STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE PETITION BY HAMILTON SOUTHEASTERN UTILITIES, INC. FOR 1) AUTHORITY TO TRANSFER ITS ASSETS FOR ITS FISHERS SERVICE AREA TO THE CITY OF FISHERS, INDIANA; AND 2) UPON CONCLUSION OF THE TRANSFER, THE CANCELLATION OF ITS CERTIFICATES OF TERRITORIAL AUTHORITY FOR THE FISHERS SERVICE AREA, EXCLUDING A PORTION OF THE CERTIFICATE OF TERRITORIAL AUTHORITY GRANTED BY THE COMMISSION IN CAUSE NO. 38819	)	**CAUSE NO. 45578**

PUBLIC'S EXHIBIT NO. 1

TESTIMONY OF SCOTT A. BELL

ON BEHALF OF

THE INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

AUGUST 31, 2021

Respectfully submitted

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

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CERTIFICATE OF SERVICE

This is to certify that a copy of the ***Public's Exhibit No. 1, Testimony of Scott A. Bell*** has been served upon the following counsel of record in the captioned proceeding by electronic service on August 31, 2021.

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TESTIMONY OF OUCC WITNESS SCOTT A. BELL
CAUSE NO. 45578
HAMILTON SOUTHEASTERN UTILITIES, INC.

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Scott A. Bell, and my business address is 115 West Washington Street, Suite 1500 South, Indianapolis, Indiana 46204.

Q: By whom are you employed and in what capacity?

A: I am employed by the Indiana Office of Utility Consumer Counselor ("OUCC") as the Director of the Water/Wastewater Division. My qualifications and experience are set forth in Appendix A.

Q: What relief does Hamilton Southeastern Utilities, Inc. seek in this case?

A: Hamilton Southeastern Utilities, Inc. ("Petitioner" or "HSE") is seeking Indiana Utility Regulatory Commission ("Commission") approval for (1) authority to transfer substantially all the assets and facilities ("Assets") HSE uses to serve the Certificate of Territorial Authority and indeterminate permits (together the "CTA") comprising HSE's Fishers service area to the City of Fishers, Indiana ("Fishers"); and (2) upon conclusion of the transfer, the cancellation of its CTA for the Fishers service area, excluding a portion of the CTA granted by the Commission in Cause No. 38819.

Q: Has the City of Fishers intervened in this case?

A: Yes. Fishers filed a Petition to Intervene with the Commission on July 8, 2021. In its Petition to Intervene, Fishers stated that it is intervening to support HSE's request for Commission approval to sell a portion of the sewer utility assets to Fishers. The OUCC did not object to the Fishers Petition to Intervene.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to present the OUCC's position regarding the sale or transfer of sewer utility assets from HSE to the City of Fishers and the cancellation of HSE's CTA comprising the Fishers Service Area.

Q: What have you done to prepare your testimony?

A: I read HSE's Verified Petition, and the testimony of Kendall W. Cochran, President of HSE, and Michael G. Lane, Director for NewGen Strategies and Solutions, LLC ("NewGen"). I also reviewed the testimony of Hon. Scott A. Fadness, Mayor of the City of Fishers, and Jonathon Valenta, Assistant Director of Public Works and Director of the Wastewater Utility for the City of Fishers. I participated in virtual meetings with representatives from both HSE and the City of Fishers. I also reviewed Petitioner's responses to OUCC discovery.

II. SALE OF ASSETS

Q: Has HSE and Fishers entered into an Asset Purchase Agreement for the sale of certain sewer utility assets?

A: Yes. Pursuant to the terms of the Asset Purchase Agreement[1] ("Agreement"), HSE and Fishers (the "Parties") have agreed that HSE would sell to Fishers its wastewater collection system that currently provides service to customers in what HSE witness Cochran has identified as the Fishers Service Area ("Service Area").[2] According to the Agreement, the base purchase price ("Base Purchase Price") is $90 Million for the Assets identified in Article 2.1, Transfer and Description of Assets. The Base Purchase Price is subject to a Base Purchase Price Adjustment as described in Article 2.3, Consideration.

[1] See HSE Attachment KWC-2.
[2] See HSE Attachment KWC-2, Exhibit A.

Q: How many customers does HSE currently serve in the Service Area?

A: According to Mr. Cochran, HSE provides service to over 25,000 customers and 34,134 equivalent dwelling units ("EDUs") in the Service Area.

Q: Is HSE also seeking approval to retain the portion of the CTA granted to HSE in Cause No. 38819 as to the Noblesville Customers?

A: Yes. The assets serving these customers is being excluded from the sale and excluded from the valuations. The OUCC has no opposition to HSE retaining the CTA to continue serving the Noblesville Customers.

Q: Will Fishers continue to charge the same rates that HSE currently charges customers in the Fishers Service Area?

A: Yes. In his testimony, Mayor Fadness stated that Fishers will continue to charge the same rates as HSE currently charges.

Q: Did HSE perform an appraisal of the Assets identified in the Agreement?

A: Yes. HSE retained Mr. Michael G. Lane, Director for NewGen Strategies and Solutions, LLC ("NewGen") to perform an appraisal of the Assets defined in the Agreement. Mr. Lane's testimony was filed as Petitioner's Exhibit 2, which included a copy of NewGen's July 12, 2021 appraisal (the "Appraisal")[3]. Mr. Lane explained that the purpose of the Appraisal was to determine the fair market value of the Assets and determined the value of the Assets to be $93,885,000.

Q: Did Fishers perform its own independent appraisal of the Assets it proposes to acquire?

A: Yes. In Section 2.3(b) of the Asset Purchase Agreement, it states that "Promptly following the date hereof but prior to the Closing Date, each Party shall engage a qualified appraisal firm (the "Appraisers"), to conduct an appraisal of the Assets in accordance with applicable

[3] See Petitioner's Exhibit 2, Direct Testimony and Attachments of Michael G. Lane, Attachment MGL-2

Law (the "Appraisal")." In response to OUCC Data Request No. 1, Fishers indicated that it engaged Commonwealth Engineers, Inc. ("Commonwealth") and included the Valuation of Hamilton Southeastern Utilities, Inc. ("Commonwealth Valuation"), dated June 2021. I have included, as Attachment SAB-1, Fishers' response to OUCC Data Request No. 1, which includes the Commonwealth Valuation.

Q: What was the result of the Commonwealth Valuation?

A: The Commonwealth Valuation determined three values: (1) the Total Cost to Replicate Utility (New) of $151,025,000 (See Table 4-1); (2) the Total Value of Utility – Adjusted for Depreciation of $102,035,000 (Table 5-4); and (3) Total Value of Utility – Adjusted for Depreciation Excluding Assets within Noblesville Municipal Boundaries of $101,459,000 (Table 6-2). All three values are greater than the $90 million purchase price.

Q: Are there general benefits to municipal ownership of these sewer utility assets?

A: Yes. There are several benefits to Fishers owning the sewer utility assets. Municipal utilities do not pay income taxes so that expense would not need to be recovered from ratepayers. A municipality like Fishers, who has a AAA bond rating from S&P, would have access to lower cost debt than an investor-owned utility. Also, a municipality has no shareholders, so it pays no return on equity investments. These advantages can result in benefits to ratepayers.

Q: Does the OUCC support the proposed transfer of assets detailed in the Asset Purchase Agreement?

A: Yes. The OUCC supports the proposed transfer.

III. RECOMMENDATIONS

Q: What are your recommendations?

A: I recommend the following:

(1) The Commission approve the sale and transfer of the Assets to the City of Fishers pursuant to the Asset Purchase Agreement.

(2) The Commission approve HSE's request to terminate the CTAs for the Service Area upon the closing of the proposed transaction.

Q: Does this conclude your testimony?

A: Yes.

APPENDIX A

Q: Please describe your educational background and experience.

A: I have a Bachelor of Science degree in Industrial Management, with a minor in Industrial Engineering from Purdue University. I began working for the Indiana Utility Regulatory Commission in 1988 as a Staff Engineer. In 1990, I transferred to the OUCC at the time of the reorganization of the Commission and the OUCC. In 1999, I was promoted to the position of Assistant Director and in 2005 I was promoted to the position of Director of the Water / Wastewater Division. During my term as Director, I have served on the Water Shortage Task Force, created by SEA 369 in the 2006 General Assembly and the Water Resources Task Force, created by HEA 1224 in the 2009 General Assembly. I am a member of the American Water Works Association ("AWWA") and have attended numerous utility related seminars and workshops including the Western Utility Rate Seminar sponsored by the National Association of Regulatory Utility Commissioners ("NARUC"). I also completed additional coursework regarding water and wastewater treatment at Indiana University-Purdue University at Indianapolis ("IUPUI").

Q: Have you previously testified before the Commission?

