROM MH 204 (NOT CRITICAL)
15	15	F1	RZ	529 to 528	529	528	8"	167.27	158	Complete		2200	4221		5.6	ROW	FRACTURE MULTIPLE (4) - 51 FROM MH 528 FRACTURE MULTIPLE (4) - FROM MH 528	15 -CIPP Line 20' (45'-65') FROM MH 528 **CIPP LINE - 158** **2020**
16	16	E3	RZ	125A to 125	125A	125	8"	112.6	118.4	Complete		2100	4100		3.9	ROW	REPAIR POINT (0) - 37' FROM MH 125 (ACTUALLY FAILING REPAIR PATCH) FRACTURE MULTIPLE (4) - FROM MH 55'	16 -CIPP LINE 30' -60' CIPP LINE 5' (30'-35') CIPP LINE 10' (50'-60') - Line **2020** **CIPP LINE - 120'**
P1A	17	C3	TV	229-214	229	214	8"		175.1	Complete	ACP	2E11	4221		19.4	ROW	ALIGNMENT DOWN (4) - 33.2, JOL - 148' FROM MH 229 SAG(4) - 162' FROM MH 229	**CIPP LINE, 175'**
P1	18	B4	TV	246 to 238	246	238	8"		315.5	Complete	VCP	4131	5100	8.2	11	ROW	H(5) - 298' FROM MH 246; SAG 303' FROM MH 246, NEAR MH 238	~~**CIPP LINE - 316'**~~ **Lined 2018** COULD SPOT REPAIR 298 -310 AND REMOVE SAG

Exhibit B
Utilties, Inc. - Twin Lakes Capital Improvement Plan
Mainline Defect Sumary Table

Old Project Number	Project Number	Map Page	Redzone/Televised	Asset	Upstream MH	Downstream MH	Size	Gis Length (Feet)	Inspected Length (Feet)	Inspection Status	Material	O&M Quick	Struct Quick	Upstream Rim To Invert	Downstream Rim To Invert	Location	Defect (1-Lowest, 5-Highest) Mcu = Camera Underwater	Proposed Repair
P2	19	F4	TV	91A to 63	91A	63	8"		139.8	Complete	ACP	3B00	5141	6.2	8.3	ROW	H(5) - 110' FROM MH 91A. PIPE DOES NOT APPEAR TOO DIRTY	SPOT REPAIR - SERVICE RECONNECT - 108-113 (SEVICE AT 110') **CIPP LINE - 140'** **2020**
P3	20	D4	TV	162 to 163	164	163	8"		293.8	Complete	ACP	0000	2J00	16.6		ESMT REAR ALONG LAKE	PIPE HAS H2S ISSUES. LINING CANIDATE	**CIPP LINE - 294'** **2020**
P4	21	C4	TV	164 to 165	165	164	8"		343.7	Complete	ACP	412N	2J00	13.2	15.5	ESMT REAR ALONG LAKE	PIPE HAS H2S ISSUES. LINING CANIDATE	**CIPP LINE - 344'** **2020**
P5	22	C4	TV	165 to 166			8"		225.9	Complete	ACP	0000	2E00	15.5	13.5	ESMT REAR ALONG LAKE	PIPE HAS H2S ISSUES. LINING CANIDATE	**CIPP LINE - 226'** **2020**
P6	23	B2	TV	349 to 350	349	350	8"		364	Complete	ACP	2K00	0000			ROW	PIPE HAS H2S ISSUES. LINING CANIDATE	~~**CIPP LINE - 364'**~~ **Lined 2018**
P7A	24	C4	TV	163 to 164	164	163	8"		381.6	Complete	ACP	5141	2N00		13.2	ESMT REAR ALONG LAKE	IG(5) - 357' FROM MH 163, 24.6' FROM MH 164	SAG - 221-252 - FULL PIPE, CANDIDATE FOR LINING **CIPP LINE - 382'** **2020**
