Application of Pennsylvania-American Water Company for the Acquisition of the Wastewater Treatment Plant and Collection System Owned and Operated by Elizabeth Borough Municipal Authority ("EBMA")

Docket No. A-2025-3052983

66 Pa. C.S. § 1329
Application Filing Checklist – Water/Wastewater

15. Plant in Service.

a. Provide an inventory of the used and useful plant assets to be transferred. Identify separately any utility plant that is held for future use.[1]

RESPONSE: a. See the Engineer's Assessment attached as Appendix A15-a that identifies assets to be transferred as required by 66 Pa.C.S. § 1329(a)(4). It should be noted that the Engineer's Assessment identifies a 30-inch diameter force main that is not in service currently and is reserved for future use when the remaining components of the Long-Term Control Plan are in place.

[1] The inventory is to be developed from available records, maps, work orders, debt issue closing documents funding construction projects, and other sources to ensure an accurate listing of utility plant by utility account.

ELIZABETH BOROUGH MUNICIPAL AUTHORITY
AND
PA AMERICAN WATER COMPANY

ENGINEERING ASSESSMENT STUDY

PHYSICAL ASSETS OF THE ELIZABETH BOROUGH MUNICIPAL AUTHORITY

February 2024
REVISED JULY 2024

Prepared By:

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LSSE • Rabell • Senate

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1.0 EXECUTIVE SUMMARY

The Elizabeth Borough Municipal Authority (Authority) owns and operates a combined sewer system including collection, pumping and treatment facilities. The Authority's service area includes all or portions of Elizabeth Borough, Forward Township, Elizabeth Township, and Lincoln Borough. Pennsylvania American Water Company (PAWC) and the Authority have entered into an Asset Purchase Agreement (APA) to transfer ownership of the system assets to PAWC.

Senate Engineering, Inc. (Senate) was contracted by PAWC and the Authority in January 2023 to prepare an assessment of tangible assets for the purchase of the Authority's wastewater collection, pumping and treatment systems by PAWC. These assets include the infrastructure, facilities, equipment and real estate currently owned by the Authority that are to be purchased by PAWC. Since this report was originally issued in August 2023 Senate was acquired by and is now a division of LSSE, Inc.

This engineering assessment study consists of 3 primary parts, namely the inventory of assets, the listing of original costs, and a statement regarding the general condition of the assets. The assessment was compiled and organized in accordance with the National Association of Regulatory Utility Commissions (NARUC) system of accounts. Each section of the report contains a summary table of asset category and the corresponding NARUC accounts. Detailed inventories of each asset category, including account number, descriptions, quantities and year of construction or purchase are contained in the report appendices. A summary of all asset account numbers and original costs is shown in the following table.

Table 1.0
Summary of Asset Categories and Original Cost

Category	Category Total
Collection System Plant	$7,395,088
Pump Station Plant	$9,157,492
WWTP Plant	$2,032,383
Other Plant	$335,980
Lands and Land Rights	$299,069
Asset Original Cost Total	$19,220,012

A summary of the NARUC account numbers and original facility costs is shown in the table on Page 2.

Table 1A below shows a summary of work-in-progress projects currently underway in Authority's sewer system. The costs associated with these projects are separate from in-service projects listed in Table 1.

Table 1A
Summary of Work-In-Progress: Completed to Date and Anticipated Total Cost

Category	Costs Incurred to Date	Anticipated Total Cost
Collection System Plant - CD 48 Program Year	$ 20,817	$ 0
Collection System Plant - CD 49 Program Year	$ 19,688	$ 120,666
Total Work-In-Progress	**$ 40,505**	**$ 310,000**
Pump Station Plant - Property	$ 7,500	$ 7,500
Total Work-In-Progress	**$ 7,500**	**$ 7,500**

Table 1.1
Summary of Account Numbers and Original Cost

Acct No	Description	Account Totals	Collection System Plant	Pump Station Plant	WWTP Plant	Other Plant
353	Land and Land Rights	$ 299,069	$ 12,069	$ 120,000	$ 167,000	
354	Structures and Improvements	$ 7,942,852		$ 6,902,762	$ 1,040,090	
355	Power Generation Equipment	$ 120,666		$ 120,666		
360	Collection Sewers – Force	$ 254,698		$ 254,698		
361	Collection Sewers – Gravity	$ 7,191,108	$ 7,191,108			
362	Special Collecting Structures	$ -				
364	Flow Measuring Devices	$ 203,981	$ 203,981			
365	Flow Measuring Installations	$ 23,070		$ 6,814	$ 16,255	
366	Reuse Systems	$ 88,521		$ 88,521		
367	Reuse Meters and Meter Installations	$ -				
371	Pumping Equipment	$ 193,963		$ 98,671	$ 95,292	
380	Treatment and Disposal Equipment	$ 1,307,463		$ 740,637	$ 566,826	
381	Plant Sewers	$ 923,662		$ 750,255	$ 173,407	
382	Outfall Sewer Lines	$ 126,076			$ 126,076	
389	Other Plant and Misc Equipment	$ 14,436			$ 14,436	
390	Office Furniture and Equipment	$ 58,067				$ 58,067
391	Transportation Equipment	$ 1,950				$ 1,950
393	Tools, Shop and Garage Equipment	$ 232,348				$ 232,348
394	Laboratory Equipment	$ 19,293				$ 19,293
395	Power Operated Equipment	$ 23,297				$ 23,297
396	Communication Equipment	$ 1,025				$ 1,025
397	Miscellaneous Equipment	$ -				
398	Other Tangible Plant	$ 194,468		$ 194,468		
	Total Asset Cost	**$ 19,220,012**	**$ 7,407,158**	**$ 9,277,492**	**$ 2,199,383**	**$ 335,980**

2.0 INTRODUCTION

In January 2023 Senate Engineering, Inc. (Senate) was contracted by Pennsylvania American Water Company (PAWC) and Elizabeth Borough Municipal Authority (Authority) to prepare an assessment of tangible assets for the purchase of the Authority's wastewater collection, pumping and treatment systems by PAWC. These assets include the infrastructure, facilities, equipment and real estate currently owned by the Authority that are to be purchased by PAWC. Since this report was originally issued in August 2023 Senate was acquired by and is now a division of LSSE, Inc. (LSSE). This assessment was compiled and organized in accordance with the National Association of Regulatory Utility Commissions (NARUC) system of accounts. The Authority is considered a Class A wastewater utility under the NARUC guidelines since the annual revenues exceed $1,000,000.

The Authority was incorporated on December 29, 1949, under the Municipal Authorities Act of May 2, 1945 (P.L.382) as amended. The Authority operates under the Pennsylvania Municipal Authorities Act and is governed by a Board of appointed members who direct the business of the Authority. The Board is composed of seven (7) members, five (5) of whom are appointed by the Elizabeth Borough Council, and two (2) appointed by the Commissioners from the Township of Elizabeth.

The Authority currently employs two operators/laborers and an administrative assistant. Contract employees are used as needed to complement the workforce.

The Authority's service area includes all or portions of 4 municipalities:

- Elizabeth Borough
- Forward Township
- Elizabeth Township
- Lincoln Borough

These areas are discussed in the following sections.

<u>Elizabeth Borough Service Area</u>

Elizabeth Borough Municipal Authority owns and operates a combined sewage collection and treatment system located within Elizabeth Borough. The wastewater treatment facility is operated under NPDES Permit No. PA-0028436 as originally issued by DEP on August 3, 1995. A renewal application for the NPDES permit was submitted to DEP in February 2007 and remains under review by DEP. The Authority continues operations under the terms and conditions of the existing permit. The Borough is well established and has limited area available for growth. The Southwestern Pennsylvania Commission estimates a 2020 Borough population of 1,345 and a 2040 population of 1,355, or a 20-year increase of less than 1%.

Forward Township Service Area

Forward Township owns and operates a separate sanitary sewer system with a primary point of connection to the Authority's system at Center Avenue. There are 5 other points of connection near the southeast boundary of the Borough. The Southwestern Pennsylvania Commission estimates a 2020 Township population of 3,291 and a 2040 population of 3,334, or a 20-year increase of approximately 1%.

Elizabeth Township Service Area

Elizabeth Township owns a separate sanitary sewer system and the Wylie Pump Station that discharges directly to the Authority's WWTP headworks. The Elizabeth Township sewers connect at multiple locations including the Wylie pump station force main, the Fallen Timber trunk sewer, and other connections at Church Street, Chicago Avenue and Blaine Hill. The Southwestern Pennsylvania Commission estimates a 2020 Township population of 13,222 and a 2040 population of 14,195, or a 20-year increase of approximately 7%.

Lincoln Borough Service Area

Lincoln Borough has allocations for 17 connections which were approved on an emergency basis by DEP in 1987. Ten connections have been made at this time. The Lincoln Borough system connects to the Elizabeth Township sanitary sewer system and eventually to the Wylie Pump Station for conveyance to EBMA. The Southwestern Pennsylvania Commission estimates a 2020 Borough population of 980 and a 2040 population of 976 or a 20-year decrease of less than 1%.

3.0 METHODOLOGY

This engineering assessment study consists of 3 primary parts, namely the inventory of assets, the listing of original costs, and a statement regarding the general condition of the assets.

In order to complete the inventory of assets the following sources of information and methods were used.

1. The collection system assets were compiled largely from an existing geographical information system (GIS) database and mapping files. This database and mapping identify pipe segments by pipe segment reference (PSR) codes and manholes by a unique numbering system. Additional sources used to create the collection system inventory included system construction drawings, historical system maps and interviews with current or former Authority personnel.
2. The pump station assets and force main sewers were recently constructed in 2022. The inventories of these facilities was based on construction drawings and field

observations.