A: Yes. I have testified in many causes relating to telecommunications, natural gas, electric, water, and wastewater utilities. During the past twenty (20) years, I have testified exclusively on water and wastewater utility issues. Some of those issues included the reasonableness of cost of service studies, rate design, fair value, Replacement Cost New Less Depreciation ("RCNLD") studies, engineering-related operation and maintenance expenses, capital improvement projects, non-revenue water and water conservation.

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CITY OF FISHERS RESPONSES TO INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR'S DATA REQUEST

The City of Fishers, Indiana, (Fishers), by counsel, responds and objects to the First Set of Data Requests propounded by the Indiana Office of Utility Consumer Counselor (OUCC) as set forth below.

GENERAL OBJECTIONS

1. Fishers objects to the Data Requests insofar as they attempt to impose on Fishers obligations different from, or in excess of, those imposed by the Indiana Rules of Trial Procedure, the Indiana Administrative Code or by the administrative law judge.

2. Fishers objects to the Requests to the extent they seek disclosure of private and confidential government or utility-related research, plans, analysis, strategies, data, or customer records and other sensitive government, private business, or utility-related information protected from unwarranted disclosure or discovery by applicable law.

3. Fishers objects to the Requests to the extent they seek information protected by the attorney-client privilege, the work-product doctrine, or other applicable privileges and protections.

Fishers hereby claims all applicable privileges and protections to the fullest extent implicated by the Requests and excludes privileged information and materials from its responses. Any disclosure of such information or materials as a result of Fishers' responses or otherwise is inadvertent and is not intended to waive any applicable privileges or protections.

4. Fishers objects to the Requests to the extent that they purport to impose any obligations beyond those specified in the Commission's Rules of Practice and Procedure and applicable orders of the Commission, and to the extent they request information beyond the scope of traditional discovery inquiry in proceedings before the Commission.

5. Fishers objects to the extent the Requests seek information that is stored on back-up tapes or other inaccessible electronic storage because of the undue burden or cost. Fishers will not search backup tapes in response to these requests.

6. Fishers' responses are based upon its present knowledge, information, and belief. These responses are subject to modification or supplementation as appropriate in view of additional or different information that discovery or further investigation may reveal.

7. Fishers reserves all objections as to relevance and materiality. Fishers submits these responses and is producing materials in response to the Requests without conceding the relevancy or materiality of the information or materials sought or produced, or their subject matter, and without prejudice to Fishers' right to object to further discovery, or to object to the admissibility of proof on the subject matter of any response, or to the admissibility of any document or category of documents, at a future time. Any disclosure of information not responsive to the Requests is inadvertent and is not intended to waive Fishers' right not to produce similar or related information or documents.

8. Fishers objects to the Requests to the extent they call for identification of, or information contained in or derived from: (a) news articles, trade press reports, published industry services or reference materials, or similar publicly-available sources that are available for purchase or otherwise; (b) materials that are part of the public record in any legislative, judicial, or administrative proceeding and reasonably available; (c) materials generated by OUCC and thus presumably in OUCC's own possession, custody or control; (d) materials otherwise available to OUCC where response to the Request would impose unnecessary or unjust burdens or expense on Fishers under the circumstances; and/or (e) previously submitted or available to OUCC in prefiled testimony, pre-hearing data submissions, and other documents already filed with the Commission in the pending proceeding.

Subject to and without waiving the foregoing General Objections, each of which are incorporated by reference into the responses below as if fully restated therein, Fishers provides the following responses to the Data Requests. Fishers' responses are based on the best information presently available. Fishers reserves the right to amend, supplement, correct or clarify answers if other or additional information is obtained, and to interpose additional objections if deemed necessary.

II. Data Request.

Q-1-1: In Section 2.3(b) of the Asset Purchase Agreement, it states that "Promptly following the date hereof but prior to the Closing Date, each Party shall engage a qualified appraisal firm (the "Appraisers"), to conduct an appraisal of the Assets in accordance with applicable Law (the "Appraisal")." Please provide the name of the qualified appraisal firm that was retained by the City of Fishers and provide a copy of the appraisal of the assets being acquired from HSE.

RESPONSE: Fishers engaged Commonwealth Engineers, Inc. ("Commonwealth"). The Commonwealth report is attached to this response as Attachment OUCC DR 1-1.

WITNESS: Mayor Fadness

Q-1-2: On pages 6-7 of Hon. Scott A. Fadness' testimony, he states that the "City will initiate the acquisition with its Board where it will consider a resolution to acquire HSE, which will include (1) approval of the Agreement, (2) an engineer's estimate supporting the City's acquisition, and (3) an order authorizing the City to pursue financing of the acquisition." Please provide a copy of the engineer's estimate supporting the City's acquisition.

RESPONSE: Mayor Fadness is referring to the appraisal report produced by Commonwealth discussed in Request Q-1-1. The Resolution discussed by Mayor Fadness, which references the Commonwealth report, is attached to this response as Attachment OUCC DR 1-2.

WITNESS: Mayor Fadness.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that on August 4, 2021, the foregoing was served electronically on the parties below:

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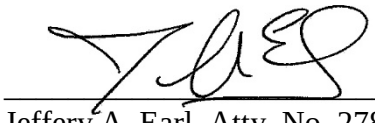

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Hamilton Southeastern Utilities, Inc.

"Valuation"

June 2021

Prepared by:

COMMONWEALTH™ ENGINEERS, INC.
A wealth of resources to master a common goal.

Section 1 – Introduction

This Task #1 Valuation for the Hamilton Southeastern (HSE) Utility provides a high-level cost estimate for both current day costs to reproduce this facility new as well as a corresponding straight-line depreciation of the assets to dates of approximate installations. The valuation was assembled using limited information as provided by HSE inclusive of:

- lineal footage of pipe and pipe material,
- pump station inventory and corresponding station pumping capacities,

  &

- age of infrastructure installed.

The Engineer applied reasonable assumptions to augment the above information provided by HSE including:

- sewer depth classifications,
- surface replacement requirements,

  &

- adjustments to the above age of infrastructure installed.

This Valuation is premised upon a *Cost Approach*. *Income* and *Market Approaches* to valuation have already been contracted by HSE and provided to the City via a draft report dated September 2020 prepared by NewGen Strategies & Solutions. Additionally, two (2) *Cost Approaches* were also identified applied within this draft report. One Cost Approach in the report summates utility records of costs incurred and depreciates these costs. The second Cost Approach provides an opinion of reproduction cost associated with the same inventory of items and also depreciates these costs.

The Engineer's *Cost Approach* does not utilize the asset listings in the NewGen Strategies & Solutions report but instead employs an analysis premised upon the understood utility's layout and conveyance capabilities. Cost to replicate a similar utility of denoted characteristics is then determined and the assets are then "straight-line" depreciated to arrive at current day value.

The Valuation is the first of a two phased approach. The object for the first phase (Task #1) is to provide an engineer's estimate of the value or cost of the utility. The second phase (Task #2) will refine this work as a part of the City's due diligence through an updated and expanded asset inventory information, adjustments to the straight-line depreciated values reflective of assessed infrastructure condition, and consideration of any identified regulatory issues that may create additional costs upon purchase as may be considered by the City in completing the purchase.

Section 2 – Utility Inventory

2.1 Gravity Sewer and Sewer Force Main

A. Sources of Information

An excel spreadsheet was provided to the Engineer by HSE summating quantity of gravity sewers and sewer force mains. This inventory was inclusive of pipe sizes, materials, and total lengths. **Tables 2-1 and 2-2** have been created to succinctly document and convey this information.