P7	25	E3	TV	547 to 321	547	321	8"		255	Complete	ACP	4631	2G00	19.5		ESMT REAR ALONG LAKE	SAG (4) 225-255' FROM MH 547	**SPOT REPAIR - LOW PRIORITY** FULL PIPE SAG AT 321
P8	26	E4	TV	548 to 547	548	547	8"		342.6	Complete	ACP	4423	0000	9.6	19.5	ESMT REAR/SDE	SAG COMING INTO MH 547	**SPOT REPAIR - LOW PRIORITY**- 322-342 FULL PIPE SAG (NOT I&I)
P9	27	D4	TV	326 to 325	326	325	8"		350	Complete	ACP	2A00	512F	14.2	3	ESMT REAR	HOLE-SOIL VISIBLE - 231' FROM MH 326	**CIPP LINE - 326'** **2020**
P10	28	D4	TV	323 to 319	323	319	8"		229	Complete	ACP	4121	0000	10.2	14.6	ESMT REAR	HOLE AT DEFECTIVE TAP AT 10' FROM MH 323. SAG(4) 223' FROM MH 323, 6' FROM MH 319	SPOR REPAIR AT SERVICE, 10', SAG 223'-END OK - 50%
P11	29	C4	TV	198 to 199	198	199	8"		401.7	Complete	ACP	3126	0000	9.6	8.2	ESMT REAR	H (NOT NOTED BY PIPE VIEW) AT 146' FROM MH 198. JOM (200')	**CIPP LINE, 402'**
P12	30	F3	TV	19 to 18	19	18	12		437.2	Complete	ACP	2100	5121	15.9	14.1	ESMT REAR	HVV (5) - 222' FROM MH 19	**CIPP LINE - 440'** **2020**
P13	31	A1	TV	370 to 370A	370	370A	8"		288.4	Complete	ACP	0000	1100	10.6	9.5	ESMT PARKING LOT	ROOTS IN MH 370A MH, IG (109')	**CIPP LINE - 390'** **2020**
P14	32	B4	TV	170 to 169	170	169	8"		363.5	Complete	ACP	4328	2L00	12.2	12.6	ESMT REAR	AC PIPE IS SPAWLLING. WLS - 345' FROM MH 170 TO MH 169	330-360 (MH 169) SAG 80% LOW PRIORITY
P15	33	E4	TV	106 to 105	106	105	8"		284.7	Complete	ACP	5141	2I00	10.2	12.2	ESMT REAR/SDE	WLS-275' FRROM MH 106, COMING INTO MH 105. IG-281' FROM MH 106	**CIPP LINE, 285'** SPOT REPAIR SAG 275-286 (END), IG AT 281
P16		C3	TV	306 to 305	306	305	8"		211	Complete	ACP	4E2C	0000			ESMT REAR ALONG LAKE	MAJOR ISSUE - PIPE HAS ALIGNMENT ISSUES	MONITOR, NO REPAIR AT THIS TIME 100-180 - SAG 80%, 205' - ALINGMENT CHANGE
P17		C3	TV	310 to 309	310	309	8"		348.5	Complete	ACP	523A	2I00	10.6	9.6	ESMT REAR ALONG LAKE	MANY SAGS IN PIPE. GREASE CUT OUT OF PIPE	MONITOR, NO REPAIR AT THIS TIME 0-40 - SAG FULL PIPE - POTENTIAL LINE IN FUTURE DUE TO PIPE MATERIAL
P18	34	C3	TV	228 to 227	228	227	8"		221.3	Complete	ACP	3123	512E	13.2	12.1	ESMT REAR	HSV (5) - 45' FROM MH 228; ID (3) - 149' FROM MH 228. JOL - 221' FROM MH 228	**CIPP LINE, 410'** SPOT REPAIR 45' FROM 228, SPOT REPAIR @ JOL (LOWER PRIORITY) **2020**