3. The wastewater treatment plant (WWTP) assets were inventoried based on construction drawings, field observations, treatment system schematics, and interviews with current or former Authority personnel. In addition, system valuation reports used for insurance purposes were also researched and included in the data.
4. Land and land rights, including easements, rights-of-way and real estate that are currently owned by the Authority were provided by the Authority Solicitor. Additional locations where sewer lines are located on or within 10 ft of property not owned by the Authority have been identified and the Solicitor is in the process of obtaining easements.

The development of original facility costs included one or more of the following methodologies:

1. Actual year of construction or purchase, and the original cost (from contractor pay requests or other documentation) were used where available.
2. Insurance valuations as developed in 1996 by GAB Business Services, Inc. were used for WWTP assets as available.
3. Asset description, year in service and cost basis for system assets as developed by Mark Turnley, CPA for the year ending December 31, 2021 Depreciation Schedule.
4. Replacement values using current or recent bid tabs, as well as information from contractors knowledgeable in the specific type of work.
5. Actual engineering, permitting, other project soft costs were used where known. For assets where these costs were not known they were estimated as 20% of the construction cost. This 20% figure is a reasonable representation of typical costs for similar projects.

When replacement values were used the values were adjusted to the known or estimated original date of construction or purchase using the Engineering News Record Construction Cost Index. The original cost was estimated using the following calculation:

$$\textit{Original Cost} = \textit{Current Replacement Cost} \times \frac{\textit{Original Year ENR Index}}{\textit{March 2023 ENR Index.}}$$

The general condition of assets was classified according to one of the following 3 categories:

1. Good – an asset in good condition is serviceable, in proper operational order and not in need of non-typical maintenance or repair.
2. Fair – an asset in fair condition is serviceable and operational but should be considered for non-routine maintenance or repair.

3. Poor – an asset in poor condition is one that is experiencing operational difficulties, is unreliable or should be considered for extensive repairs or maintenance or replacement within the next 5 to 10 years, depending on the type of asset.

4.0 SYSTEM DESCRIPTION

4.1 Collection System

The Authority owns and maintains a sewage collection system that is comprised of over 43,500 LF of sewer lines ranging in size from 6-inch to 48-inch diameter. The pipe materials used in the collection system are primarily vitrified clay pipe (VCP) and polyvinylchloride pipe (PVC). The earliest date found on any of the Authority's sewer system maps was 1950. This date is assumed as the original date of construction, although other anecdotal sources indicate portions of the collection system existed prior to that time. Service laterals are owned by property owners from the structure to the main sewer line and are not included in this asset assessment. A copy of the Authority's overall collection system map is included in Appendix A.

The Fallen Timber sanitary sewer line collects sewage from portions of Forward and Elizabeth Townships and terminates at the Authority pump station. This line is owned by Elizabeth Township and will not be conveyed to PAWC in the sale of assets.

Portions of the Authority collection system are combined sewers that convey sanitary sewage and storm water. A total of 5 active combined sewer overflow (CSO) structures remain in the permitted sewerage system.

In order to reduce flow at the sewage treatment plant the Authority has implemented a long-term plan to separate the sanitary and combined sewers. Areas that have had sewer separation work include portions of the CSO 3, CSO 6, CSO 7 and CSO 8 sewersheds. Some inlets in the stormwater system remain connected to the combined sewer system. In these cases PAWC will acquire ownership of the stormwater inlets and piping that are connected to the combined sewer system.

<u>Interceptor</u>
Prior to 2002, the interceptor consisted of 14" and 16" diameter sewers totaling about 2,700 feet along water's edge of the Monongahela River. Diversion chambers were originally installed on Borough sewer lines at 6 locations where the combined sewer collection lines in the Borough connected to the interceptor.

A proposal to replace the interceptor with a new one at higher elevation was developed in cooperation with the U.S. Army Corps of Engineers. The proposal was a part of the project which

intended to raise the Lock and Dam #2 on the Monongahela River and thus the level of the water pool near the interceptor. The interceptor replacement project was completed in 2001 and placed in operation. New combined sewer overflow CSO regulator chambers were made operational. The original diversion chambers are connected to the new CSO chambers and still used as part of the outfall structures.

Maintenance and Repair Projects

In 2013 EBMA undertook a comprehensive sewer cleaning and CCTV program. The results of the CCTV inspection were used to undertake a multi-year program to repair the major deficiencies identified in the CCTV records. The program included the following types of repair and rehabilitation efforts:

- Sewer line replacement
- Relining of sewer lines
- Excavated spot repairs
- Trenchless spot repairs
- Manhole installation and grade ring/lid replacement

Sewage collection systems in the other 3 service municipalities are owned and maintained by the respective municipalities.

4.2 Pump Station

The Authority's original raw sewage pump station was constructed in 1958-1959 and pumps flow from Elizabeth Borough, Forward Township and portions of Elizabeth Township. This pump station was equipped with 3 pumps operating as lead, lag, and standby. The pump curves show a total capacity of 460 gpm, or 1.3 mgd, with 2 pumps running.

The original pump station equipment deteriorated over the years and was replaced in 2022 with a new pumping facility that included screening and grit removal equipment. The new raw sewage pump station and headworks was designed with the same initial capacity as the previous facility. The new pump station was constructed with a wet weather wetwell and the capability to increase the future pumping capacity and reliability which will help reduce CSOs. A copy of the Authority's pump station plan is included in Appendix B.

Force Mains

Sewage is delivered from the pump station to the WWTP through approximately 800 feet of 8-inch force main. A second force main of 30-inch diameter is installed from the pump station to the WWTP but is not in service at this time. This line will be used once the WWTP pumping capacity is increased for wet weather flows.

The force main from Wylie pump station that conveys sewage to the Authority's WWTP headworks is owned by Elizabeth Township and will not be conveyed to PAWC in the sale of assets.

4.3 Wastewater Treatment Plant

The WWTP, originally constructed in 1958-1959 for a permitted capacity of 0.6 MGD, utilizes the activated sludge process for sewage treatment. The plant was upgraded in 1970 by adding additional aeration tanks.

In 1992, improvements were added and placed into operation at the plant as the first stage of overall plant expansion to treat 1.2 MGD. The project was completed under DEP Water Quality Management (WQM) Part II Permit No. 0270416-A1. Plans for the second and third stages of the plant expansion to treat the flow of 1.2 MGD were prepared and submitted to DEP under WQM Part II Permit No. 0270416-A2. The project was completed in 1993. In 2004, the capacity of the plant to handle wet weather flows was increased by additional piping between the aeration tanks and the settling tanks and between the settling tanks and the chlorine contact tanks.

The current treatment plant incorporates activated sludge with the following unit processes:

- Mechanical screening
- Grit removal and dewatering
- Aeration
- Settling
- Disinfection using chlorine gas
- Sludge recycle
- Sludge wasting to a holding tank

A layout of the Authority's WWTP plan is included in Appendix C.

5.0 INVENTORY OF ASSETS AND ORIGINAL FACILITY COST

The inventory and organization of cost data is prepared in accordance with the NARUC requirements for Class A wastewater utilities and is classified by the account groups shown in the following table.

Table 5.0
NARUC Class A Wastewater Utility Plant Accounts

Acct No	Description	Collection System Plant	Pump Station Plant	WWTP Plant	General Plant
353	Land and Land Rights	353.1	353.2	353.3	
354	Structures and Improvements	354.1	354.2	354.3	
355	Power Generation Equipment		355.2		
360	Collection Sewers – Force	360.1			
361	Collection Sewers – Gravity	361.1			
362	Special Collecting Structures	362.1			
364	Flow Measuring Devices	364.1	364.2	364.3	
365	Flow Measuring Installations	365.1	365.2	365.3	
366	Reuse Systems		366.2	366.3	
367	Reuse Meters and Meter Installations			367.3	
371	Pumping Equipment		371.2	371.3	
380	Treatment and Disposal Equipment		380.2	380.3	
381	Plant Sewers		381.2	381.3	
382	Outfall Sewer Lines			382.3	
389	Other Plant and Misc Equipment		389.2	389.3	389.4
390	Office Furniture and Equipment			390.3	390.4
391	Transportation Equipment				391.4
393	Tools, Shop and Garage Equipment				393.4
394	Laboratory Equipment				394.4
395	Power Operated Equipment			395.3	395.4
396	Communication Equipment		396.2	396.3	396.4
397	Miscellaneous Equipment		397.2	397.3	397.4
398	Other Tangible Plant		398.2	398.3	398.4

The inventory and original facility costs for each system are discussed in the following sections.

5.1 Collection System

A detailed listing of the collection system inventory and the original facility costs are included in Appendix D. A summary of these inventory and cost account numbers is shown in the following table.