Table 2-1
Gravity Sewer Inventory – Provided by HSE

Gravity Sewer Pipe Size and Type	Length (ft)
8in DI Pipe	23,051
10in DI Pipe	9,006
12in DI Pipe	9,732
14in DI Pipe	246
15in DI Pipe	372
16in DI Pipe	2,596
18in DI Pipe	1,438
20in DI Pipe	54
24in DI Pipe	6,684
30in DI Pipe	131
42in DI Pipe	129
8in PE Pipe	576
10in PE Pipe	351
6in PVC Pipe	688
8in PVC Pipe	1,184,742
10in PVC Pipe	72,512
12in PVC Pipe	43,826
15in PVC Pipe	31,696
16in PVC Pipe	1,999
18in PVC Pipe	32,328
21in PVC Pipe	2,130
24in PVC Pipe	15,088
27in PVC Pipe	1,704
18in RCP Pipe	842
8in Truss Pipe	52,911
10in Truss Pipe	4,778
12in Truss Pipe	7,432
15in Truss Pipe	18,343
Unknown Pipe (Purchased properties and properties awaiting GIS correction)	37,400
Total Gravity Sewer Footage	**1,562,785**

Table 2-2
Sewer Force Main Inventory – Provided by HSE

Pressure Sewer Pipe Size and Type	Length (ft)
4 In DI Pipe	960
6in DI Pipe	56
8in DI Pipe	94
10in DI Pipe	708
12in DI Pipe	6,037
16in DI Pipe	1,420
18in DI Pipe	24
20in DI Pipe	10,323
36in DI Pipe	266
2in PE Pipe	9,869
3in PE Pipe	5,985
4in PE Pipe	264
8in PE Pipe	735
12in PE Pipe	2,825
14in PE Pipe	1,051
16in PE Pipe	929
18in PE Pipe	450
20in PE Pipe	2,767
1.25in PVC Pipe	455
1.5in PVC Pipe	233
2in PVC Pipe	16,893
2.5in PVC Pipe	4,184
3in PVC Pipe	9,509
4in PVC Pipe	9,046
6in PVC Pipe	2,587
8in PVC Pipe	14,443
10in PVC Pipe	29,710
12in PVC Pipe	17,565
14in PVC Pipe	5,856
16in PVC Pipe	27,080
20in PVC Pipe	398
24in PVC Pipe	264
30in PVC Pipe	42
36in PVC Pipe	5,340
42in PVC Pipe	10
Unknown Pipe (Purchased properties and properties awaiting GIS correction)	38,715
Total Force Main Footage	**227,093**

In addition to the above inventory provided by HSE, Indiana Utility Regulatory Commission (IURC) filings from 1990 to 2020 were also provided by HSE and consulted and reviewed by the Engineer. The IURC filings contain information reflective of assets in place prior to the reporting year and assets installed over the course of the reporting year. This information is summated in below **Table 2-3**.

Table 2-3
IURC Sewer Pipe Inventory

Item	Material	Size (inches)	Length (ft)
Gravity Sewer	DI	8	1,016
Gravity Sewer	PVC	1.5	111
Gravity Sewer	PVC	2	7,155
Gravity Sewer	PVC	2.5	2,909
Gravity Sewer	PVC	3	4,668
Gravity Sewer	PVC	4	1,288
Gravity Sewer	PVC	6	69,943
Gravity Sewer	PVC	8	1,051,729
Gravity Sewer	PVC	10	89,053
Gravity Sewer	PVC	12	53,932
Gravity Sewer	PVC	14	246
Gravity Sewer	PVC	15	46,613
Gravity Sewer	PVC	16	824
Gravity Sewer	PVC	18	23,426
Gravity Sewer	PVC	21	2,021
Gravity Sewer	PVC	24	9,867
Gravity Sewer	PVC	27	1,984
Gravity Sewer	PVC	30	131
Gravity Sewer	RCP	18	842
Total Gravity Sewer			**1,367,758**
Force Main	PE	2	2,140
Force Main	PVC	2	2,462
Force Main	PVC	3	5,910
Force Main	PVC	4	6,792
Force Main	PVC	6	1,548
Force Main	PVC	8	9,945
Force Main	PVC	10	25,359
Force Main	PVC	12	11,962
Force Main	PVC	14	1,051
Force Main	PVC	16	2,476
Force Main	PVC	20	1,313
Total Force Main			**70,958**

The information provided in the IURC filings does not match the information provided by the Utility, as illustrated in below **Table 2-4**. Further, gravity sewer pipe is typically ≥8-inch in diameter. The IURC filings reflect a large quantity of pipe ≤8-inch as gravity sewer. This is likely a simple mis-categorization on the reporting forms. None-the-less, the inventory discrepancies between the two (2) sources is noteworthy as it contributes to a level of uncertainty with respect to the accuracy of asset inventory.

Table 2-4
HSE vs IURC Sewer Pipe Inventory

Item	Source – HSE Excel Spreadsheet	Source- IURC Summary Reporting	Difference (%)
Gravity Sewer	1,562,785	1,367,758	12.5%
Force Main	227,093	70,958	68.8%
Total	1,789,878	1,438,716	19.6%

The HSE Utility has a robust GIS based mapping system which the Engineer has been provided access and has reviewed in support of the Valuation assembly. The Excel Spreadsheet unit quantities for pipe size, type, and material were identified by HSE as being obtained from the GIS mapping system. It is most probable that a higher standard of care was taken in the assembly of the GIS mapping system than employed historically for the assembly of the annual IURC reports. Therefore, the data within the Excel Spreadsheet representative of pipe size, type, and material has been utilized for purposes of this valuation assembly.

B. Sewer Pipe Assumptions

1. Depth

Neither the Excel Spreadsheet nor the IURC Summary Reporting data provide the installed depths of sewer mains. Depth classifications are impactful when assessing cost of installation. Reasonable expectations for sewer main depths were therefore employed.

Force main depth requirements are primarily dictated by soil freeze depth. For purposes of this assessment, all force mains were assumed to be installed with a corresponding depth of cover of 6-feet.

Gravity sewers that are less than or equal to 12-inches diameter are assumed to be primarily utilized in clustered residential areas (or neighborhoods). These areas tend to contain shorter stretches of pipe and convey smaller rates/volumes of flow. For purposes of this assessment, all gravity sewers less than or equal to 12-inches diameter are assumed to have a depth of cover between 6 and 8 feet.

Gravity sewers that are greater than 12-inches but less than 18-inches diameter are assumed to accept flows from multiple neighborhoods and

convey those flows to regional lift stations or larger interceptors. This typically requires greater depths of installation than those serving individual clustered residential areas. For purposes of this assessment, all gravity sewers greater than 12-inch in diameter and less than 18-inch in diameter are assumed to have a depth of cover between 8 and 10 feet.

Gravity sewers that are greater than 18-inches diameter are assumed to be utilized for interceptor conveyance and are at greater depths. For purposes of this assessment, all gravity sewer greater than 18-inch are assumed to have a depth of cover between 10 and 12 feet.

Sewer pipe assumptions discussed above are summarized in below **Table 2-5.**

Table 2-5
Assumed Sewer Pipe Installation Depths

Type	Size	Depth of Cover (feet)
Force Main	All	6
Gravity Sewer	Less than or equal to 12-inches	6-8
Gravity Sewer	Greater than 12-inches AND less than or equal to 18-inches	8-10
Gravity Sewer	Greater than 18-inches	10-12

2. Surface Restoration

In addition to depth, assumptions were made regarding the type of surface restoration required after the excavation for the pipe, installation of the pipe and backfilling of the pipe. For the sake of this assessment, two (2) categories of surface restoration were employed:

a. Asphalt Restoration

b. Grass Restoration

Cost for surface replacement typically ranges from a low for grass surface replacement to a high for hard surface replacement such as asphalt. Based on the Engineer's cursory review of the utility GIS mapping system, about 30% of the sewer mains appear to be installed in grass and the remaining 70% installed under hard surface. Therefore, costs associated with utility pipe surface restoration requirements (should this system need to be installed today and surfaces restored to existing conditions) reflect these percentages.

2.2 Manholes

A. Sources of Information

The Excel Spreadsheet inventory provided by the utility does not include information on manholes (only sewer pipe). Manholes are present along gravity sewer and the corresponding costs associated with this asset must be considered.

From 1990 to 1999, manholes were included in the Utility's IURC filings. Over this time, 410 manholes were recorded on the IURC filings. Unfortunately, after 1999, the IURC filings no longer included manholes.

In December of 2019, when the Engineer was initially contracted to assemble the utility valuation, a gross estimation of 4,500 manholes was made with the assumption that manholes were evenly spaced every 400-feet along the gravity sewer pipe. Over the 2019 and early 2020 timeframe of the initial contract the Engineer reviewed the GIS mapping in detail and performed a count of manholes reflected on this mapping. This approach identified 6,539 manholes within the collection system. This value is reasonable given the sewer system layout and is therefore utilize for purposes of this valuation.

B. Assumptions

1. Size

Manhole sizes were estimated using National Precast Concrete Association (NPCA) sizing recommendations (2014). This guidance outlines manhole sizing based on the material and diameter of the pipe(s) entering the manhole, the number of pipes entering the manhole, and the angles between pipes entering the manholes. Manhole sizing guidelines for the purposes of this valuation employed three common scenarios for pipes of known diameters:

a. Three pipes entering the manhole where X°=90° and Y°=180°

b. Two pipes entering the manhole where X°=90°

c. Two pipes entering the manhole where X°=180°

X° is the angle between Pipe 1 and Pipe 2 and Y° is the angle between Pipe 1 and Pipe 3.

These assumptions yield the following guidelines for manhole size:

- For pipes less than or equal to 24-inches in diameter, a manhole diameter of 48-inches is required.
- For pipes greater than 24-inches and less than 36-inches in diameter, a manhole diameter of 60-inches is required.
- For pipes greater than or equal to 36-inches in diameter, a manhole diameter of 72-inches is required.