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U4/S6	35	B1	TV	377 to 376	377	376	8"		251	Complete	ACP	3100	0000	9'		ESMT SIDE	BREAK-IN TAP WITH ROOTS 106' 377	**TOP HAT LINER - MAY NEED TO REPAIR**
S1	36	E4	RZ	100 to 101	100	101	8"		345.8	Complete		2500	3121	13.5		ROW	DEFECTIVE TAP 268' FROM MH 100	**TOP HAT LINER**
S2	37	E4	RZ	139 to 138	139	138	8"		231	Complete		3127	0000		9.7	ROW	DEFECTIVE TAP 45 FEET FROM 139	**TOP HAT LINER - MAY NEED TO REPAIR**
S3	38	D4	RZ	159 to 158	157	159	8"		247.3	Complete	ACP	2200	2G00			ESMT REAR ALONG LAKE	DEFECTIVE TAP 36' FROM 159	~~**CIPP LINE 285',**~~ **Lined 2018**
S5/U6	39	B2	RZ	354 to 353	354	353	8"		324.9	Complete		2500	0000	7		ROW	DEFECTIVE TAP 86' FROM 353	**TOP HAT LINER - MAY NEED TO REPAIR**
S7	40	E2	RZ	470 to 473	470	473	15"		368.9	Complete	ACP	2100	0000			ROW	DEFECTIVE TAP 270' FROM MH 270	~~**TOP HAT LINER,**~~ **Lined 2018**
S9	41	F2	RZ	487 to 486	487	486	8"		268.8	Complete		2200	3900		20.7	ROW	DEFECTIVE TAP 114' UPSTREAM OF 486	~~**TOP HAT LINER,**~~ **Lined 2018**
U1	42	B2	TV	406 to 407	407	406	8"										DEFECTIVE TAP 64' FROM 407	~~**CIPP LINE 410',**~~ **Lined 2018**
U5	43	B2	RZ	354 to 353	354	353	8"		324.9	Complete		2500	0000	7		ROW	DEFECTIVE TAP 15' FROM 354	**TOP HAT LINER - MAY NEED TO REPAIR**
	44			361 to 358	361	358	8"		279	Complete	ACP	5400	4100				Pipe deteroration (5) - 103',116',129',142'; Infiltration Dripper (4) - 142'	**CIPP Line, 279'**
	45	C2	TV	428 To 429	428	429	8"		283.3	Complete	ACP	5131	0000	141	173	Westover Drive	INFILTRATION GUSHER(5) - 71', DEPOSITS ATTACHED ENCRUSTATION (3) - 283'	**CIPP LINE 285'**
	46	D2	TV	449 To 448	449	448	8"		212.7	Complete	ACP	0000	3100	120	80	Devonshire Circle	HOLE (3) - 171'	**CIPP LINE 215'**
	47	F2	TV	487 To 486	487	486	8"		256.3	Complete	ACP	4131	0000	167	248	Rustic Lane	INFILTRATION RUNNER (4) - 253'; INFILTRATION DRIPPER(3) - 245'; DEPOSITS ATTACHED ENCRUSTATION (2)- 245', 253'	**CIPP LINE 260'**
	48	D2	TV	455 To 454	455	454	8"		270.2	Complete	ACP	0000	3100	92	236	Windsor Place	HOLE (3) - 128'	**CIPP LINE 270'**
CLEANING & TELEVISING																		
17		F1	RZ	532 to 533	532	533	10"	401.48	389.9	Complete with Reversal		5121	1K00		14.3		DEPOSITS (5) - 88' FROM MH 532	STANDARD CLEAN (402') & CUT OUT DESPOSIT
18		C4	RZ	232 to 231	232	231	8"	288.69	316.8	Complete with Reversal		4C33	0	7.9			MCU (4) (120'-135') FROM MH 231 MCU (4) (180'-260') FROM MH 231 MCU (4) (270"-300') FROM MH 231	*CAMERA UNDERWATER* STANDARD CLEAN (316') AND RETELEVISE GREASE IN PIPE