Table 5.1
Summary of Collection System Inventory and Original Cost

Acct No.	Description	Unit	Quantity		Amount
361.10	6" Gravity Collection Sewer	LF	810	$	125,311
361.11	8" Gravity Collection Sewer	LF	6,974	$	98,345
361.12	10" Gravity Collection Sewer	LF	818	$	5,930
361.13	12" Gravity Collection Sewer	LF	19,503	$	174,841
361.14	15" Gravity Collection Sewer	LF	3,049	$	1,818,387
361.15	18" Gravity Collection Sewer	LF	9,325	$	93,558
361.17	24" Gravity Collection Sewer	LF	1,677	$	19,551
361.18	30" Gravity Collection Sewer	LF	1,002	$	13,075
361.19	36" Gravity Collection Sewer	LF	387	$	5,225
361.20	42" Gravity Collection Sewer	LF	218	$	3,062
361.21	48" Gravity Collection Sewer	LF	187	$	28,767
361.22	Trenchless Sewer Repairs	LS	1	$	1,383,699
361.23	Stormwater Inlets to CS System	EA	147	$	34,139
361.24	Stormwater Piping to CS System	LF	4,842	$	37,329
361.97	CSO Chambers	LS	6	$	683,077
361.98	Manholes	EA	224	$	203,235
361.99	Miscellaneous	LS	-	$	2,463,577
Total 361.10 Asset Cost				**$**	**7,191,108**
Total 364.10 Asset Cost				**$**	**203,981**
Total Collection System				**$**	**7,395,088**

The collection system is generally in good to fair condition. Since 2015 the Authority has conducted ongoing efforts to clean, CCTV inspect and repair or rehabilitate combined and sanitary sewer lines. The rehabilitation and repair efforts were focused on pipe segments and manholes found to contain National Association of Sewer Service Companies (NASSCO) ratings of S4, S5, M4 and M5. These ratings indicated that the identified segments had moderate to severe structural or maintenance issues to address. Several assets that could be considered to be in poor condition include the CSO 3 and CSO 8 check valves to prevent river water from entering the combined sewer system. Both of these facilities are being bid for rehabilitation.

5.2 Pump Station

The pump station contains treatment and pumping equipment. The treatment equipment includes a mechanical bar screen with a washer/compactor, a grit removal unit, and a grit washer and classifier unit. The current pumping equipment includes 2 dry weather pumps with associated piping, valving and appurtenances. The Authority will retain ownership of the structural, non-moving parts of the mechanical bar screen and washer/compactor assembly. The value of the assets to be retained by the Authority equal approximately 40% of the total value, or $65,352. A detailed listing of the pump station inventory and the original facility costs are included in Appendix E. A summary of these inventory and cost account numbers is shown in the following table.

Table 5.2
Summary of Pump Station Inventory and Original Cost

Acct No.	Description	Unit	Quantity		Amount
354.2	Structures and Improvements	LS	1	$	6,902,762
355.2	Power Generation Equipment	LS	1	$	120,666
360.2	Collection Sewers - Force	LS	1	$	254,698
365.2	Flow Measuring Installations	LS	1	$	6,814
366.2	Reuse Systems	LS	1	$	88,521
371.2	Pumping Equipment	LS	1	$	98,671
380.2	Treatment and Disposal Equipment	LS	1	$	740,637
381.2	Plant Sewers	LS	1	$	750,255
398.2	Other Tangible Plant	LS	1	$	194,468
Total Asset Cost				**$**	**9,157,492**

The pump station structure, equipment and other plant were recently constructed in 2020 -2022 and are considered to be in good condition.

5.3 Wastewater Treatment Plant

The WWTP inventory includes those listed items located “inside the fence” at the WWTP. A detailed listing of the WWTP inventory and the original facility costs are included in Appendix F. A summary of the inventory and cost account numbers is shown in the following table.

Table 5.3
Summary of WWTP Inventory and Original Cost

Acct No.	Description	Unit	Quantity	Amount
354.3	Structures and Improvements	1	LS	$ 1,040,090
364.3	Flow Measuring Installations	1	LS	$ 16,255
371.3	Pumping Equipment	1	LS	$ 95,292
380.3	Treatment and Disposal Equipment	1	LS	$ 566,826
381.3	Plant Sewers	1	LS	$ 173,407
382.3	Outfall Sewers	1	LS	$ 126,076
389.3	Other Plant and Miscellaneous Equipment	1	LS	$ 14,436
Total Asset Cost				**$ 2,032,383**

Portions of the WWTP were constructed in 1959 with several upgrades and additions being constructed since that time. Most of the assets at the WWTP are considered to be in fair to good condition. Assets that may be considered poor to marginally fair include:

1. The sludge digester/holding tank structure is in need of cleaning and piping replacement. It is not functioning as an anaerobic digester as intended and the heat exchanger equipment is not being used.
2. The original aeration tanks have significant areas of concrete spalling and should be repaired if they are to remain in service.
3. The clarifier effluent weirs should be replaced.

5.4 Other Plant

Other plant items include those assets owned by the Authority that will be transferred to PAWC but do not fit into the collection, pumping, treatment or land ownership categories. In some cases these other plant assets are grouped together as noted in the detailed listing. The condition of these assets varies based on age, the amount of usage and other considerations. The condition of these individual plant assets generally range from good to fair and are reported to be in serviceable condition. The detailed listing of the Other Plant inventory and the original facility costs are included in Appendix G. A summary of the inventory and cost account numbers is shown in the following table.

Table 5.4
Summary of Other Plant Inventory and Original Cost

Acct No.	Description	Unit	Quantity	Amount
390.4	Office Furniture and Equipment	1	LS	$ 58,067
391.4	Transportation Equipment	1	LS	$ 1,950
393.4	Tools, Shop and Garage Equipment	1	LS	$ 232,348
394.4	Laboratory Equipment	1	LS	$ 19,293
395.4	Power Operated Equipment	1	LS	$ 23,297
396.4	Communication Equipment	1	LS	$ 1,025
Total Asset Cost				**$ 335,980**

6.0 LAND AND LAND RIGHTS

Land owned or controlled by the Authority includes real property, easements and rights of way. The properties owned by the Authority are primarily those at or near the WWTP and the pump station. Unless specifically stated otherwise on deeds the easements for pipelines typically are 20 ft in width and centered upon the existing sewer line.

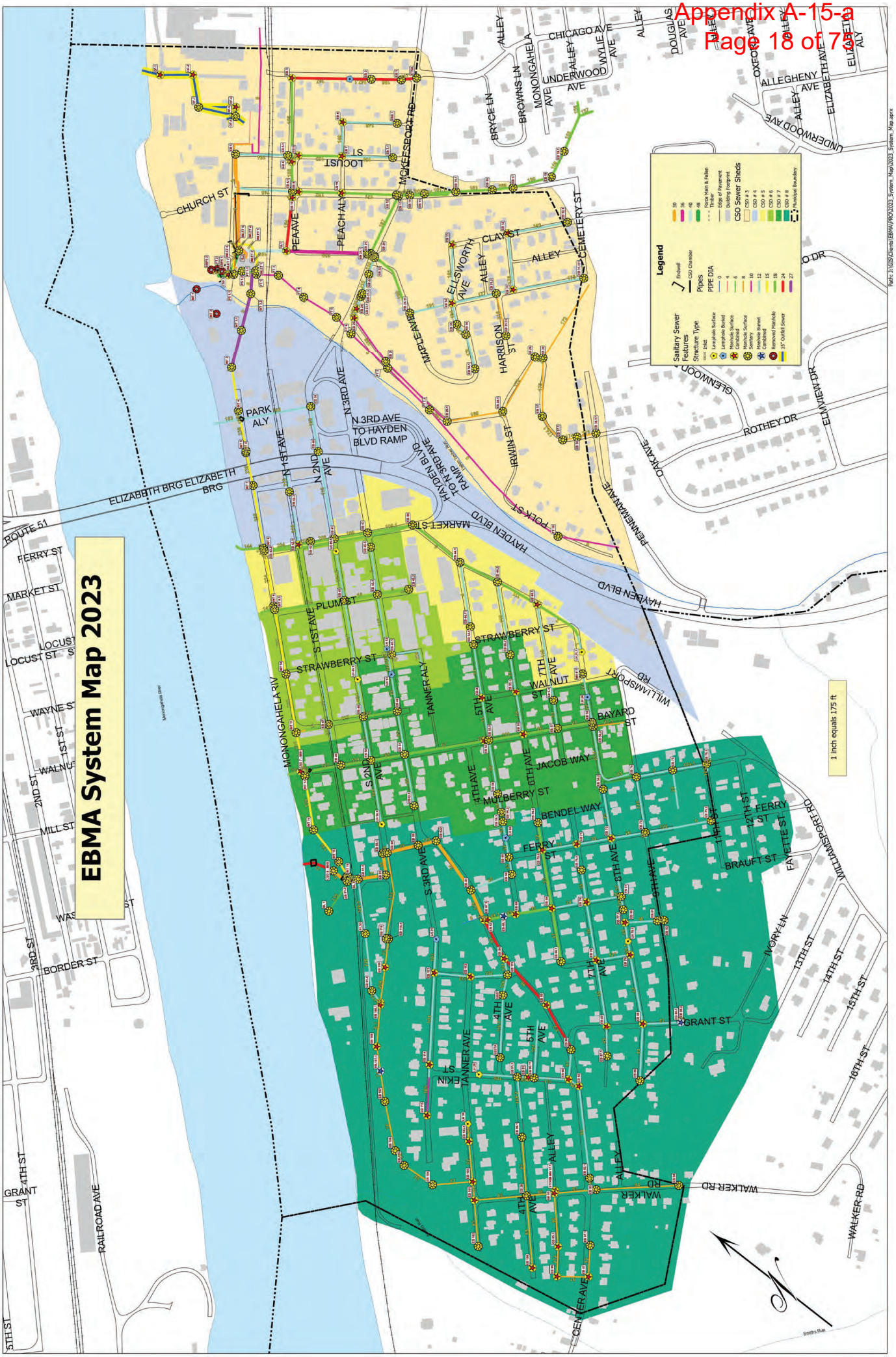
The properties and easements currently owned or controlled by the Authority were identified and provided for this assessment by the Authority solicitor. A complete list of the properties and parcels is included in Appendix H. A summary of the original asset cost for these lands and land rights are shown in the table below.