Applying these guidelines assuming manholes are distributed equally along the various diameter gravity sewers, an inventory of likely manholes was created (**See Table 2-6**).

Table 2-6
Manhole Size Assumptions

Manhole Size	Pipe Size	Total Length of Main* (feet)	Percentage of Main (Based on Length)	Number of Manholes**
48-inches	Less than or equal to 24-inches	1,523,421	99.87%	6,531
60-inches	Greater than 24-inches and less than 36-inches	1,835	0.12%	8
72-inches	Greater than or equal to 36-inches	129	0.01%	1

* *Utilizes the Length of Mains from the inventory provided by the Utility, not including the unknown pipe.*

** *The tota*l number of manholes adds up to 6,540 due to rounding.

2. Depth

Manhole depths were assumed based on the depth of pipe entering the manhole (**See Section 2.1**). Since it was assumed that 60-inch and 72-inch diameter manholes contain pipes with a diameter greater than 24-inches, these manholes were assumed to have a depth of 10 to 12 feet. 48-inch manholes were assumed to be distributed equally throughout the collection system, so the depth was distributed based on the percentage of sewer main in each category. Assumed manhole installation depths are summarized in below **Tables 2-7 and 2-8**.

Table 2-7
48-inch Manhole Depth Assumptions

Depth (feet)	Pipe Size	Total Length of Main (feet)	Percentage of Main (Based on Length)	Number of Manholes
6-8	Less than or equal to 12-inches	1,409,605	92.53%	6,043
8-10	Greater than 12-inches AND less than or equal to 18-inches	89,860	5.90%	385
10-12	Greater than 18-inches	23,956	1.57%	103

Table 2-8
Manhole Depth Assumptions

Manhole Size	Number of Manholes 6-8 Feet Deep	Number of Manholes 8-10 Feet Deep	Number of Manholes 10-12 Feet Deep
48-inches	6043	385	103
60-inches	-	-	8
72-inches	-	-	1

3. Surface Restoration

Again assuming that manholes are equally distributed throughout the system, surface restoration for manholes follows the same guidelines as outlined in **Section 2.2;** 30% of manholes located in grass and 70% of manholes located in asphalt.

2.3 Lift Stations

A. Sources of Information

In addition to the inventory of sewer mains, the Utility also provided an inventory of 30 lift stations in the system (*HSE Utilities Pump Inventory: 2021*). This inventory includes:

- Lift Station Name
- Number of Pumps
- Size, Voltage, and Capacity of Pumps
- Pump Manufacturer, Model Number, and Serial Number
- Pump Manufacture Date and Installation Date

A summary of this inventory is shown in **Table 2-9**.

Table 2-9
Lift Station Inventory – Provided by Utility
(*HSE Utilities Pump Inventory: 2021*)

Lift Station Name	Pump Number	Pump Capacity (GPM)
Fall Road	1	763
	2	763
	3	763
Covington Estates	1	116
	2	116
New 106th St	1	4,000
	2	4,000
	3	4,000
Old 106th St	1	2,200
	2	2,200

Lift Station Name	Pump Number	Pump Capacity (GPM)
Harrison Lakes	1	500
	2	500
Stevenson Mill	1	115
	2	115
Hawthorne Ridge	1	800
	2	800
Rosewood	1	250
	2	250
Approach	1	875
	2	875
Beaver Ridge	1	100
	2	100
Canal Place 1	1	600
	2	600
Cambridge 2	1	500
	2	500
Canal Place 4	1	320
	2	320
Cambridge 5	1	100
	2	100
Thorpe Creek	1	2,300
	2	2,300
116th St	1	3,000
	2	3,000
	3	3,000
Mud Creek	1	1,600
	2	1,600
	3	1,600
Sand Creek	1	800
	2	800
	3	800
Waters Edge	1	150
	2	150
Fishers Market Place	1	500
	2	500
	3	500
Barrington Estates	1	120
	2	120
Cambridge 10	1	100
	2	100
HSE Maintenance Building	1	575
	2	575

Lift Station Name	Pump Number	Pump Capacity (GPM)
BEE Camp	1	800
	2	800
Georgia Road	1	1,460
	2	1,460
Fishers Retirement	1	120
	2	120
Vermillion	1	580
	2	580
	3	580
Bridger Pines	1	388
	2	388
Reserve at Lantern	1	184
	2	184
Intracoastal	1	2,336
	2	2,336
	3	2,336

In addition to the inventory provided by the Utility, the IURC filings from 1990-2020 listed the lift stations. The IURC filings agree with the inventory provided by the Utility.

B. Assumptions

1. Firm Capacity

The Firm Capacity of a lift station is the pumping capacity of the station with the largest pump out of service—this is the number utilized to determine the cost of the lift station. To determine the Firm Capacity of the lift stations, the pump capacities provided by the Utility (**Table 2-9**) were utilized. For lift stations with two pumps, the Firm Capacity is the smaller of the two pump capacities. For lift stations with three pumps, the Firm Capacity was estimated to be the sum of the smallest two pumps. While this is not the exact capacity of the station, it is an appropriate approximation to utilize for application to a general “cost curve” which reflects lift station cost assumptions at various firm pumping capacities.

2. Lift Station Type

In addition to firm pumping capacity, the “cost curve” consulted reflects varying costs for two (2) types of lift station:

- wet well/dry well lift stations
- submersible lift stations.

Wet well/dry well lift stations are generally more expensive than submersible lift stations. The type of lift station was determined using the pump models provided by the Utility. Since none of the pump models provided are dry pit pumps, all lift stations were presumed to be of the more affordable submersible lift station type.

3. Standby Power

Another variable that impacts the cost of a lift station is whether there is dedicated standby power. Many lift stations will have a dedicated backup generator to prevent overflows in the case of a power outage, but maintenance and fuel for these generators can be quite costly. For this reason, it is unlikely that all lift stations have dedicated standby power. For the purposes of this valuation, it has been assumed that lift stations with a firm pumping capacity of 1,000 gallons per minute (GPM) or greater have dedicated standby power, whereas those with a firm capacity of less than 1,000 GPM do not have dedicated standby power.

2.4 Conclusions

There are multitude of assumptions that are required employed based upon the readily available information provided to the Engineer with respect to the HSE Utility. The denoted assumptions are premised in best Engineering judgement and are deemed to be “reasonable”. The Engineer is comfortable that with he provided information from the utility and the assumptions identified employed, a rough idea of the utilities value can be determined; which is the intent of this Task 1 – Valuation.

Section 3 – Unit Costs

3.1 Gravity Sewer and Sewer Force Main

A. Sources of Information

The RSMeans Online Cost Estimating Resource was utilized to determine the installed unit prices for both gravity sewer and sewer force main. All costs are from release year 2021 and set for the location of Indianapolis (461-462).

A summary of the costs utilized for gravity sewer can be found below:

- Section 333111.20 Sewage Collection, Plastic Pipe
- Section 333111.25 Sewage Collection, Polyvinyl Chloride Pipe
- Section 334211.60 Sewage/Drainage Collection, Concrete Pipe
- Section 331413.15 Water Supply, Ductile Iron Pipe

A summary of the costs utilized for sewer force main can be found below:

- Section 331413.15 Water Supply, Ductile Iron Pipe
- Section 331413.20 Water Supply, Polyethylene Pipe, C901
- Section 331413.25 Water Supply, Polyvinyl Chloride Pipe
- Section 331413.35 Water Supply, HDPE

A summary of the costs utilized for the associated excavation, bedding, backfill, compaction, and restoration can be found below:

- Section 312316.13 Excavating, Trench
- Section 312323.16 Fill By Borrow And Utility Bedding
- Section 312323.14 Backfill, Structural
- Section 312323.23 Compaction
- Section 329219.14 Seeding, Athletic Fields
- Section 321123.23 Base Course Drainage Layers
- Section 321216.13 Plant-Mix Asphalt Paving

B. Assumptions

In the cases where materials were not available in RSMeans, the closest fit was used. RSMeans does not provide costs for sewer force mains, so costs for water mains were utilized. These costs should be comparable to sewer force mains. RSMeans only catalogs costs for small diameter polyethylene (PE) pipe, so for all larger-diameter PE pipe, the costs for high-density polyethylene (HDPE) were utilized. The information provided by the Utility listed approximately 83,000 lineal feet of Truss pipe in the system; unfortunately, RSMeans does not catalog Truss

pipe. Since Truss pipe is made primarily of polyvinyl chloride (PVC), costs for PVC pipe were utilized.

Approximately 37,000 feet of gravity sewer and 39,000 feet of force main are of unknown size and material, per the information provided by the Utility. The information provided notes that the unknown pipe is from "purchased properties and properties awaiting GIS correction". It is assumed that this is primarily made up of residential areas, so for the purposes of this valuation, it was assumed that the unknown gravity sewer is made up of 8-inch PVC gravity sewer and the unknown force main is made up of 8-inch PVC force main.