Exhibit B
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Mainline Defect Sumary Table

Old Project Number	Project Number	Map Page	Redzone/Televised	Asset	Upstream MH	Downstream MH	Size	Gis Length (Feet)	Inspected Length (Feet)	Inspection Status	Material	O&M Quick	Struct Quick	Upstream Rim To Invert	Downstream Rim To Invert	Location	Defect (1-Lowest, 5-Highest) Mcu = Camera Underwater	Proposed Repair
19		B3	RZ	262 to 263	262	263	8"	225.7	256.5	Complete with Reversal		4B31	2200		19		MCU (4) (22'-36') FROM MH 232 (POTENTIAL SAG) MCU (4) (133'-137') FROM MH 232 (POTENTIAL SAG) MCU (4) (170'-185') FROM MH 232 (POTENTIAL SAG) MCU (4) (236') FROM MH 232 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN (256') AND RETELEVISE NO GREASE IN PIPE
20		B4	RZ	169 to 168	169	168	8"	436.38	453.3	Complete		4A38	2100	12.6			MCU (4) (0'-10') FROM MH 169 (POTENTIAL SAG) MCU (4) (120'-130') FROM MH 169 (POTENTIAL SAG) MCU (4) (220'-260') FROM MH 169 (POTENTIAL SAG) MCU (4) (280'-290') FROM MH 169 (POTENTIAL SAG) MCU (4) (399'-415') FROM MH 169 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN (453') AND RETELEVISE GREASE IN PIPE
21		B3	RZ	282 to 285	282	285	8"	374.83	332.1	Incomplete with Reversal		4A31	0		23.9		TAP BREAK DEFECTIVE (3) FROM MH 285 MCU (4) (210'-300') FROM MH 285 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN (375') AND RETELEVISE
22		B4	RZ	236 to 235	236	235	8"	456.96	701.8	Complete with Reversal		4A28	0		10		MCU (4) (5'-5') FROM MH 235 (POTENTIAL SAG) MCU (4) (23'-40') FROM MH 235 (POTENTIAL SAG) MCU (4) (85'-115') FROM MH 235 (POTENTIAL SAG) TAP FACTORY DEFECTIVE (2) (161') FROM MH 235 MCU (4) (180'-230') FROM MH 235 (POTENTIAL SAG)	*CAMERA UNDERWATER* HEAVY CLEAN (456') AND RETELEVISE GREASE IN PIPE
23		C4	RZ	202 to 558	202	558	8"	207.35	320.8	Complete		4A00	0		11.8		MCU (4) (50'-60') FROM MH 558 (POTENTIAL SAG) MCU (4) (70'-140') FROM MH 558 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN (320') AND RETELEVISE
24		C4	RZ	561 to 199	561	199	8"	177.7	177.6	Complete		4A00	0	13.3			MCU (4) (60'-130') FROM MH 561 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN (177') AND RETELEVISE
25		B3	RZ	280 to 281	280	281	8"	172.44	176.4	Complete		452A	0		6		MCU (4) (35'-60') FROM MH 281 (POTENTIAL SAG) MCU (4) (160'-170') FROM MH 281 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN (177') AND RETELEVISE GREASE IN PIPE
26		B4	RZ	171 to 170	171	170	8"	344.04	366.7	Complete		433A	2711	11			ROOTS MEDIUM BARREL (4) - 10' FROM MH 171 MCU (4) (355-368') FROM MH 171 (MH NEEDS TO BE CLEANED)	STANDARD CLEAN (366') CUT INTRUDING TAP AT 245' FROM MH 171' VACCUM OUT MH 170
27		D3	RZ	312 to 311	312	311	8"	335.81	335	Complete with Reversal		413I	4100		9.3		MCU (4) (5'-10') FROM MH 311 (NOT AN ISSUE) TS (0) - 91 'FROM MH 311 (LINING MIGHT BE PULLING AWAY) TB (0) - 127' FROM MH 311 (LINING OK) TS (4) - 198' FROM MH 311 (LINING PULLING AWAY)	*ALREADY LINED* STANDARD CLEAN AND RETELEVISE (335') CHECK TELEVISING FOR LINING DELAMINATION
28		D4	RZ	324 to 323	324	323	8"	245.76	228.9	Complete with Reversal		412B	0		12.7		DEPOSITS (4) 168' FROM MH 324'	CUT OUT DESPOSITS AT 164' HEAVY CLEAN (245')
29		C3	RZ	305 to PLYGRD	305	PLYGRD	8"	316.23	148.3	Complete		4829	0	21.7			MCU (4) (50'-90') FROM MH 305 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (150') GREASE IN PIPE
30		C4	RZ	199 to 562	199	562	8"	85.84	164	Complete		4800	0	13.9			MCU (4) (20'-40') FROM MH 199 (POTENTIAL SAG) MCU (4) (145'-165') FROM MH 199 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (164') GREASE IN PIPE
31		B3	RZ	277 to 276	277	276	8"	221.4	122.5	Incomplete with Reversal		4631	0	16.1			MCU (4) (70'-105") FROM MH 277 (POTENTIAL SAG) DAE (4) (124') FROM MH 277	*CAMERA UNDERWATER* CUT DEPOSITS AT 124' STANDARD CLEAN AND RETELEVISE (221') GREASE IN PIPE
32		C3	RZ	307 to 306	307	306	8"	157.05	163.2	Complete		4629	2100		15.5		MCU (4) (45'-55') FROM MH 306 (POTENTIAL SAG) MCU (4) (110'-130') FROM MH 306 (POTENTIAL SAG) MCU (4) (160'-170') FROM MH 306 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (163') GREASE IN PIPE
33		E4	RZ	148 to 547	148	547	8"	330.82	136.1	Incomplete with Reversal		5131	1100		19.5		DEPOSITS (5) - 77' FROM MH 148	HEAVY CLEAN AND RETELEVISE (331')
34		C4	RZ	212 to 557	212	557	8"	350.89	376	Complete		4600	0		22		MCU (4) (216'-248') FROM MH 557 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (376') GREASE IN PIPE
35		A4	RZ	175 to 174	175	174	8"	308.16	319	Complete		4521	0	7			MCU (4) (160'-200') FROM MH 175 (POTENTIAL SAG)	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (320') GREASE IN PIPE
36		C4	RZ	192 to 561	192	561	8"	192.84	204.3	Complete		4500	0		13.3		MCU (4) (0'-26') FROM MH 561 (CAMERA GOING UPSTREAM AGAINST WATER)	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (205') GREASE IN PIPE