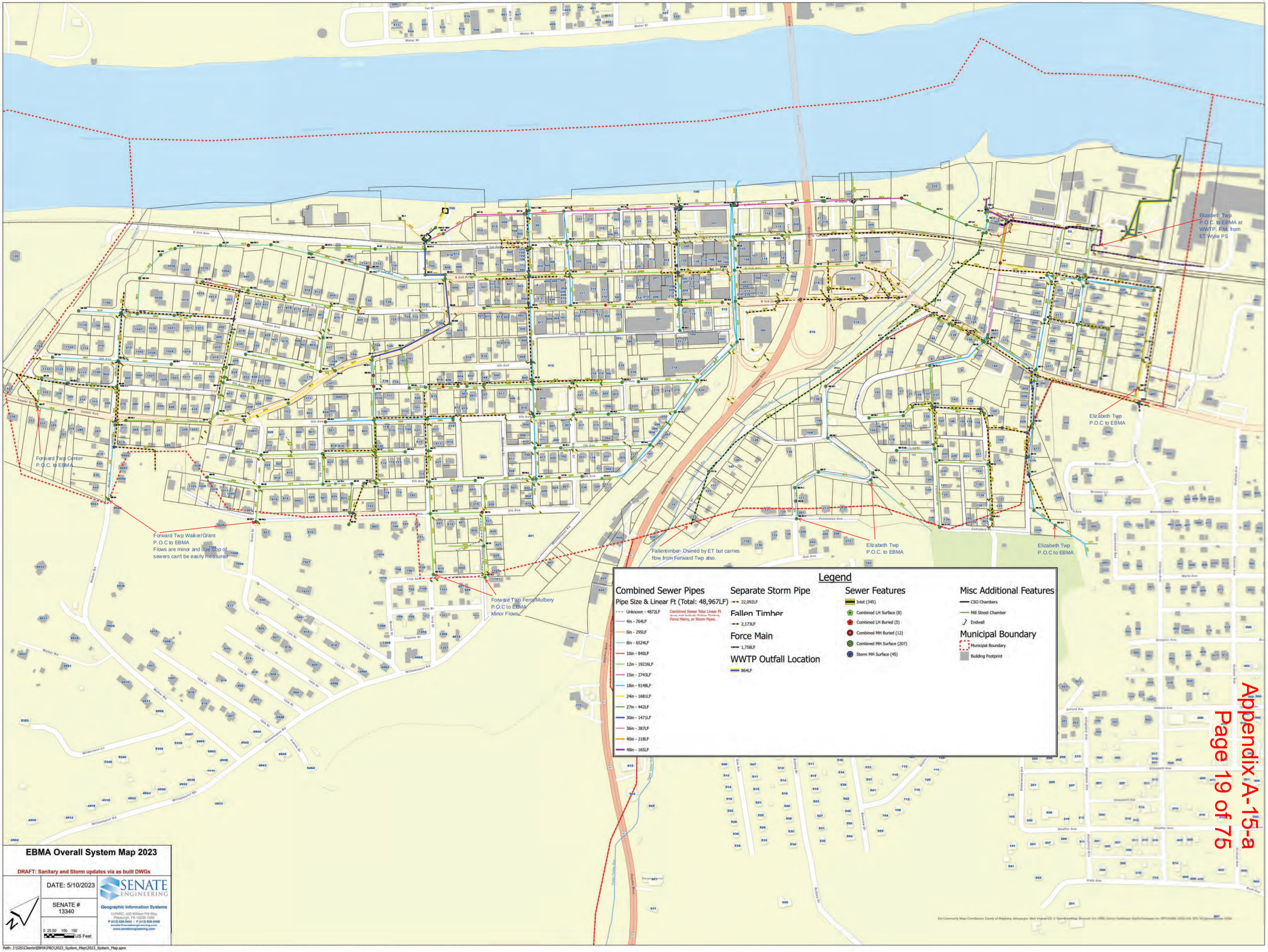
Table 6.0
Summary of Lands and Land Rights Cost

Acct No.	Description	Original Cost
353.1	Collection System Land and Land Rights	$ 12,069
353.1	Pump Station Land and Land Rights	$ 120,000
353.1	WWTP Land and Land Rights	$ 167,000
	Total Land and Land Rights	**$ 299,069**

The remaining properties with sewer lines on or adjacent to them, that did not have an existing easement, were identified by LSSE using Allegheny County tax map information and the GIS sewer system mapping. These easement exhibits were provided to the Solicitor for use in acquiring easements. A list of these properties is also included in Appendix H.

Appendix A


EBMA System Map 2023
Legend
Endwall
CSO Chamber
Pipes
PIPE DIA
Force Main & Fallen Timber
Edge of Pavement
Building Footprint
CSO Sewer Sheds
CSO # 1
CSO # 4
CSO # 5
CSO # 6
CSO # 7
CSO # 8
Municipal Boundary
Sanitary Sewer Features
Structure Type
Inlet
Manhole Surface
Manhole Buried
Removed Manhole
15" Outfall Sewer
1 inch equals 175 ft
CHURCH ST
LOCUST ST
MORGANTOWN RD
PEACH ALY
PEA AVE
CLAY ST
CEMETERY ST
ELLSWORTH AVE
ALLEY
MAPLE AVE
HARRISON ST
IRWIN ST
PARK ALY
N 3RD AVE
N 3RD AVE TO HAYDEN BLVD RAMP
RAMP N 3RD AVE TO HAYDEN BLVD
N 1ST AVE
N 2ND AVE
POLK ST
MARKET ST
HAYDEN BLVD
ELIZABETH BRG
ELIZABETH BRG
ROUTE 51
FERRY ST
PLUM ST
S 1ST AVE
STRAWBERRY ST
TANNER ALY
MONONGAHELA RIV
S 2ND AVE
5TH AVE
7TH AVE
WALNUT ST
BAYARD ST
JACOB WAY
4TH AVE
MULBERRY ST
BENDEL WAY
S 3RD AVE
8TH AVE
9TH AVE
12TH ST
11TH ST
BRAUFT ST
FAYETTE ST
WILLIAMSPORT RD
WORLEY LN
13TH ST
14TH ST
15TH ST
16TH ST
GRANT ST
TANNER AVE
EKIN ST
WALKER RD
CENTER AVE
RAILROAD AVE
WAYNE ST
MILL ST
BORDER ST
2ND ST
1ST ST
3RD ST
4TH ST
5TH ST
WALNUT ST
LOCUST ST
CHICAGO AVE
UNDERWOOD AVE
WYLIE AVE
DOUGLAS AVE
OXFORD AVE
ALLEGHENY AVE
ELIZABETH AVE
UNDERWOOD AVE
BRYCE LN
BROWNS LN
MONONGAHELA AVE
GLENWOOD DR
ROTHEY DR
ELMVIEW DR
OAK AVE
PENNSYLVANIA AVE
Smiths Run
Monongahela River


Elizabeth Twp
P.O.C. to EBMA at
WWTP, F.M. from
ET Wylie PS
Elizabeth Twp
P.O.C to EBMA
Forward Twp Center
P.O.C. to EBMA
Forward Twp Walker/Grant
P.O.C to EBMA
Flows are minor and due top of
sewers can't be easily measured
Fallentimber- Owned by ET but carries
flow from Forward Twp also.
Elizabeth Twp
P.O.C. to EBMA
Elizabeth Twp
P.O.C to EBMA
Forward Twp Ferry/Mulberry
P.O.C to EBMA
Minor Flows
Legend
Combined Sewer Pipes
Pipe Size & Linear Ft (Total: 48,967LF)
Unknown - 4872LF
4in - 764LF
6in - 295LF
8in - 6524LF
10in - 840LF
12in - 19216LF
15in - 2743LF
18in - 9148LF
24in - 1681LF
27in - 442LF
30in - 1471LF
36in - 387LF
40in - 218LF
48in - 165LF
Combined Sewer Total Linear Ft
does not include Pollock Roaring
Force Mains, or Storm Pipes.
Separate Storm Pipe
22,092LF
Fallen Timber
2,173LF
Force Main
1,758LF
WWTP Outfall Location
864LF
Sewer Features
Inlet (345)
Combined LH Surface (8)
Combined LH Buried (5)
Combined MH Buried (12)
Combined MH Surface (207)
Storm MH Surface (45)
Misc Additional Features
CSO Chambers
Mill Street Chamber
Endwall
Municipal Boundary
Municipal Boundary
Building Footprint
EBMA Overall System Map 2023
DRAFT: Sanitary and Storm updates via as built DWGs
DATE: 5/10/2023
SENATE #
13340
0 25 50 100 150
US Feet
SENATE ENGINEERING
Geographic Information Systems
U-PARC, 420 William Pitt Way
Pittsburgh, PA 15238-1330
P (412) 826-5454 • F (412) 826-5458
www.senateengineering.com
Esri Community Maps Contributors, County of Allegheny, data.pa.gov, West Virginia GIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
Path: J:\GIS\Clients\EBMA\PRO\2023_System_Map\2023_System_Map.aprx

Appendix B

File name: H:\SEN\P\013\13695\Dwg\C05 PUMP STATION.DWG Mar 20, 2023-11:16am

DRAWING No. C05
SHEET No.: OF 000

PUMP STATION PLAN

ELIZABETH BOROUGH
MUNICIPAL AUTHORITY

No. 1 LOCUST STREET
ELIZABETH, PA 15037
P: 412-384-3686
F: 412-384-3144

SENATE ENGINEERING
ENGINEERS-PLANNERS-SURVEYORS
U-PARC
420 WILLIAM PITT WAY
PITTSBURGH, PA 15238
P: 412-826-5454
F: 412-826-5458
www.senateengineering.com