In the cases where a specific size of pipe is not available in RSMeans, the cost was scaled based on available sizes, utilizing the trendline function in Microsoft Excel.

Trench boxes are assumed to be 6 feet deep and the trench is assumed to have a 1:1 slope beyond that.

C. Unit Costs

The unit costs utilized for gravity sewer are presented in below **Table 3-1**.

Table 3-1
Unit Costs – Gravity Sewer

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/LF)	Total Cost with Grass Restoration and O&P ($/LF)	Total Cost with Asphalt Restoration ($/LF)	Total Cost with Asphalt Restoration and O&P ($/LF)
DI	8-inch	6-8	$69	$79	$89	$101
DI	8-inch	8-10	$72	$83	$105	$119
DI	8-inch	10-12	$76	$88	$122	$139
DI	10-inch	6-8	$88	$100	$109	$123
DI	10-inch	8-10	$91	$104	$125	$141
DI	10-inch	10-12	$95	$109	$142	$162
DI	12-inch	6-8	$115	$129	$136	$153
DI	12-inch	8-10	$118	$133	$152	$171
DI	12-inch	10-12	$122	$139	$169	$192
DI	14-inch	6-8	$132	$148	$154	$172
DI	14-inch	8-10	$135	$152	$170	$191
DI	14-inch	10-12	$139	$158	$187	$211
DI	15-inch	6-8	$137	$153	$158	$178
DI	15-inch	8-10	$139	$157	$174	$196
DI	15-inch	10-12	$144	$163	$192	$217
DI	16-inch	6-8	$141	$158	$163	$183
DI	16-inch	8-10	$144	$162	$179	$202
DI	16-inch	10-12	$148	$168	$196	$222
DI	18-inch	6-8	$180	$202	$202	$227

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/LF)	Total Cost with Grass Restoration and O&P ($/LF)	Total Cost with Asphalt Restoration ($/LF)	Total Cost with Asphalt Restoration and O&P ($/LF)
DI	18-inch	8-10	$183	$206	$219	$246
DI	18-inch	10-12	$187	$212	$236	$267
DI	20-inch	6-8	$187	$211	$210	$237
DI	20-inch	8-10	$190	$215	$226	$256
DI	20-inch	10-12	$194	$221	$244	$277
DI	24-inch	6-8	$211	$238	$236	$265
DI	24-inch	8-10	$214	$242	$252	$285
DI	24-inch	10-12	$219	$248	$270	$305
DI	30-inch	6-8	$166	$182	$192	$212
DI	30-inch	8-10	$169	$187	$209	$232
DI	30-inch	10-12	$174	$193	$227	$253
DI	42-inch	6-8	$194	$193	$225	$228
DI	42-inch	8-10	$198	$198	$242	$248
DI	42-inch	10-12	$203	$205	$260	$269
PE	8-inch	6-8	$13	$15	$33	$37
PE	8-inch	8-10	$16	$19	$49	$55
PE	8-inch	10-12	$20	$24	$66	$75
PE	10-inch	6-8	$16	$18	$36	$40
PE	10-inch	8-10	$19	$21	$52	$59
PE	10-inch	10-12	$23	$27	$70	$79
PVC	1.5-inch	6-8	$5	$6	$22	$25
PVC	1.5-inch	8-10	$8	$9	$38	$43
PVC	1.5-inch	10-12	$12	$14	$55	$63
PVC	2-inch	6-8	$6	$6	$23	$26
PVC	2-inch	8-10	$8	$10	$39	$44
PVC	2-inch	10-12	$12	$15	$56	$64
PVC	2.5-inch	6-8	$7	$7	$24	$27
PVC	2.5-inch	8-10	$9	$11	$40	$45
PVC	2.5-inch	10-12	$13	$16	$57	$65
PVC	3-inch	6-8	$9	$10	$26	$30
PVC	3-inch	8-10	$11	$13	$42	$48
PVC	3-inch	10-12	$15	$19	$59	$68
PVC	4-inch	6-8	$11	$13	$29	$33
PVC	4-inch	8-10	$14	$17	$45	$52
PVC	4-inch	10-12	$18	$22	$62	$72
PVC	6-inch	6-8	$13	$15	$32	$36
PVC	6-inch	8-10	$16	$18	$48	$54
PVC	6-inch	10-12	$20	$24	$65	$74
PVC	8-inch	6-8	$19	$21	$38	$43

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/LF)	Total Cost with Grass Restoration and O&P ($/LF)	Total Cost with Asphalt Restoration ($/LF)	Total Cost with Asphalt Restoration and O&P ($/LF)
PVC	8-inch	8-10	$22	$25	$54	$61
PVC	8-inch	10-12	$26	$30	$71	$82
PVC	10-inch	6-8	$25	$24	$45	$47
PVC	10-inch	8-10	$27	$28	$61	$65
PVC	10-inch	10-12	$31	$33	$78	$86
PVC	12-inch	6-8	$31	$34	$52	$57
PVC	12-inch	8-10	$34	$38	$68	$76
PVC	12-inch	10-12	$38	$43	$85	$96
PVC	14-inch	6-8	$35	$38	$56	$62
PVC	14-inch	8-10	$38	$42	$72	$81
PVC	14-inch	10-12	$42	$48	$89	$101
PVC	15-inch	6-8	$39	$42	$60	$67
PVC	15-inch	8-10	$42	$46	$77	$85
PVC	15-inch	10-12	$46	$52	$94	$106
PVC	16-inch	6-8	$47	$51	$69	$76
PVC	16-inch	8-10	$50	$55	$85	$95
PVC	16-inch	10-12	$54	$61	$103	$115
PVC	18-inch	6-8	$55	$60	$78	$86
PVC	18-inch	8-10	$58	$64	$94	$105
PVC	18-inch	10-12	$62	$70	$112	$125
PVC	21-inch	6-8	$73	$79	$96	$105
PVC	21-inch	8-10	$76	$83	$113	$124
PVC	21-inch	10-12	$80	$89	$130	$145
PVC	24-inch	6-8	$91	$98	$116	$126
PVC	24-inch	8-10	$94	$102	$132	$145
PVC	24-inch	10-12	$99	$109	$150	$166
PVC	27-inch	6-8	$112	$120	$138	$149
PVC	27-inch	8-10	$116	$125	$155	$168
PVC	27-inch	10-12	$120	$131	$172	$189
PVC	30-inch	6-8	$142	$151	$169	$181
PVC	30-inch	8-10	$145	$156	$185	$201
PVC	30-inch	10-12	$150	$162	$203	$222
RCP	18-inch	6-8	$55	$61	$77	$86
RCP	18-inch	8-10	$58	$65	$93	$105
RCP	18-inch	10-12	$62	$71	$111	$126
Truss	8-inch	6-8	$19	$21	$38	$43
Truss	8-inch	8-10	$22	$25	$54	$61
Truss	8-inch	10-12	$26	$30	$71	$82
Truss	10-inch	6-8	$25	$24	$45	$47

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/LF)	Total Cost with Grass Restoration and O&P ($/LF)	Total Cost with Asphalt Restoration ($/LF)	Total Cost with Asphalt Restoration and O&P ($/LF)
Truss	10-inch	8-10	$27	$28	$61	$65
Truss	10-inch	10-12	$31	$33	$78	$86
Truss	12-inch	6-8	$31	$34	$52	$57
Truss	12-inch	8-10	$34	$38	$68	$76
Truss	12-inch	10-12	$38	$43	$85	$96
Truss	15-inch	6-8	$39	$42	$60	$67
Truss	15-inch	8-10	$42	$46	$77	$85
Truss	15-inch	10-12	$46	$52	$94	$106

The unit costs for force main are presented in below **Table 3-2**.