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37		B4	RZ	168 to 167	168	167	8"	467.49	454	Complete with Reversal		4331	0		16.1		DAGS (4) - 110.5 FROM MH 167 MCU (4) - 212'-224' FROM MH 167 MCU (4) - 33'-61' FROM MH 168	*CAMERA UNDERWATER* HEAVY CLEAN AND RETELEVISE (468') GREASE IN PIPE
38		D3	RZ	311 to 310	311	310	8"	367.7	369.4	Complete		4327	2300	9.3			SURFACE SPALLING (2) - FROM MH 311 TO 155' MCU (4) (360'-370') FROM MH 311 (POTENTIAL SAG)	STANDARD CLEAN AND RETELEVISE (370') *POTENTIAL CIPP LINING IN FUTURE* FROM MH 311-155'
39		C3	RZ	230 to 229	230	229	8"	125.97	125.7	Complete		4321	0	9.9			MCU (4) (63.3') FROM MH 230 (POTENTIAL SAG AT TAP CONNECTION)	STANDARD CLEAN AND RETELEVISE (125')
40		C4	RZ	167 to 166	167	166	8"	89.97	87.9	Complete		4300	0		18		MCU (4) (23'-38') FROM MH 166 (POTENTIAL SAG)	HEAVY CLEAN AND RETELEVISE (90') VERY DIRTY PIPE
41		D3	RZ	219 to 217	219	217	8"	362.91	373.4	Complete		4232	1100		8.2		ROOTS MEDIUM BARREL (4) - 10' FROM MH 217	POTENTIAL 5' LINING AT 10.6' FROM MH 217 *VIDEO UNUSABLE FOR ADEQUATE REVIEW* STANDARD CLEAN AND RETELEVISE (375')
42		B4	RZ	173 to 172	173	172	8"	289.53	307.2	Complete		4231	1K00	11.2			MCU (4) (237'-245') FROM MH 173 (POTENTIAL SAG) MCU (4) (305'-308') FROM MH 173 (WATER BACKUP AT MH - MINOR)	STANDARD CLEAN AND RETELEVISE (308')
43		C2	RZ	301 to 333	301	333	12"	125.98	296.3	Complete		4231	1F00	17.9			MCU (4) (180'-190') FROM MH 173 (WATER BACKUP AT MH - MINOR)	STANDARD CLEAN AND RETELEVISE (190')
44		B4	RZ	174 to 173	174	173	8"	345.23	93.6	Incomplete with Reversal		4231	1100		11.2		MCU (4) (CAMERA ROLLED OVER)	*VIDEO UNUSABLE FOR ADEQUATE REVIEW* STANDARD CLEAN AND RETELEVISE (346')
45		C3	RZ	306 to 305	306	305	8"	262.62	116.8	Incomplete with Reversal		4225	0	15.5			MCU (4) (21') FROM MH 305 (LINE BLOCKED) MCU (4) (86') FROM MH 306 (LINE BLOCKED)	*VIDEO UNUSABLE FOR ADEQUATE REVIEW* STANDARD CLEAN AND RETELEVISE (262') GREASE IN LINE
46		C4	RZ	191 to 193	191	193	8"	765.26	37.8	Incomplete with Reversal		4222	0		6		RBJ (4) - 33' FROM MH 193 RBC(4) - 38' FROM MH 193 TBI (4) - 38' FROM MH 193	*VIDEO UNUSABLE FOR ADEQUATE REVIEW* CUT OUT ROOTS AND INTRUDING TAP AT 33' & 38' STANDARD CLEAN AND RETELEVISE (765') LOCATE MANHOLE 191
47		B3	RZ	286 to 287	286	287	8"	93.06	83.6	Incomplete with Reversal		4200	0		14.6		MCU (4) (73') FROM MH 287 (SURVEY ABANDONED) PIPE LOOKED PRETTY CLEAN - MAYBE JUST GREASE BLOCKAGE	STANDARD CLEAN AND RETELEVISE (93')
48		F3	RZ	20 to 19	20	19	8"	247.41	218.1	Incomplete with Reversal		4139	3100		15.4		MCU (4) (213') FROM MH 20 (SURVEY ABANDONED) GREASE IN PIPE - PROBABLY JUST GREASE BACK UP AT DOWN STREAM END OF PIPE	HEAVY CLEAN AND RETELEVISE (247')
49		D4	RZ	327 to 326	327	326	8"	283.9	349	Complete		4134	2211	5.9			ROOTS MEDIUM BARREL (4) 69' FROM MH 327 (REALLY RFJ-LEVEL1)	STANDARD CLEAN AND RETELEVISE (350')
50		B3	RZ	261 to 262	261	262	8"	331.58	225.2	Incomplete with Reversal		4133	1100		6		TAP BREAK INTRUDING (2) - 67' FROM MH 261 MISC. CAMERA UNDERWATER (4) - 156' FROM MH 262	CUT INTRUDING TAP 67' FROM MH 261 STANDARD CLEAN AND RETELEVISE (332')
51		B3	RZ	290 to 291	290	291	8"	234.11	251	Complete		4133	0		14.3		MCU (4) (15'-25') FROM MH 291 (POTENTIAL SAG)	STANDARD CLEAN AND RETELEVISE (251')
52		A3	RZ	554 to 280	554	280	8"	328.14	344.3	Complete with Reversal		4132	0	4			TAP BREAK DEFECTIVE (3) - 193' FROM MH 554 MCU (4) (335') FROM MH 554 (SURVEY ABANDONED) GREASE IN PIPE - GREASE BACK UP AT DOWNSTREAM END OF PIPE	STANDARD CLEAN AND RETELEVISE (251') MONTOR DEFECTIVE TAP AT 193' FROM MH 554
53		D4	RZ	553 to 552	553	552	8"	334.84	377.5	Complete with Reversal		4131	3100	5.9			ROOTS MEDIUM BARREL (4) - 169' FROM MH 553	HEAVY CLEANING 380' (ROOT BALLS & DEPOSITS)
54		B4	RZ	242 to 241	242	241	8"	229.48	184.6	Complete		4131	0		8.1		DEPOSITS (4) - 10.5' FROM MH 241 TAP BREAK DEFECTIVE (2) - 10.5' FROM MH 241	REPLACE TAP OR CLEAN OUT SERVICE CONNECTION AT 10.5' (R) FROM MH 241 STANADARD CLEAN AND RETELEVISE (186')