DESIGN BY: K HILLMAN
DRAWN BY: J MARCUM
CHECKED BY: R BARNETT
SCALE: AS NOTED
JOB No. 13695
DATE 03/20/2023

REVISIONS	BY	DATE

Appendix C

SEWAGE TREATMENT PLANT
PLAN

ELIZABETH BOROUGH
MUNICIPAL AUTHORITY
No. 1 LOCUST STREET
ELIZABETH, PA 15037
P: 412-384-3686
F: 412-384-3544

SENATE ENGINEERING
ENGINEERS-PLANNERS-SURVEYORS
U-PARC
420 WILLIAM PITT WAY
PITTSBURGH, PA 15238
P: 412-828-5454
F: 412-828-5456
www.senateengineering.com

REVISIONS	BY	DATE

DRAWN BY: MBF / SJM
DATE: 03/17/2023
DESIGN BY: –
SCALE: AS SHOWN
CHECKED BY: –
JOB No. 13693

SHT-No. 000 OF
SHEET NUMBER

BAR MEASURES 1" ON ORIGINAL DRAWING IF BAR DOES NOT MEASURE 1" ADJUST SCALES ACCORDINGLY

1"

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
0 10 20 40 60

BOROUGH GARAGE
GARAGE
OFFICE/CONTROL BUILDING
DIGESTER
36" TRIPLE PEAR
EFFLUENT CHAMBER
CHLORINE CONTACT TANK
CLARIFIERS
AERATION TANK
AERATION TANK
AERATION TANK
AERATION TANK
CHLORINE ROOM
BLOWER MECHANICAL ROOM
754.62
754.74

File name: H:\SEN\P\013\13693\Dwg\ELIZA WWTP STRUCTURES.DWG Mar 20, 2023-11:10am

Appendix D

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.00 - Collection Sewers -Gravity and 364.10 Flow Measuring Devices

Acct No.	Description	Unit	Quantity		Amount
361.10	6" Gravity Collection Sewer	LF	810	$	125,311
361.11	8" Gravity Collection Sewer	LF	6,974	$	98,345
361.12	10" Gravity Collection Sewer	LF	818	$	5,930
361.13	12" Gravity Collection Sewer	LF	19,503	$	174,841
361.14	15" Gravity Collection Sewer	LF	3,049	$	1,818,387
361.15	18" Gravity Collection Sewer	LF	9,325	$	93,558
361.17	24" Gravity Collection Sewer	LF	1,677	$	19,551
361.18	30" Gravity Collection Sewer	LF	1,002	$	13,075
361.19	36" Gravity Collection Sewer	LF	387	$	5,225
361.20	42" Gravity Collection Sewer	LF	218	$	3,062
361.21	48" Gravity Collection Sewer	LF	187	$	28,767
361.22	Trenchless Sewer Repairs	LS	1	$	1,383,699
361.23	Stormwater Inlets to CS System	EA	147	$	34,139
361.24	Stormwater Piping to CS System	LF	4,842	$	37,329
361.97	CSO Chambers	LS	6	$	683,077
361.98	Manholes	EA	224	$	203,235
361.99	Miscellaneous	LS	-	$	2,463,577
Total 361.10 Asset Cost				**$**	**7,191,108**
Total 364.10 Asset Cost				**$**	**203,981**
Total Collection System				**$**	**7,395,088**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.10 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers	Unit	Quantity	Year		Amount
361.10	6" Gravity Collection Sewer	LF				
	6" PVC Pipes for sewers and lateral	LF	809.5	1998	$	125,310.60
	Total		**809.5**		**$**	**125,310.60**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.11 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers		Unit	Quantity	Year		Amount
361.11	8" Gravity Collection Sewer		LF				
		135	LF	170.9	1950	$	1,159
		190	LF	436.1	1950	$	2,957
		74	LF	9.7	1950	$	66
		75	LF	130.2	1950	$	883
		76.1	LF	194.1	1950	$	1,316
		77	LF	252.7	1950	$	1,714
		78	LF	227.5	1950	$	1,543
		79	LF	77.8	1950	$	528
		80	LF	155.1	1950	$	1,052
		81	LF	183.8	1950	$	1,246
		82	LF	184.3	1950	$	1,250
		83	LF	78.1	1950	$	530
		84	LF	82.8	1950	$	561
		85	LF	210.7	1950	$	1,429
		86	LF	237.5	1950	$	1,611
		87	LF	268.2	1950	$	1,819
		88	LF	126.7	1950	$	859
		89	LF	328.5	1950	$	2,228
		90	LF	242.2	1950	$	1,642
		91	LF	143.8	1950	$	975
		92	LF	143.1	1950	$	970
		93	LF	192.7	1950	$	1,307
		94	LF	376.8	1950	$	2,555
		170	LF	289.1	1950	$	1,960
		171	LF	34.6	1950	$	235
		172	LF	399.1	1950	$	2,706
		173	LF	267.2	1950	$	1,812
		174.1	LF	144.3	1950	$	979
		216	LF	197.4	1950	$	1,339
		222	LF	19.6	1950	$	133
		209	LF	160.4	1950	$	1,088
		212	LF	137.8	1950	$	934
		213	LF	88.9	1950	$	603
		174	LF	66.2	1950	$	449
		21.1	LF	142.8	1950	$	968
		169	LF	259.8	1950	$	1,762

76	LF	9.5	1950	$	64
12	LF	43	1950	$	292
204.1	LF	17.4	1950	$	118
8" PVC Pipes at all depths up to 22'	LF	244	1998	$	52,704
Total		**6974.4**		**$**	**98,345**

Notes:

1. Average Depth is 8.17'
2. All costs include 5' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.12 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers	Unit	Quantity	Year	Amount
361.12	10" Gravity Collection Sewer	LF			
	105	LF	175.3	1950	$ 1,270
	168	LF	250.6	1950	$ 1,816
	169.1	LF	392.5	1950	$ 2,844
	Total		**818.4**		**$ 5,930**

Notes:
1. Average Depth is 13.68'
2. All costs include 5' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.13 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers		Unit	Quantity	Year		Amount
361.13	12" Gravity Collection Sewer		LF				
		1	LF	77.8	1950	$	600
		4	LF	297.1	1950	$	2,291
		8	LF	217.9	1950	$	1,680
		11	LF	195.5	1950	$	1,507
		13	LF	72	1950	$	555
		14	LF	250.7	1950	$	1,933
		15	LF	196.1	1950	$	1,512
		17	LF	176.8	1950	$	1,363
		18	LF	200.2	1950	$	1,544
		19	LF	127.2	1950	$	981
		22	LF	117.7	1950	$	907
		23.1	LF	269.2	1950	$	2,076
		24	LF	104.7	1950	$	807
		25	LF	248.8	1950	$	1,918
		26	LF	156	1950	$	1,203
		28	LF	175.6	1950	$	1,354
		29	LF	17.5	1950	$	135
		30	LF	161.1	1950	$	1,242
		31	LF	158.3	1950	$	1,221
		34	LF	160	1950	$	1,234
		35	LF	147.1	1950	$	1,134
		36	LF	161.5	1950	$	1,245
		37	LF	90.5	1950	$	698
		38	LF	269	1950	$	2,074
		39	LF	85.1	1950	$	656
		40	LF	147.8	1950	$	1,140
		41	LF	30.8	1950	$	237
		42	LF	316.8	1950	$	2,443
		43	LF	175.4	1950	$	1,352
		44	LF	265.4	1950	$	2,046
		45	LF	140.1	1950	$	1,080
		46	LF	308	1950	$	2,375
		50	LF	201	1950	$	1,550
		51	LF	78.6	1950	$	606
		52	LF	89.2	1950	$	688
		53	LF	74.1	1950	$	571

56	LF	33.9	1950	$	261
62	LF	231.6	1950	$	1,786
63	LF	202.9	1950	$	1,564
65	LF	207	1950	$	1,596
66	LF	176.5	1950	$	1,361
68	LF	253.8	1950	$	1,957
69	LF	79.9	1950	$	616
95	LF	421.7	1950	$	3,251
96	LF	56	1950	$	432
97	LF	135.7	1950	$	1,046
101	LF	74.7	1950	$	576
102	LF	170	1950	$	1,311
103	LF	138.9	1950	$	1,071
104	LF	425.5	1950	$	3,281
106.1	LF	291	1950	$	2,244
107	LF	266.5	1950	$	2,055
108	LF	175.8	1950	$	1,355
110	LF	337	1950	$	2,598
112	LF	449.2	1950	$	3,463
113	LF	363.9	1950	$	2,806
115	LF	251.6	1950	$	1,940
120	LF	294.3	1950	$	2,269
122	LF	172.6	1950	$	1,331
124	LF	12	1950	$	93
125	LF	266.7	1950	$	2,056
126	LF	58.5	1950	$	451
127	LF	158	1950	$	1,218
130	LF	167.2	1950	$	1,289
131	LF	184.6	1950	$	1,423
133	LF	396.8	1950	$	3,059
134.1	LF	363.5	1950	$	2,803
145	LF	246	1950	$	1,897
148	LF	251.3	1950	$	1,938
149	LF	155.4	1950	$	1,198
150	LF	233.1	1950	$	1,797
163	LF	266.7	1950	$	2,056
164	LF	99.9	1950	$	770
175	LF	328.9	1950	$	2,536
176	LF	259.8	1950	$	2,003
177	LF	285.8	1950	$	2,204
178	LF	60.5	1950	$	466
179	LF	167.7	1950	$	1,293
182	LF	312.4	1950	$	2,409
183	LF	132.2	1950	$	1,019
184	LF	238.5	1950	$	1,839
191	LF	198.2	1950	$	1,528
192	LF	277.7	1950	$	2,141