Table 3-2
Unit Costs – Force Main

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/LF)	Total Cost with Grass Restoration and O&P ($/LF)	Total Cost with Asphalt Restoration ($/LF)	Total Cost with Asphalt Restoration and O&P ($/LF)
DI	4-inch	6	$60	$67	$65	$65
DI	6-inch	6	$71	$80	$76	$77
DI	8-inch	6	$68	$77	$74	$75
DI	10-inch	6	$87	$98	$94	$95
DI	12-inch	6	$113	$127	$121	$122
DI	16-inch	6	$139	$156	$148	$149
DI	18-inch	6	$178	$200	$188	$189
DI	20-inch	6	$185	$209	$195	$196
DI	36-inch	6	$207	$224	$222	$224
PE	2-inch	6	$7	$8	$11	$12
PE	3-inch	6	$10	$11	$14	$15
PE	4-inch	6	$13	$15	$18	$18
PE	8-inch	6	$23	$26	$30	$30
PE	12-inch	6	$34	$39	$42	$43
PE	14-inch	6	$40	$45	$48	$49
PE	16-inch	6	$48	$54	$57	$58
PE	18-inch	6	$60	$67	$69	$71
PE	20-inch	6	$71	$79	$81	$82
PVC	1.25-inch	6	$4	$5	$8	$9
PVC	1.5-inch	6	$4	$4	$8	$9
PVC	2-inch	6	$4	$5	$9	$9
PVC	2.5-inch	6	$5	$6	$10	$10

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/LF)	Total Cost with Grass Restoration and O&P ($/LF)	Total Cost with Asphalt Restoration ($/LF)	Total Cost with Asphalt Restoration and O&P ($/LF)
PVC	3-inch	6	$7	$8	$12	$12
PVC	4-inch	6	$10	$11	$15	$16
PVC	6-inch	6	$13	$15	$19	$20
PVC	8-inch	6	$18	$20	$24	$25
PVC	10-inch	6	$22	$25	$29	$30
PVC	12-inch	6	$28	$32	$36	$37
PVC	14-inch	6	$29	$32	$37	$38
PVC	16-inch	6	$35	$39	$44	$45
PVC	20-inch	6	$52	$57	$62	$63
PVC	24-inch	6	$72	$79	$84	$85
PVC	30-inch	6	$112	$122	$126	$128
PVC	36-inch	6	$160	$170	$175	$177
PVC	42-inch	6	$214	$228	$232	$234

3.2 Manholes

A. Sources of Information

The RSMeans Online Cost Estimating Resource was also utilized to determine installed unit prices for manholes. All costs are from release year 2021 and set for the location of Indianapolis (461-462).

A summary of the costs utilized for manholes can be found below:

- Section 334233.13 Catch Basins
- Section 330561.10 Storm Drainage Manholes, Frames & Covers

A summary of the costs utilized for the associated excavation, bedding, backfill, compaction, and restoration can be found below:

- Section 312316.13 Excavating, Trench
- Section 312323.16 Fill By Borrow And Utility Bedding
- Section 312323.14 Backfill, Structural
- Section 312323.23 Compaction
- Section 329219.14 Seeding, Athletic Fields
- Section 321123.23 Base Course Drainage Layers
- Section 321216.13 Plant-Mix Asphalt Paving

B. Assumptions

No information was provided regarding the material of the manholes. Since the Utility's inception, precast concrete has been the predominant material for gravity sewer manholes. It is unlikely that there are manholes of other materials, so it has been assumed that all manholes are made of precast concrete.

C. Unit Costs

The unit costs for manholes are presented in below **Table 3-3**.

Table 3-3
Unit Costs – Manholes

Material	Size	Depth (FT)	Total Cost with Grass Restoration ($/EA)	Total Cost with Grass Restoration and O&P ($/EA)	Total Cost with Asphalt Restoration ($/EA)	Total Cost with Asphalt Restoration and O&P ($/EA)
Concrete	48-inch	6	$2,304	$2,789	$2,517	$3,028
Concrete	48-inch	8	$3,470	$4,188	$4,322	$5,146
Concrete	48-inch	10	$4,021	$4,898	$4,873	$5,856
Concrete	48-inch	12	$4,625	$5,680	$5,956	$7,176
Concrete	60-inch	6	$4,556	$5,296	$4,826	$5,599
Concrete	60-inch	8	$4,341	$5,147	$4,903	$5,780
Concrete	60-inch	10	$5,629	$6,666	$6,591	$7,747
Concrete	60-inch	12	$6,972	$8,260	$8,440	$9,909
Concrete	72-inch	6	$6,137	$7,101	$6,470	$7,475
Concrete	72-inch	8	$7,404	$8,684	$8,056	$9,417
Concrete	72-inch	10	$8,726	$10,288	$9,804	$11,500
Concrete	72-inch	12	$10,103	$11,969	$11,715	$13,779
Concrete	84-inch	6	$7,047	$8,205	$7,450	$8,657
Concrete	84-inch	8	$12,660	$14,796	$13,409	$15,638
Concrete	84-inch	10	$13,311	$15,764	$14,513	$17,114
Concrete	84-inch	12	$14,020	$16,809	$15,781	$18,787

3.3 Lift Stations

A. Sources of Information

Costs for lift stations were estimated based on cost curves from "Pump Station Design", Revised Third Edition.

B. Assumptions

The cost curves utilize an ENR CCI value of 4500. To bring the costs to present value, an ENR CCI value of 11989.91 (May 2021) was utilized.

Many of the lift stations have capacities lower than the minimum capacity on the cost curve (~210 GPM). In these cases, the minimum cost presented on the curve was utilized.

C. Unit Costs

The unit costs for lift stations are shown in **Table 3-4**.

Table 3-4
Unit Costs – Lift Stations

Lift Station Name	Estimated Cost - Submersible, No Standby Power	Estimated Cost - Submersible, Standby Power	Estimated Cost - Wet Well/Dry Well, No Standby Power	Estimated Cost - Wet Well/Dry Well, Standby Power
Fall Road	$667,000	$2,398,000	$533,000	$2,398,000
Covington Estates	$40,000	$480,000	$320,000	$427,000
New 106th St	$1,866,000	$5,862,000	$2,398,000	$10,658,000
Old 106th St	$800,000	$2,931,000	$667,000	$3,198,000
Harrison Lakes	$267,000	$1,199,000	$427,000	$853,000
Stevenson Mill	$40,000	$480,000	$320,000	$427,000
Hawthorne Ridge	$320,000	$1,599,000	$427,000	$1,333,000
Rosewood	$160,000	$800,000	$427,000	$453,000
Approach	$374,000	$1,732,000	$427,000	$1,333,000
Beaver Ridge	$40,000	$480,000	$320,000	$427,000
Canal Place 1	$267,000	$1,333,000	$427,000	$1,066,000
Cambridge 2	$267,000	$1,199,000	$427,000	$853,000
Canal Place 4	$174,000	$1,040,000	$427,000	$587,000
Cambridge 5	$40,000	$480,000	$320,000	$427,000
Thorpe Creek	$800,000	$3,198,000	$800,000	$3,198,000
116th St	$1,599,000	$5,329,000	$1,732,000	$7,994,000
Mud Creek	$933,000	$3,731,000	$1,040,000	$5,063,000
Sand Creek	$533,000	$2,665,000	$533,000	$2,398,000
Waters Edge	$94,000	$587,000	$320,000	$427,000
Fishers Market Place	$374,000	$1,173,000	$427,000	$1,599,000
Barrington Estates	$40,000	$480,000	$320,000	$427,000
Cambridge 10	$40,000	$480,000	$320,000	$427,000
HSE Maintenance Building	$240,000	$1,333,000	$427,000	$1,013,000
BEE Camp	$320,000	$1,599,000	$427,000	$1,333,000
Georgia Road	$667,000	$2,398,000	$533,000	$2,398,000
Fishers Retirement	$54,000	$507,000	$320,000	$427,000

Lift Station Name	Estimated Cost - Submersible, No Standby Power	Estimated Cost - Submersible, Standby Power	Estimated Cost - Wet Well/Dry Well, No Standby Power	Estimated Cost - Wet Well/Dry Well, Standby Power
Vermillion	$480,000	$2,132,000	$453,000	$1,866,000
Bridger Pines	$187,000	$1,066,000	$427,000	$747,000
Reserve at Lantern	$80,000	$667,000	$320,000	$427,000
Intracoastal	$1,333,000	$5,063,000	$1,333,000	$6,129,000

The costs presented above represent the cost range enveloped by the cost curves. The most affordable submersible lift station without standby power and the most expensive submersible lift station with standby power are presented. The same is true for the wet pit/dry pit lift station columns. Clearly, a standby generator and corresponding supporting electrical considerations would not result in such a dramatic discrepancy in pricing for a similarly constructed lift station of same capacities.

Section 4 – Total Costs

4.1 Gravity Sewer and Sewer Force Main

Based on the information provided by the utility and assumptions outlined in **Section 2.1** and the unit costs outlined in **Section 3.1**, the estimated total cost of replicating the installed gravity sewer and force main today (May 2021) is $78,812,000. This does not take into account the recent dramatic impacts on construction materials currently being seen but yet to be recognized impactful on construction bids.

4.2 Manholes

Based on the assumptions outlined in **Section 2.2.** and the costs outlined in **Section 3.2.**, the total cost to replicate the installation of the gravity sewer supporting manholes is $32,289,000. This also does not reflect the recent dramatic impacts on construction materials.

4.3 Lift Stations

Based on the assumptions outlined in **Section 2.3.** and the costs outlined in **Section 3.3.**, the total cost to replicate the lift stations, including overhead and profit, is $39,924,000; less any recent impacts increased costs associated with manufacturing and construction materials might play.