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55		C3	RZ	267 to 268	267	268	8"	322.09	334.5	Complete		4131	0	8			ROOTS BALL JOINT (4) - 25' FROM MH 267	CUT OUT ROOT BALL & DEPOSITS 25' FROM MH 267
56		B2	RZ	343 to 344	343	344	8"	384.27	387.3	Incomplete with Reversal		4128	0	11			MCU (4) (388') FROM MH 343 (SURVEY ABANDONED) GREASE IN PIPE - PROTENTIAL GREASE BACK UP AT DOWN STREAM END OF PIPE	STANDARD CLEAN AND RETELEVISE (388') CLEAN OUT MH 344
57		B4	RZ	170 to 169	170	169	8"	365.36	261.4	Incomplete with Reversal		4125	2100	10			MCU (4) (253' FROM MH 170 (SURVEY ABANDONED) GREASE IN PIPE - PROTENTIAL GREASE BACK UP AT DOWN STREAM END OF PIPE.	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (365')
58		B4	RZ	189 to 188	189	188	8"	249.91	227	Complete with Reversal		4123	0		10		DEPOSITS (4) -158' FROM MH 188	CUT OUT DEPOSITS AT 156' FROM MH 188 STANDARD CLEAN AND RETELEVISE (244')
59		D4	RZ	320 to 319	320	319	8"	110.36	118.9	Complete		4121	0	26			DAE (4) - 51' FROM MH 320	CUT OUT DESPOSTS AT 51' FROM MH 320
60		D4	RZ	549 to 548	549	548	8"	101.13	61	Incomplete with Reversal		4121	0		13.1		MCU (4) - 5'-10' FROM MH 548 MCU (4) - 10' FROM MH 549	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (102') GREASE IN PIPE
61		B1	RZ	363 to 362	363	362	0"	351.33	1.5	Incomplete		4100	0		11		MCU (4) - AT MH 362 ONLY 1' OF PIPE TELEVISED	*CAMERA UNDERWATER* STANDARD CLEAN AND RETELEVISE (102') GREASE IN PIPE
62		E1	RZ	520 to 522	520	522	8"	373.26	194.6	Incomplete		4100	0	15			DEPOSITS (4) - 196' FROM MH 520	CUT OUT DEPOSITS AT 195' FROM MH 520 STANDARD CLEAN AND RETELEVISE (373')
NONE																		
63		B4	RZ	238 to 236	238	236	8"	132.91	137	Complete		4121	0		11.1		MCU (4) (92'-96') FROM MH 236 *DEBRIS IN PIPE-MINOR*	NONE
64		B4	RZ	190 to 189	190	189	8"	80.3	78.7	Incomplete with Reversal		4121	2100		17		LU (4) - ALIGNMENT UP *DROP MANHOLE INCORRECTLY CODED* PIPE IS FINE	NONE
65		F3	RZ	37 to 36	37	36	0"	152.4	154.6	Incomplete		4100	0		6.7		LL (4) - ALIGNMENT LEFT *DROP MANHOLE INCORRECTLY CODED* PIPE IS FINE	NONE
66		F3	RZ	567 to 37	567	37	0"	77.46	72.4	Incomplete		4100	0	7.5			LR (4) - ALIGNMENT RIGHT *DROP MANHOLE INCORRECTLY CODED* PIPE IS FINE	NONE
2020 Televising																		
		D1	TV	445 To 444	445	444	8"		328.7		ACP	2100	0000	108	132	Parkwood Place	DAE (2) - 299'	-
		D1	TV	445 To 444	445	444	8"		0		ACP	0000	0000	108	132	Parkwood Place		-
		D2	TV	429 To 443	429	443	8"		399		ACP	0000	0000	173	168	Sunrise Drive		-
		D2	TV	439 To 443	439	443	8"		349.1		ACP	0000	0000	211	168	Park Lane		-
		D2	TV	440 To 439	440	439	8"		137.5		ACP	2100	0000	86	211	Harbor Park	DAE (2) - 137'	-
		D2	TV	438 To 439	438	439	8"		292.8		ACP	0000	0000	168	211	Park Place		-
		D2	TV	437 To 438	437	438	8"		196.6		ACP	0000	0000	160	168	Park Place		-
	45	C2	TV	428 To 429	428	429	8"		283.3		ACP	5131	0000	141	173	Westover Drive	IG (5) - 71', DAE (3) - 283'	Line
		C2	TV	428 To 429	428	429	8"		63.6		ACP	3100	0000	141	173	Westover Drive	DAE (3) - 63'	-
		C2	TV	427 To 428	427	428	8"		137.3		ACP	0000	0000	168	141	Ravenwood Drive		-
		C1	TV	426 To 427	426	427	8"		139		ACP	0000	0000	150	168	Ravenwood Drive		-
		C2	TV	430 To 429	430	429	8"		375.4		ACP	0000	0000	160	173	Sunrise Drive		-
		C2	TV	435 To 429	435	429	8"		334.2		ACP	0000	0000	129	173	Park Place		
		C2	TV	436 To 435	436	435	8"		243.1		ACP	0000	0000	122	129	Park Place		-