193	LF	208.3	1950	$	1,606
194	LF	8.5	1950	$	66
215	LF	108.8	1950	$	839
217	LF	42.9	1950	$	331
218	LF	59.4	1950	$	458
219	LF	65.1	1950	$	502
220	LF	262.2	1950	$	2,022
223	LF	17.1	1950	$	132
224	LF	88	1950	$	678
225	LF	29.6	1950	$	228
229	LF	294.1	1950	$	2,268
230	LF	80.4	1950	$	620
106	LF	95.1	1950	$	733
23	LF	17.5	1950	$	135
39.1	LF	67.6	1950	$	521
124.1	LF	155.9	1950	$	1,202
194.1	LF	35.6	1950	$	274
215	LF	107.4	1950	$	828
220.1	LF	250.7	1950	$	1,933
134	LF	181	1950	$	1,396
134.2	LF	228	1950	$	1,758
216	LF	150	1950	$	1,157
108.1	LF	49.6	1950	$	382
108.2	LF	187.5	1950	$	1,446
95.1	LF	32.5	1950	$	251
22.1	LF	114.5	1950	$	883
124.2	LF	30	1950	$	231
184.1	LF	34.2	1950	$	264
105	LF	54	1950	$	416
12" PVC gravity sewer up to 16'	LF	155	1998	$	25,668
Total		**19502.5**		**$**	**174,841**

Notes:

1. Average Depth is 9.32'
2. All costs include 5' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.14 - Collection Sewers -Gravity

Acct No.	Description - PSR NUMBERS		Unit	Quantity	Year		Amount
361.14	15"Gravity Collection Sewer		LF				
		136	LF	25.1	1998	$	22,108
		137	LF	76.4	1998	$	67,293
		138	LF	185.3	1998	$	163,212
		139	LF	249	1998	$	219,319
		231	LF	201.6	1998	$	177,569
		232	LF	277.1	1998	$	244,070
		233	LF	298.6	1998	$	263,007
		234	LF	256.1	1998	$	225,573
		235	LF	289.9	1998	$	255,344
		236	LF	153.5	1998	$	135,203
		237	LF	9.4	1998	$	8,280
		238	LF	186.2	1950	$	1,522
		243	LF	11.8	1950	$	96
	15" PVC Sewer Pipe		LF	828.5	1998	$	35,791
	Total			**3048.5**		**$**	**1,818,387**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.15 - Collection Sewers -Gravity

Acct No.	Description - PSR NUMBERS		Unit	Quantity	Year		Amount
361.15	18" Gravity Collection Sewer		LF				
		2	LF	233.4	1950	$	2,341.60
		3	LF	196.4	1950	$	1,970
		5	LF	259.7	1950	$	2,605
		7	LF	692.6	1950	$	6,949
		9	LF	145.5	1950	$	1,460
		10	LF	157.8	1950	$	1,583
		12	LF	109.9	1950	$	1,103
		20	LF	158.7	1950	$	1,592
		21	LF	160.2	1950	$	1,607
		32	LF	131.7	1950	$	1,321
		33	LF	269.5	1950	$	2,704
		47	LF	242.1	1950	$	2,429
		48	LF	167.7	1950	$	1,682
		49.1	LF	77.1	1950	$	774
		64	LF	157.7	1950	$	1,582
		67	LF	369.8	1950	$	3,710
		70	LF	57	1950	$	572
		109.1	LF	226.5	1950	$	2,272
		111	LF	206.1	1950	$	2,068
		114	LF	316.2	1950	$	3,172
		118	LF	159.1	1950	$	1,596
		119	LF	137	1950	$	1,374
		121	LF	142.7	1950	$	1,432
		141	LF	58.9	1950	$	591
		142	LF	27	1950	$	271
		143	LF	34.9	1950	$	350
		144	LF	114.1	1950	$	1,145
		146	LF	40.3	1950	$	404
		151	LF	252.2	1950	$	2,530
		152	LF	198.6	1950	$	1,992
		153	LF	39.6	1950	$	397
		155	LF	199.1	1950	$	1,997
		156	LF	63.5	1950	$	637
		157	LF	63.6	1950	$	638
		158	LF	202.4	1950	$	2,031
		159	LF	103.7	1950	$	1,040

160	LF	94.7	1950	$	950
161	LF	170	1950	$	1,706
162	LF	175.1	1950	$	1,757
165	LF	38.2	1950	$	383
166	LF	21.9	1950	$	220
167	LF	291.8	1950	$	2,928
185	LF	383	1950	$	3,842
188	LF	164.5	1950	$	1,650
189	LF	180.7	1950	$	1,813
190	LF	436.1	1950	$	4,375
202	LF	51.9	1950	$	521
203	LF	67.2	1950	$	674
204	LF	159.9	1950	$	1,604
205	LF	58	1950	$	582
206	LF	108	1950	$	1,084
207	LF	23.7	1950	$	238
227	LF	163.3	1950	$	1,638
228	LF	142.2	1950	$	1,427
214	LF	9.5	1950	$	95
151.1	LF	48.8	1950	$	490
49.2	LF	14.7	1950	$	147
49	LF	53.6	1950	$	538
161.1	LF	142	1950	$	1,425
109	LF	154.3	1950	$	1,548
Total		**9325.4**		**$**	**93,558**

Notes:

1. Average Depth is 11.06'
2. All costs include 5' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.17 - Collection Sewers -Gravity

Acct No.	Description - PSR numbers	Unit	Quantity	Year		Amount
361.17	24" Gravity Collection Sewer	LF				
	71	LF	142.4	1950	$	1,660
	98	LF	284.9	1950	$	3,321
	99	LF	199.1	1950	$	2,321
	132	LF	238.7	1950	$	2,783
	147	LF	264.1	1950	$	3,079
	154	LF	245.4	1950	$	2,861
	186	LF	137.3	1950	$	1,601
	187	LF	67.6	1950	$	788
	147.1	LF	97.5	1950	$	1,137
Total			**1677**		**$**	**19,551**

Notes:
1. Average Depth is 7.86'
2. All costs include 6' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.18 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers	Unit	Quantity	Year	Amount
361.18	30" Gravity Collection Sewer	LF			
	54	LF	275.7	1950	$ 3,598
	55	LF	143.9	1950	$ 1,878
	57	LF	19.3	1950	$ 252
	58	LF	98.9	1950	$ 1,291
	72	LF	51.2	1950	$ 668
	73	LF	128.9	1950	$ 1,682
	128	LF	84.5	1950	$ 1,103
	129	LF	148.3	1950	$ 1,936
	208	LF	51.1	1950	$ 667
	Total		**1001.8**		**$ 13,075**

Notes:
1. Average Depth is 10.17'
2. All costs include 6' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.19 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers	Unit	Quantity	Year		Amount
361.19	36" Gravity Collection Sewer	LF				
	180	LF	369.5	1950	$	4,994
	180.1	LF	17.1	1950	$	231
	Total		**386.6**		**$**	**5,225**

Notes:
1. Average Depth is 10.23'
2. All costs include 6' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.20 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers	Unit	Quantity	Year		Amount
361.20	42" Gravity Collection Sewer	LF				
	195	LF	217.6	1950	$	3,062
	Total		**217.6**		**$**	**3,062**

Notes:
1. Average Depth is 12.80'
2. All costs include 6' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.21 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers	Unit	Quantity	Year		Amount
361.21	48" and Larger Gravity Collection Sewer	LF				
	198	LF	45.6	1950	$	674
	211	LF	11.5	1950	$	170
	48" Concrete sewer	LF	130	1998	$	27,924
	Total		**187.1**		**$**	**28,767**

Notes:
1. Average Depth is 14.76'
2. All costs include 8' wide pavement restoration

Elizabeth Borough Municipal Authority

Original Cost of Collection System
as of March 31, 2023

Summary of Account 361.22 - Collection Sewers -Gravity

Acct No.	Description - PSR Numbers & work	Unit	Quantity	Year of Work		Amount
361.22	Trenchless Sewer Repairs					
	190 - MH-MH Lining	LF	436.1	2016	$	25,119.36
	86 - MH-MH Lining	LF	237.5	2015	$	10,830
	91 - MH-MH Lining	LF	143.8	2015	$	6,557
	93 - MH-MH Lining	LF	192.7	2015	$	8,787
	94 - MH-MH Lining	LF	376.8	2015	$	17,182
	170 - MH-MH Lining	LF	289.1	2016	$	16,652
	173 - MH-MH Lining	LF	267.2	2016	$	15,391
	212 - MH-MH Lining	LF	137.8	2015	$	6,284
	169 - MH-MH Lining	LF	259.8	2016	$	14,964
	105 - MH-MH Lining	LF	175.3	2015	$	8,625
	168 - MH-MH Lining	LF	250.6	2016	$	16,239
	169.1 - MH-MH Lining	LF	392.5	2016	$	25,434
	15 - MH-MH Lining	LF	196.1	2016	$	17,649
	22 - MH-MH Lining	LF	117.7	2015	$	7,062
	51 - MH-MH Lining	LF	78.6	2015	$	4,716
	68 - MH-MH Lining	LF	253.8	2016	$	22,842
	103 - MH-MH Lining	LF	138.9	2015	$	8,334
	112 - MH-MH Lining	LF	449.2	2015	$	26,952
	127 - MH-MH Lining	LF	158	2015	$	9,480
	133 - MH-MH Lining	LF	396.8	2015	$	23,808
	149 - MH-MH Lining	LF	155.4	2016	$	13,986
	179 - MH-MH Lining	LF	167.7	2016	$	15,093
	191 - MH-MH Lining	LF	198.2	2016	$	17,838
	193 - MH-MH Lining	LF	208.3	2016	$	18,747
	105 - MH-MH Lining	LF	54	2015	$	3,240
	3 - MH-MH Lining	LF	196.4	2015	$	18,854
	5 - MH-MH Lining	LF	259.7	2016	$	32,722
	7 - MH-MH Lining	LF	692.6	2015	$	66,490
	9 - MH-MH Lining	LF	145.5	2016	$	18,333
	10 - MH-MH Lining	LF	157.8	2015	$	15,149
	33 - MH-MH Lining	LF	269.5	2015	$	25,872
	64 - MH-MH Lining	LF	157.7	2016	$	19,870
	67 - MH-MH Lining	LF	369.8	2016	$	46,595
	114 - MH-MH Lining	LF	316.2	2016	$	39,841
	118 - MH-MH Lining	LF	159.1	2016	$	20,047
	121 - MH-MH Lining	LF	142.7	2016	$	17,980