4.4 Total Cost

The total cost of the utility if it were to be installed today is summarized in below **Table 4-1**. These costs do not account for depreciation due to age nor do they account for recent impacts that may be associated with the unusual labor, manufacturing, and construction materials cost increases.

Table 4-1
Total Cost To Replicate Utility (New)

Item	Cost
Gravity Sewer and Force Main	$78,812,000
Manholes	$32,289,000
Lift Stations	$39,924,000
Total	**$151,025,000**

Section 5 – Utility Depreciated Value

5.1 Gravity Sewer and Sewer Force Main

To determine the depreciation of the sewers (both gravity and force main), the following assumptions were applied:

1. Sewers are estimated to have an expected useful life of 50-150 years. To be conservative, this valuation assumes an expected useful life of 75 years.
2. The sewers will depreciate in a "straight line", with a value of $0 at the end of their useful life.

The above noted assumptions are conservative in nature. Application of these assumptions and provide for an arguable maximum reduction in the value of the gravity sewer and force main due to age. It could readily be argued that expected useful life is 100-years and that there is value remaining after that time frame associated with the infrastructure.

Engineering judgement was required employed with respect to the age of the system and corresponding approach to depreciation. The information provided by the utility in their Excel Spreadsheet did not delineate quantities with respect to dates of installation. For that matter, no dates of installation were provided via this source. The IURC filings can be consulted to identify dates of installation though the quantities of gravity sewer main and sewer force main do not match that of the Excel Spreadsheet. To resolve this issue the following approach was taken:

1. The total percentage of gravity sewer added in a given year per the IURC filings was applied to the total length of gravity sewer provided by the utility's Excel Spreadsheet.
2. The total length of gravity sewer added in any given year was distributed proportionately to the various pipe diameters and materials of construction contained in the Excel Spreadsheet.
3. The total percentage of force main added in a given year per the IURC filings was applied to the total length of force main provided by the Utility.
4. The length of force main added in a given year was also distributed proportionately amongst the various pipe sizes and materials of construction of force main contained in the Excel Spreadsheet.
5. Surface restoration assumptions for any given year were applied to the total pipe installed proportionate to pipe diameter, pipe material, pipe depth classification, and per the originally outlined 70% required asphalt restoration 30% required grass restoration.

Application of the above outlined adjustments result in the **Table 5-1** depreciated value of for sewers and force main; $62,220,000+/-.

Table 5-1
Costs Adjusted for Depreciation – Gravity Sewer and Force Main

Item	Total Cost with Grass Restoration and O&P ($)	Total Cost with Asphalt Restoration and O&P ($)
Force Main Total Cost	$8,871,577	$9,734,551
Force Main Total Depreciation	$2,016,895	$2,213,087
Force Main Total Depreciated Value	$6,854,681	$7,521,464
Gravity Sewer Total Cost	$43,597,538	$80,367,317
Gravity Sewer Total Depreciation	$9,078,463	$16,735,159
Gravity Sewer Total Depreciated Value	$34,519,075	$63,632,159
Total Depreciated Value of Gravity Sewer and Force Main (100% Grass Restoration and 100% Asphalt Restoration)	**$41,373,756**	**$71,153,623**
Total Depreciated Value of Gravity Sewer and Force Main (30% Grass Restoration and 70% Asphalt Restoration)	**$12,412,127**	**$49,807,536**
Total Depreciated Value of Gravity Sewer and Force Main	**$62,220,000 +/-**	

5.2 Manholes

To determine the depreciation of the manholes, the following assumptions were applied:

1. Manholes are estimated to have an expected useful life of 50-100 years. To be conservative, this valuation assumes an expected useful life of 50 years.
2. The manholes will depreciate in a “straight line”, with a value of $0 at the end of their useful life.

In addition to the above, assumptions were made regarding the age of the system. The IURC provided some information on the age of manholes in the system, but unfortunately, due to the limited number of filings including manholes, the filings do not offer enough information to determine depreciation. Because manholes are installed along the gravity sewers, the following assumptions were utilized:

1. The total percentage of gravity sewer added in a given year per the IURC filings can be applied to the total number of manholes installed per year.
2. The number of manholes added in a given year is distributed equally amongst the sizes and materials of gravity sewer provided by the utility.
3. Surface restoration assumptions for any given year were applied to the total number of manholes installed proportionate to manhole diameter, manhole depth and pre the originally outlined 70% required asphalt restoration 30% required grass restoration.

Application of the above outlined adjustments result in the below **Table 5-2** depreciated value for the manholes; namely, $22,204,000 +/-.

Table 5-2
Costs Adjusted for Depreciation – Manholes

Item	Cost with Grass Restoration and O&P ($)	Cost with Asphalt Restoration and O&P ($)
Manhole Total Cost	$27,859,968	$34,187,710
Manhole Total Depreciation	$8,702,063	$10,678,534
Manhole Total Depreciated Value (100% Grass Restoration and 100% Asphalt Restoration)	**$19,157,905**	**$23,509,176**
Manhole Total Depreciated Value (30% Grass Restoration and 70% Asphalt Restoration)	**$5,747,372**	**$16,456,423**
Manhole Total Depreciated Value (30% Grass Restoration and 70% Asphalt Restoration)	**$22,204,000 +/-**	

5.3 Lift Stations

To determine the depreciation of the lift stations, the following assumptions were applied:

1. The depreciated value for the lift stations are calculated utilizing the shortest useful service life item – the mechanical equipment, namely 15-years.
2. The entire lift station value is distributed equally amongst the installed pumps (as each station may have pumps of varied installation dates).
3. Depreciate is applied in a “straight line”, with a value of $0 at the end of useful life.
4. The installation date of each pump listed on the information provided by the utility is utilized as the start date for depreciating that pump station’s component cost.

This approach is for gross estimation purposes only. It can be readily argued as lift stations consists of components of varied useful lives and though the mechanical equipment can be depreciated over 15-years, the structure itself should be afforded a longer useful life. Further, it could be argued that straight-line depreciation should not be employed as value remains once useful life is realized. Also, the date of pump installation will not always equate to the date of pump station installation (as pumps can be and likely have been replaced at stations that have already been in service for quite some time). None-the-less, this approach has been taken for purposes of this Valuation.

Application of the above denoted assumptions, results in the below **Table 5-3** depreciated values for the lift stations; namely $17,611,000.

Table 5-3
Costs Adjusted for Depreciation – Lift Stations

Lift Station Name	Pump Number	Pump Installation Date	New Construction Cost	Depreciated Value
Fall Road	1	Dec-02	$2,398,000	$855,321
	2	Jun-12		
	3	Jul-16		
Covington Estates	1	Jun-18	$40,000	$30,845
	2	Aug-17		
New 106th St	1	Jan-17	$5,862,000	$2,197,771
	2	Aug-09		
	3	Aug-09		
Old 106th St	1	Jun-12	$2,931,000	$1,169,324
	2	Jun-12		
Harrison Lakes	1	Aug-18	$267,000	$214,026
	2	May-18		
Stevenson Mill	1	Mar-95	$40,000	$0
	2	Mar-95		
Hawthorne Ridge	1	Nov-00	$320,000	$0
	2	Nov-00		
Rosewood	1	Jul-17	$160,000	$59,017
	2	Dec-99		
Approach	1	Jul-19	$374,000	$325,738
	2	Jul-19		
Beaver Ridge	1	Oct-07	$40,000	$8,621
	2	Aug-11		
Canal Place 1	1	Sep-18	$267,000	$217,779
	2	Sep-18		
Cambridge 2	1	Mar-17	$267,000	$183,617
	2	May-16		
Canal Place 4	1	Oct-01	$174,000	$0
	2	Feb-99		
Cambridge 5	1	Sep-17	$40,000	$19,181
	2	Aug-09		
Thorpe Creek	1	Jan-03	$3,198,000	$0
	2	Jan-03		
116th St	1	Sep-13	$5,329,000	$2,570,516
	2	Sep-13		
	3	Sep-13		
Mud Creek	1	Jul-13	$3,731,000	$1,337,360
	2	Jul-15		
	3	Sep-03		

Lift Station Name	Pump Number	Pump Installation Date	New Construction Cost	Depreciated Value
Sand Creek	1	Jun-05	$2,665,000	$975,039
	2	Mar-12		
	3	Mar-17		
Waters Edge	1	Mar-01	$94,000	$0
	2	Mar-01		
Fishers Market Place	1	Nov-11	$1,173,000	$422,366
	2	Nov-11		
	3	Nov-11		
Barrington Estates	1	Jul-12	$40,000	$16,177
	2	Jul-12		
Cambridge 10	1	Oct-07	$40,000	$8,734
	2	Sep-11		
HSE Maint Building	1	Jul-03	$240,000	$0
	2	Jul-03		
BEE Camp	1	May-05	$320,000	$0
	2	May-05		
Georgia Road	1	Dec-20	$2,398,000	$2,322,498
	2	Jan-21		
Fishers Retirement	1	Jan-15	$54,000	$30,848
	2	Jan-15		
Vermillion	1	Jul-17	$2,132,000	$1,572,806
	2	Jul-17		
	3	Jul-17		
Bridger Pines	1	Jul-19	$187,000	$162,869
	2	Jul-19		
Reserve at Lantern	1	Jul-20	$80,000	$75,021
	2	Jul-20		
Intracoastal	1	Nov-14	$5,063,000	$2,835,881
	2	Nov-14		
	3	Nov-14		
		TOTAL	**$39,924,000**	**$17,611,355**

The denoted depreciated value for the lift stations is reasonable and conservative in nature for purposes of formulating value afforded via a purchase. These stations have been constructed since the early to mid-80s in support of the utility and have been maintained functional over that time frame.