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		C2	TV	431 To 430	431	430	8"		61.9		ACP	3100	0000	103	160	Annandale Lane	DAGS (3) - 61.3	Monitor Deposits
		C2	TV	431 To 430	431	430	8"		149.2		ACP	3100	0000	103	160	Annandale Lane	DAGS (3) - 148'	Monitor Deposits
		C2	TV	432 To 431	432	431	8"		116.5		ACP	0000	0000	142	103	Annandale Lane		-
		C2	TV	433 To 432	433	432	8"		121		ACP	2100	0000	146	142	Annandale Lane	DAE (2) - 4'	-
		C2	TV	434 To 433	434	433	8"		127.8		ACP	0000	0000	129	146	Hognan Ct		-
		C1	TV	394 To 379	394	379	8"		353.5		PVC	0000	0000	93	105	Glen Oaks Drive		-
		C1	TV	395 To 394	395	394	8"		308.7		PVC	0000	0000	71	93	Glen Oaks Drive		-
		C1	TV	396 To 395	396	395	8"		218.4		ACP	0000	0000	87	71	Glen Oaks Drive		-
		C1	TV	397 To 396	397	396	8"		335.4		ACP	0000	0000	73	87	Glen Oaks Drive		-
		C1	TV	398 To 397	398	397	8"		305.1		ACP	0000	0000	86	73	Glen Oaks Drive		-
		C1	TV	413 To 398	413	398	8"		286.4		ACP	2100	0000	108	86	Augusta Drive	DAE (2) - 25', 98'	-
		D2	TV	442 To 465	442	465	8"		340.1		ACP	0000	0000	185	132	Harbor Park		-
		D2	TV	441 To 442	441	442	8"		173.1		ACP	0000	0000	133	185	Harbor Park		-
		D2	TV	463 To 464	463	464	8"		406.6		ACP	0000	0000	90	211	Marine Drive		-
		D2	TV	462 To 463	462	463	8"		143.1		ACP	0000	0000		90	Marine Drive		-
		F2	TV	481 To 483	481	483	8"		365.2		ACP	0000	0000	119	188	Windy Hill Road		-
		F2	TV	482 To 481	482	481	8"		397.7		ACP	3100	0000	70	119	Wallhaven Court	RML (3) - 165'	Monitor Lateral at 165'
		F2	TV	480 To 481	480	481	8"		256.2		ACP	0000	0000	101	119	Windy Hill Road		-
		E2	TV	477 To 476	477	476	8"		349.9		ACP	0000	0000	189	298	Windy Hill Road		Appears to be Infiltration Gusher in MH 477
		E2	TV	478 To 477	478	477	8"		142.4		ACP	0000	0000	184	189	Windy Hill Road		-
		E2	TV	479 To 478	479	478	8"		408		ACP	5100	0000	80	184	Windy Hill Road	~~DAE (5) - 193'~~	Deposit Cut out
		E2	TV	474 To 473	474	473	8"		401.3		ACP	2100	0000	122	215	Chevy Chase Circle	DAE (2) - 209'	-
		E2	TV	475 To 474	475	474	8"		377.8		ACP	0000	0000	67	122	Chevy Chase Circle		-
		D2	TV	451 To 454	451	454	8"		271.6		ACP	3100	0000	138	236	Sunrise Drive	DAE (2) - 271';	
		D2	TV	451 To 454	451	454	8"		73.3		ACP	3100	0000	138	236	Sunrise Drive	DAE (2) - 72';	
		D2	TV	452 To 451	452	451	8"		304.1		ACP	0000	0000	144	138	Tremont Lane		-
		D2	TV	453 To 452	453	452	8"		372.9		ACP	0000	0000	92	144	Tremont Lane		-
		D2	TV	448 To 451	448	451	8"		232.6		ACP	2200	0000	80	138	Sunrise Drive	DAE (2) - 25',32';	-
	46	D2	TV	449 To 448	449	448	8"		212.7		ACP	0000	3100	120	80	Devonshire Circle	H (3) - 171'	Line Hole
		D1	TV	450 To 449	450	449	8"		399.3		ACP	3200	0000	109	120	Devonshire Circle	ID (3) - 390',398'	ID's are minor
		D2	TV	447 To 448	447	448	8"		353.1		ACP	2100	0000	149	80	Sunrise Drive	DAGS (2) - 333'	-
		D2	TV	446A To 447	446A	447	8"		124.1		ACP	0000	0000	146	149	Fairhaven Circle		-
		D1	TV	446 To 446A	446	446A	8"		332.2		ACP	3100	0000	122	146	Fairhaven Circle	TBI (3) - 332'	
		D1	TV	446 To 446A	446	446A	8"		45.5		ACP	3100	0000	122	146	Fairhaven Circle	TBI (3) - 45'	
		D2	TV	443 To 447	443	447	8"		351.8		ACP	2200	0000	168	149	Sunrise Drive	DAE (2) - 165',320'	-
		D2	TV	444 To 443	444	443	8"		202.3		ACP	5131	0000	132	168	Parkwood Place	TBI (3) - 202'; DAGS (5) - 202'	
		D2	TV	444 To 443	444	443	8"		124.7		ACP	3100	0000	132	168	Parkwood Place	TBI (3) - 125'	
		E2	TV	471 To 470	471	470	8"		366.1		ACP	0000	0000	72	181	Highland Court		-
		F2	TV	472 To 471	472	471	8"		173.8		ACP	0000	0000	75	72	Highland Court		-
		F2	TV	490 To 489	490	489	8"		155.9		ACP	0000	0000	106	132	Rustic Lane		-
		F2	TV	484 To 483	484	483	8"		180.2		ACP	0000	0000	232	188	Rustic Lane		-
		F2	TV	485 To 484	485	484	8"		65.7		ACP	0000	0000	257	232	Rustic Lane	DAGS (5) - 65'	Grease needs to be cut out
		F2	TV	485 To 484	485	484	8"		19.5		ACP	3100	0000	257	232	Rustic Lane	DAE (3) - 19';	