143 - MH-MH Lining	LF	34.9	2016	$	4,397
152 - MH-MH Lining	LF	198.6	2016	$	25,024
153 - MH-MH Lining	LF	39.6	2016	$	4,990
167 - MH-MH Lining	LF	291.8	2016	$	36,767
185 - MH-MH Lining	LF	383	2016	$	48,258
188 - MH-MH Lining	LF	164.5	2016	$	20,727
202 - MH-MH Lining	LF	51.9	2016	$	6,539
204 - MH-MH Lining	LF	159.9	2016	$	20,147
205 - MH-MH Lining	LF	58	2016	$	7,308
207 - MH-MH Lining	LF	23.7	2016	$	2,986
109 - MH-MH Lining	LF	154.3	2016	$	19,442
98 - MH-MH Lining	LF	284.9	2016	$	41,026
99 - MH-MH Lining	LF	199.1	2016	$	28,670
132 - MH-MH Lining	LF	238.7	2016	$	34,373
154 - MH-MH Lining	LF	245.4	2016	$	50,651
186 - MH-MH Lining	LF	137.3	2016	$	28,339
187 - MH-MH Lining	LF	67.6	2016	$	13,953
55 - MH-MH Lining	LF	143.9	2015	$	32,792
129 - MH-MH Lining	LF	148.3	2015	$	33,795
150 - Trenchless Spot Repair	LS	1	2015	$	2,034
148 - Trenchless Spot Repair	LS	1	2015	$	2,034
187 - Trenchless Spot Repair	LS	1	2015	$	36,480
151 - Trenchless Spot Repair	LS	1	2015	$	8,184
176 - Trenchless Spot Repair	LS	1	2015	$	2,034
174.1 - Trenchless Spot Repair	LS	1	2015	$	672
169 - Trenchless Spot Repair	LS	1	2015	$	672
182 - Trenchless Spot Repair	LS	1	2015	$	2,034
1 - Trenchless Spot Repair	LS	1	2015	$	2,034
2 - Trenchless Spot Repair	LS	1	2015	$	8,184
111 - Trenchless Spot Repair	LS	1	2015	$	8,184
110 - Trenchless Spot Repair	LS	1	2015	$	2,034
3 - Trenchless Spot Repair	LS	1	2015	$	8,184
229 - Trenchless Spot Repair	LS	1	2015	$	2,034
9 - Trenchless Spot Repair	LS	1	2015	$	8,184
115 - Trenchless Spot Repair	LS	1	2015	$	2,034
10 - Trenchless Spot Repair	LS	1	2015	$	8,184
134.2 - Trenchless Spot Repair	LS	1	2015	$	8,184
134.1 - Trenchless Spot Repair	LS	1	2015	$	2,034
134 - Trenchless Spot Repair	LS	1	2015	$	2,034
227 - Trenchless Spot Repair	LS	1	2015	$	8,184
22 - Trenchless Spot Repair	LS	1	2015	$	2,034
21 - Trenchless Spot Repair	LS	1	2015	$	8,184
20 - Trenchless Spot Repair	LS	1	2015	$	8,184
17 - Trenchless Spot Repair	LS	1	2015	$	2,034
69 - Trenchless Spot Repair	LS	1	2015	$	2,034
66 - Trenchless Spot Repair	LS	1	2015	$	2,034
92 - Trenchless Spot Repair	LS	1	2015	$	672

90 - Trenchless Spot Repair	LS	1	2015	$	672
77.1 - Trenchless Spot Repair	LS	1	2015	$	672
130 - Trenchless Spot Repair	LS	1	2015	$	2,034
85 - Trenchless Spot Repair	LS	1	2015	$	672
82 - Trenchless Spot Repair	LS	1	2015	$	672
106.1 - Trenchless Spot Repair	LS	1	2015	$	2,034
101 - Trenchless Spot Repair	LS	1	2015	$	2,034
100 - Trenchless Spot Repair	LS	1	2015	$	2,034
97 - Trenchless Spot Repair	LS	1	2015	$	2,034
96 - Trenchless Spot Repair	LS	1	2015	$	2,034
89 - Trenchless Spot Repair	LS	1	2015	$	672
90 - Trenchless Spot Repair	LS	1	2015	$	672
92 - Trenchless Spot Repair	LS	1	2015	$	672
44 - Trenchless Spot Repair	LS	1	2015	$	2,034
47 - Trenchless Spot Repair	LS	1	2015	$	8,184
34 - Trenchless Spot Repair	LS	1	2015	$	2,034
38 - Trenchless Spot Repair	LS	1	2015	$	2,034
36 - Trenchless Spot Repair	LS	1	2015	$	2,034
35 - Trenchless Spot Repair	LS	1	2015	$	2,034
39 - Trenchless Spot Repair	LS	1	2015	$	2,034
40 - Trenchless Spot Repair	LS	1	2015	$	2,034
26 - Trenchless Spot Repair	LS	1	2015	$	2,034
25 - Trenchless Spot Repair	LS	1	2015	$	2,034
30 - Trenchless Spot Repair	LS	1	2015	$	2,034
31 - Trenchless Spot Repair	LS	1	2015	$	2,034
175 - Trenchless Spot Repair	LS	1	2015	$	2,034
175 - Excavated Spot Repair	LF	34	2015	$	12,240
199 - Excavated Spot Repair	LF	8	2015	$	2,640
149 - Excavated Spot Repair	LF	34	2015	$	12,240
18 - Excavated Spot Repair	LF	33	2015	$	11,880
133 - Excavated Spot Repair	LF	8	2015	$	2,640
Total		**11795.3**		**$**	**1,383,699**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
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Summary of Account 361.23 - Stormwater Inlets Connected to Combined Sewer System

Acct No.	Description - PSR Numbers & work	Unit	Quantity	Year of Work		Amount
361.23	Stormwater Inlets to CS System					
	Standard Size Inlet w/ Grating	EA	147	1950	$	34,139
	Total		**147**		**$**	**34,139**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
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Summary of Account 361.24 - Stormwater Piping Connected to Combined Sewer System

Acct No.	Description - PSR Numbers & work	Unit	Quantity	Year of Work		Amount
361.24	12" Dia Stormwater Piping to CS System					
	All Segments (from GIS Mapping)	LF	4,841.5	1950	$	37,329
	Total		**4,841.5**		**$**	**37,329**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
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Summary of Account 361.97 - Collection Sewers -Gravity

Acct No.	Description	Unit	Quantity	Year		Amount
361.97	Cost of CSO Chambers					
	Total Upper Mill St Regulator (CSO 8)	LS	1	1998	$	**118,273**
	CSO 8 Regualtor	EA	1		$	59,340
	Hancor	EA	1		$	3,450
	Flow Channel	EA	1		$	3,036
	New Concrete Endwalls & Apron	EA	1		$	2,622
	Red Valve Tideflex	EA	1		$	20,728
	Outfall Channels	EA	1		$	4,278
	Select Backfill	SF	1		$	4,050
	Labor & Other overheads	EA	1		$	11,040
	Aluminum baffle on sides	EA	1		$	898
	Fiberglass Platforms	EA	1		$	8,280
	3" Dia. Safety Posts (4/Regulator)	EA	4		$	552
	Total Bayard St (CSO 7)	LS	1	1998	$	**109,552**
	CSO 7 Regulator	EA	1		$	62,100
	Hancor	EA	1		$	3,450
	Flow Channel	EA	1		$	3,036
	New Concrete Endwalls & Apron	EA	1		$	2,346
	Red Valve Tideflex	EA	1		$	9,798
	Outfall Channels	EA	1		$	4,002
	Select Backfill	SF	1		$	4,050
	Labor & Other overheads	EA	1		$	11,040
	Aluminum baffle on sides	EA	1		$	898
	Fiberglass Platforms	EA	1		$	8,280
	3" Dia. Safety Posts (4/Regulator)	EA	4		$	552
	Total Plum St (CSO 6)	LS	1	1998	$	**106,588**
	CSO 6 Regulator	EA	1		$	66,240
	Hancor	EA	1		$	3,450
	Flow Channel	EA	1		$	3,036
	New Concrete Endwalls & Apron	EA	1		$	2,418
	Red Valve Tideflex	EA	1		$	9,798
	Outfall Channels	EA	1		$	6,486
	Select Backfill	SF	1		$	4,050
	Pipe Plugs	EA	1		$	1,380
	Aluminum baffle on sides	EA	1		$	898
	Fiberglass Platforms	EA	1		$	8,280
	3" Dia. Safety Posts (4/Regulator)	EA	4		$	552