5.4 Utility Depreciated Value

A conservative depreciated value for the utility is presented in below **Table 5-4**.

Table 5-4
Total Value of Utility – Adjusted for Depreciation

Item	Cost
Gravity Sewer and Force Main	$62,220,000
Manholes	$22,204,000
Lift Stations	$17,611,000
Total	**$102,035,000**

Section 6 – Noblesville Excluded Assets

6.1 Excluded Assets

A portion of the assets outlined in previous sections are within the municipal boundaries of Noblesville, outlined in **Figure 1**. These assets are to be excluded from the overall valuation of the Utility. The following information outlined in **Table 6-1** was provided by the Utility to determine the value of the excluded assets.

Table 6-1
Noblesville Excluded Assets

Property Description	Book Cost	Book End Depreciation	Book Net Value
Marsh at Prairie Lakes	$175,487.00	$52,061.14	$123,425.86
Shoppes at 141st Street	$29,795.00	$7,448.75	$22,346.25
Noblesville Professional Office Park	$46,355.00	$9,193.74	$37,161.26
Trilogy - Noblesville Health Care Campus	$54,039.00	$8,781.37	$45,257.63
Prairie Lakes Apartments, Sect. 1	$113,978.00	$18,521.43	$95,456.57
Prairie Lakes, Sect. 1	$185,298.00	$30,496.96	$154,801.04
Prairie Lakes, Sect. 2	$116,695.00	$19,206.08	$97,488.92
Total	**$721,647.00**	**$145,709.47**	**$575,937.53**

The costs outlined in **Table 6-1** were provided by the utility and are not reflective of the same process employed for the overall utility. Given the relative cost (less than 1%), the impact of the valuation approach to this excluded area is negligible. This information will be utilized in determining the total value of the Utility, excluding the assets within the Noblesville municipal boundaries.

6.2 Total Costs (Excluding Assets within Noblesville Municipal Boundaries)

An updated depreciated value for the utility, accounting for excluded assets within Noblesville Municipal Boundaries is presented in below **Table 6-2**.

Table 6-2
Total Value of Utility – Adjusted for Depreciation
Excluding Assets within Noblesville Municipal Boundaries

Item	Cost
Gravity Sewer and Force Main	$62,220,000
Manholes	$22,204,000
Lift Stations	$17,611,000
Excluded Assets	($576,000)
Total	**$101,459,000**

Insert Figure 1

Overall Utility Map

Section 7 – Conclusions & Recommendations

7.1 Conclusions

As presented within this Valuation, the HSE Utility being considered for purchase by the City of Fishers is grossly estimated to be worth $151M new and $102M straight-line depreciated. The portion of the utility that is within the Municipal Boundaries of Noblesville is estimated to have a depreciated value of approximately $576,000. The estimated value of the HSE Utility, excluding the portion located within the Noblesville Municipal Boundaries is estimated to have a depreciated value of $101.5M. These gross estimates are premised upon the Engineer's denoted assumptions, the limited information and time available during initial assembly, and through application of a utility replicating *Cost Approach.* This Cost Approach accounts for construction cost only. Non-construction costs associated with replicating the utility could conceivably add up to 25% of the denoted value.

7.2 Recommendations

This gross estimation can be utilized as a basis of value through employing an alternate methodology to that contained in the September 2020 Draft Report by NewGen Strategies & Solutions. This estimation may be updated as the Engineer works with the City to conduct due diligence in the City's continuing review of the system and ultimate determination in the City's discretion to complete the transaction.

RESOLUTION NO. R071321A

A RESOLUTION OF THE CITY OF FISHERS BOARD OF PUBLIC WORKS & SAFETY APPROVING AN ASSET PURCHASE AGREEMENT WITH HAMILTON-SOUTHEASTERN UTILITIES, INC., AND OTHER RELATED MATTERS THERETO

WHEREAS, the City of Fishers, Hamilton County, Indiana ("City") currently owns and operates a municipal sewer utility pursuant to Ind. Code §36-9-23 *et. seq.* (the "Municipal Sewage Works Act" or the "Act");

WHEREAS, in accordance with the Act, the City, by and through its Board of Public Works & Safety ("Board"), operates, manages, and controls the sewage works, including without limitation, entering into all contracts or agreements necessary or incidental to the performance of its duties and the execution of its powers under the Act;

WHEREAS, Hamilton-Southeastern Utilities, Inc. ("HSE") owns and operates a wastewater collection system that provides service to customers located within the certificates of territorial authority and indeterminate permits ("CTAs") granted by the Indiana Utility Regulatory Commission ("IURC") comprising HSE's Fishers service area (the "Service Area") (collectively referred to as the "Business") as further defined in the Agreement (as hereinafter defined);

WHEREAS the City desires to acquire and HSE desires to sell the Assets of HSE relating to the Business (the "Acquisition") pursuant to the terms and conditions of a certain Asset Purchase Agreement ("Agreement"), which is attached hereto and incorporated herein as Exhibit A;

WHEREAS, pursuant to the Act, the City may acquire, construct, or improve sewage works and issue revenue bonds to pay the cost of acquiring and improving the sewage works and property;

WHEREAS, the City is prepared to render a comparable sewage disposal service without loss of continuity of service to the Service Area, and upon Closing, the City will own and merge into its existing service all of HSE's Assets relating to the Business;

WHEREAS, pursuant to the Act, the City engaged Commonwealth Engineers, Inc. ("Engineer") to provide an estimate of the Acquisition ("Engineer's Estimate"), which is attached hereto and incorporated herein as Exhibit B;

WHEREAS, in addition to the Engineer's Estimate, HSE separately appraised the Acquisition ("HSE Appraisal");

WHEREAS, both the Engineer's Estimate and HSE Appraisal exceed the Purchase Price;

WHEREAS, the Engineer has found that no repairs, replacements, or additions are necessary to complete the Acquisition;

WHEREAS, the City does not anticipate raising the user fees to complete the Acquisition;

WHEREAS, the Board now desires to approve the Agreement and authorizes the City to take various actions in furtherance of the Agreement as further described herein; and

WHEREAS, defined terms not otherwise defined by this resolution shall have the meaning prescribed under the Agreement.

NOW, THEREFORE, BE IT RESOLVED, by the City of Fishers Board of Public Works & Safety meeting in regular session as follows:

Section 1. The Board hereby approves the Acquisition.

Section 2. The Board hereby approves the Agreement in substantially similar form as Exhibit A, which is attached hereto and incorporated herein.

Section 3. The Board hereby approves the Engineer's Estimate in substantially similar form as Exhibit B, which is attached hereto and incorporated herein.

Section 4. The Board hereby authorizes the Mayor to execute the Agreement and any and all documents, amendments, filings, and materials, and seek any applicable regulatory approvals, in furtherance of the Acquisition.

Section 5. The Board hereby orders the City to issue revenue bonds in an amount necessary to pay the Purchase Price and all other necessary or incidental expenses related to the Acquisition.

Section 6. The City shall immediately provide notice of adoption of this resolution in accordance with the Act and Ind. Code §5-3-1.

Section 7. This Resolution shall be of full force and effect from and upon its adoption and in accordance with Indiana law.

SO RESOLVED, by the City of Fishers Board of Public Works & Safety this 13th day of July, 2021.

BOARD OF PUBLIC WORKS & SAFETY,

CITY OF FISHERS, HAMILTON COUNTY, INDIANA

AYE		NAY
	Scott Fadness, Member	
	Jason Meyer, Member	
	Jeff Lantz, Member	

Attest:
Lindsay Downing, Board Clerk

This instrument prepared by: Christopher P. Greisl, City Attorney, City of Fishers, Hamilton County, Indiana, 1 Municipal Drive, Fishers, Indiana, 46038

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security Number in this document, unless required by law. /s/ Christopher P. Greisl, Esq.

Exhibit A
[*Asset Purchase Agreement*]

Exhibit B
[*Engineer's Estimate*]