Exhibit B
Utilties, Inc. - Twin Lakes Capital Improvement Plan
Mainline Defect Sumary Table

Old Project Number	Project Number	Map Page	Redzone/Televised	Asset	Upstream MH	Downstream MH	Size	Gis Length (Feet)	Inspected Length (Feet)	Inspection Status	Material	O&M Quick	Struct Quick	Upstream Rim To Invert	Downstream Rim To Invert	Location	Defect (1-Lowest, 5-Highest) Mcu = Camera Underwater	Proposed Repair
		F2	TV	486 To 485	486	485	8"		90.2		ACP	0000	0000	248	257	Rustic Lane		
	47	F2	TV	487 To 486	487	486	8"		256.3		ACP	4131	0000	167	248	Rustic Lane	IR (4) - 253'; ID(3) - 245';DAE (2)- 245', 253'	Line IR
		F2	TV	488 To 487	488	487	8"		115.7		ACP	0000	0000	185	167	Rustic Lane	TFD (3) - 60'	
		F2	TV	489 To 488	489	488	8"		118.7		ACP	0000	0000	132	185	Rustic Lane		
		E2	TV	461 To 468	461	468	8"		167.3		ACP	0000	0000	99	210	Sunrise Drive		-
		E2	TV	460 To 461	460	461	8"		86.8		ACP	0000	0000	124	99	Sunrise Drive		
		E2	TV	457 To 460	457	460	8"		349.2		ACP	0000	0000	202	124	Sunrise Drive		-
		E2	TV	458 To 457	458	457	8"		332.4		ACP	0000	0000	81	202	Oak Crest Place		-
		E2	TV	459 To 458	459	458	8"		202.1		ACP	0000	0000	76	81	Oak Crest Place		
		E2	TV	459 To 458	459	458	8"		102.5		ACP	0000	0000	76	81	Oak Crest Place		
		D2	TV	454 To 457	454	457	8"		416.5		ACP	2100	0000	236	202	Sunrise Drive	DAGS (2) - 328';	-
	48	D2	TV	455 To 454	455	454	8"		270.2		ACP	0000	3100	92	236	Windsor Place	H (3) - 128'	Line
		E2	TV	456 To 455	456	455	8"		256.7		ACP	0000	0000	73	92	Windsor Place		-

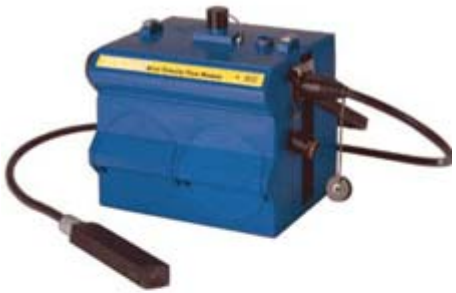
2150 Area Velocity Module

Continuous wave Doppler flow meter is ideal for portable flow surveys and permanent installations.

The 2150 Flow Module uses continuous wave Doppler technology to measure mean velocity. The sensor transmits a continuous ultrasonic wave, then measures the frequency shift of returned echoes reflected by air bubbles or particles in the flow.

The 2150's "smart" area velocity probe is built on digital electronics, so the analog level is digitized in the sensor itself to overcome electromagnetic interference. The probe is also factory-calibrated for 10-foot (3 meter) span at different temperatures. This built-in calibration eliminates drift in the level signal, providing long-term level stability that reduces recalibration frequency and completely eliminates span recalibration.

In field use, the 2150 is typically powered either by two alkaline, or Teledyne ISCO Rechargeable Lead-acid batteries, within a 2191 Battery Module. Highly efficient power management extends battery life up to 15 months at 15-minute data storage intervals. Other power options (including solar) are available.



Above: 2150 with AV sensor and Battery Module

Right: up to 4 Modules stack together for multi-stream or redundant measurements

Standard Features

- Rugged, submersible enclosure meets NEMA 4X, 6P (IP68) environmental specs.
- Chemically resistant epoxy-encapsulated sensor withstands abuse, resists oil and grease fouling, and eliminates the need for frequent cleaning.
- Replaceable high-capacity internal desiccant cartridge and hydrophobic filter protect sensor reference from water entry and internal moisture.
- Pressure transducer vent system automatically compensates for atmospheric pressure changes to maintain accuracy.
- The quick-connect sensor can be easily removed and interchanged in the field without requiring recalibration.
- Up to four 2100 Series flow modules can be networked by stacking and/or extension cables.
- Software features:
    - Secure data storage. All data are continuously stored in flash memory to protect against loss in case of power failure
    - Easy to upgrade. New operating software can be downloaded into non-volatile flash memory, without affecting stored program and data.
    - Records and stores input voltage and temperature data.
    - Variable rate data storage lets you change the data storage interval when programmed conditions occur. This feature assures maximum information about an exceptional event – such as an overflow – while conserving power and data capacity during normal conditions.
    - 38,400 bps communication provides speedy setup and data retrieval.

Applications

- Portable and permanent-site AV flow monitoring for inflow and infiltration, capacity assessment, sewer overflow, and sewer studies.
- Measures shallow flow is small pipes. Low-profile velocity sensor minimizes flow stream obstruction, and senses velocity in flows down to 1 inch (25 mm) in depth.
- Stack modules you need to build a compact, integrated system.
- Monitor multiple flow streams at the same time.
- Obtain redundant measurements to guarantee integrity.
- Remotely locate modules and connect them via cable.
- Expand your monitoring system as your requirements evolve.

Options and Accessories

- 2101 Field Wizard - ruggedized keyboard and display stacks on 2100 system
- 2102 Wireless Module - adds 2-way spread spectrum radio communication for remote data retrieval without manhole entry
- 2103 Modem Module - adds telephone (land line) communication for remote data retrieval
- 2103Ci CDMA Cellular Modem Module - adds cellular communication using Serial Over IP technology (with Flowlink Pro software)
- 2103Gi GSM/GPRS Cellular Modem Module - supports 3G GSM "pushed data" (with Flowlink Pro software)
- 2108 Analog Output Module allows easy interface with SCADA/DCS or other secondary instrument systems

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