Total Market St (CSO 5)	LS	1	1998	$	**101,824**
CSO 5 Regulator	EA	1		$	62,100
Flow Channel	EA	1		$	3,036
New Concrete Endwalls & Apron	EA	1		$	4,554
Red Valve Tideflex	EA	1		$	9,798
Outfall Channels	EA	1		$	7,176
Select Backfill	SF	1		$	4,050
Pipe Plugs	EA	1		$	1,380
Aluminum baffle on sides	EA	1		$	898
Fiberglass Platforms	EA	1		$	8,280
3" Dia. Safety Posts (4/Regulator)	EA	4		$	552
Total Park Alley (CSO 4)	LS	1	1998	$	**111,898**
CSO 4 Regulator	EA	1		$	62,100
Hancor	EA	1		$	3,450
Flow Channel	EA	1		$	3,036
New Concrete Endwalls & Apron	EA	1		$	3,726
Red Valve Tideflex	EA	1		$	8,280
Outfall Channels	EA	1		$	6,486
Select Backfill	SF	1		$	4,050
Labor & Other overheads	EA	1		$	11,040
Aluminum baffle on sides	EA	1		$	898
Fiberglass Platforms	EA	1		$	8,280
3" Dia. Safety Posts (4/Regulator)	EA	4		$	552
Total Mill Alley (CSO 3)	LS	1	1998	$	**134,944**
CSO 3 Regulator	EA	1		$	62,100
New Chamber Ahead of Mill Alley	EA	1		$	3,036
New Concrete Endwalls & Apron	EA	1		$	4,968
Red Valve Tideflex	EA	1		$	48,300
Select Backfill	SF	1		$	4,050
Pipe Plugs	EA	1		$	2,760
Aluminum baffle on sides	EA	1		$	898
Fiberglass Platforms	EA	1		$	8,280
3" Dia. Safety Posts (4/Regulator)	EA	4		$	552
Total				$	**683,077**

Elizabeth Borough Municipal Authority

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Summary of Account 361.98 - Collection Sewers -Gravity

Acct No.	Description - Manhole Numbers	Unit	Quantity	Year		Amount
361.98	Manholes	EA				
	EB 35	EA	1	2014	$	3,588
	EB 36	EA	1	1950	$	302
	EB 31.33	EA	1	1950	$	302
	EB 31.2	EA	1	1950	$	302
	EB 31.111	EA	1	1950	$	302
	EB 32.1	EA	1	1950	$	302
	EB 4.1	EA	1	1950	$	302
	EB 7.1	EA	1	1950	$	302
	EB8.1	EA	1	1950	$	302
	EB 2	EA	1	1950	$	302
	EB 97.1	EA	1	1950	$	302
	EB 92.1	EA	1	2014	$	3,588
	EB 99.1	EA	1	2014	$	3,588
	EB27A	EA	1	2014	$	3,588
	EB27	EA	1	2014	$	3,588
	EB 86	EA	1	1950	$	302
	EB 89	EA	1	2014	$	3,588
	EB 87.1	EA	1	2014	$	3,588
	EB 82	EA	1	1950	$	302
	EB 81	EA	1	1950	$	302
	EB 77	EA	1	1950	$	302
	EB 77.1	EA	1	2014	$	3,588
	EB 76.1	EA	1	2014	$	3,588
	EB 70.2	EA	1	2014	$	3,588
	EB 69.1	EA	1	2014	$	3,588
	EB 64	EA	1	1950	$	302
	EB 65	EA	1	1950	$	302
	EB 56.1	EA	1	2014	$	3,588
	EB 56.2	EA	1	2014	$	3,588
	EB 58.2	EA	1	1950	$	302
	EB 75.1	EA	1	2014	$	3,588
	EB 75	EA	1	1950	$	302
	EB 75.2	EA	1	2014	$	3,588
	EB 62	EA	1	1950	$	118
	EB 63	EA	1	2014	$	3,588
	EB 58.2	EA	1	1950	$	302

LH 21.1	EA	1	1950	$	302
Eb 57.1	EA	1	1950	$	302
EB 55.2	EA	1	1950	$	302
EB 54.1	EA	1	1950	$	302
EB 44.11	EA	1	1950	$	302
EB 30	EA	1	1950	$	302
EB 29	EA	1	1950	$	302
EB 37.1	EA	1	1950	$	302
OF-4	EA	1	1950	$	302
OF-5	EA	1	1950	$	302
OF-6	EA	1	1950	$	302
OF-7	EA	1	1950	$	302
OF-2	EA	1	1950	$	302
OF-1	EA	1	1950	$	302
EB 1	EA	1	1950	$	302
EB 3	EA	1	1950	$	302
EB 4	EA	1	1950	$	302
EB 6	EA	1	1950	$	302
EB 7	EA	1	1950	$	302
EB 8	EA	1	1950	$	302
EB 11	EA	1	1950	$	302
EB 9	EA	1	1950	$	302
EB 10	EA	1	1950	$	302
EB 5	EA	1	1950	$	302
EB 10.2	EA	1	1950	$	302
CSO 3	EA	1	1950	$	302
EBPS 2	EA	1	1950	$	302
EB 10.1	EA	1	1950	$	302
EB 25	EA	1	1950	$	302
EB 24	EA	1	1950	$	302
EB 23.1	EA	1	1950	$	302
EB 23	EA	1	1950	$	302
EB 21	EA	1	1950	$	302
EB 20	EA	1	1950	$	302
EB 22	EA	1	1950	$	302
EB 34	EA	1	1950	$	302
EB 33	EA	1	1950	$	302
EB 32	EA	1	1950	$	302
EB 31	EA	1	1950	$	302
EB 18	EA	1	1950	$	302
EB 17	EA	1	1950	$	302
EB 16	EA	1	1950	$	302
EB 15	EA	1	1950	$	302
EB 14	EA	1	1950	$	302
EB 13	EA	1	1950	$	302
EB 12	EA	1	1950	$	302
EB 38	EA	1	1950	$	302

EB 37	EA	1	1950	$	302
EB 28.1	EA	1	1950	$	302
EB 26	EA	1	1950	$	302
FT 10	EA	1	1950	$	302
INT 7	EA	1	1950	$	302
INT 8	EA	1	1950	$	302
EB 42.2	EA	1	1950	$	302
INT 9	EA	1	1950	$	302
INT 9.1	EA	1	1950	$	302
INT 10	EA	1	1950	$	302
INT 11	EA	1	1950	$	302
CSO 7 - MH1	EA	1	1950	$	302
INT 12	EA	1	1950	$	302
INT 15	EA	1	1950	$	302
CSO 8 - MH1	EA	1	1950	$	302
INT 16	EA	1	1950	$	302
EB 61.1	EA	1	1950	$	302
61.3D	EA	1	1950	$	302
BL 1	EA	1	1950	$	302
BL 2	EA	1	1950	$	302
EB 61.2	EA	1	1950	$	302
EB 61	EA	1	1950	$	302
EB 60.1	EA	1	1950	$	302
EB 60	EA	1	1950	$	302
EB 59	EA	1	1950	$	302
EB 39	EA	1	1950	$	302
EB 40	EA	1	1950	$	302
EB 41	EA	1	1950	$	302
EB 45	EA	1	1950	$	302
EB 46	EA	1	1950	$	302
EB 50	EA	1	1950	$	302
EB 51	EA	1	1950	$	302
EB 48	EA	1	1950	$	302
EB 45.1	EA	1	1950	$	302
EB 45.2	EA	1	1950	$	302
EB 49	EA	1	1950	$	302
EB 45.3	EA	1	1950	$	302
EB 43	EA	1	1950	$	302
EB 44	EA	1	1950	$	302
INT 6	EA	1	1950	$	302
INT 5	EA	1	1950	$	302
INT 4	EA	1	1950	$	302
EB 42.3	EA	1	1950	$	302
EB 42	EA	1	1950	$	302
EB 42.1	EA	1	1950	$	302
EB 47	EA	1	1950	$	302
EB 97	EA	1	1950	$	302

EB 54	EA	1	1950	$	302
EB 53.1	EA	1	1950	$	302
EB 53	EA	1	1950	$	302
EB 56	EA	1	1950	$	302
EB 68	EA	1	1950	$	302
EB 55.1	EA	1	1950	$	302
EB 55	EA	1	1950	$	302
EB 70.1	EA	1	1950	$	302
EB 69	EA	1	1950	$	302
EB 44.3	EA	1	1950	$	302
EB 57	EA	1	1950	$	302
EB 58	EA	1	1950	$	302
EB 73	EA	1	2014	$	3,588
EB 79	EA	1	1950	$	302
EB 80	EA	1	1950	$	302
EB 72	EA	1	1950	$	302
EB 71	EA	1	1950	$	302
EB 76	EA	1	1950	$	302
EB 78	EA	1	1950	$	302
EB 87	EA	1	1950	$	302
EB 88	EA	1	1950	$	302
EB 110.1	EA	1	1950	$	302
EB 109	EA	1	1950	$	302
EB 67	EA	1	1950	$	302
EB 67.1	EA	1	1950	$	302
EB 84	EA	1	1950	$	302
EB 85	EA	1	1950	$	302
EB 90	EA	1	1950	$	302
EB 92	EA	1	1950	$	302
EB 93	EA	1	1950	$	302
EB 94	EA	1	1950	$	302
EB 108.1	EA	1	1950	$	302
EB 108	EA	1	1950	$	302
EB 96	EA	1	1950	$	302
EB 95.1	EA	1	1950	$	302
STORM MH 17.1	EA	1	1950	$	302
EB 95	EA	1	1950	$	302
EB 100	EA	1	1950	$	302
EB 28	EA	1	1950	$	302
EB 102	EA	1	1950	$	302
EB 101	EA	1	1950	$	302
EB 103	EA	1	1950	$	302
EB 105	EA	1	1950	$	302
EB 107	EA	1	1950	$	302
EB 104	EA	1	1950	$	302
EB 106	EA	1	1950	$	302
LH 30	EA	1	1950	$	302

EB 103.1	EA	1	1950	$	302
EB 91	EA	1	1950	$	302
INT 2	EA	1	1950	$	302
INT 1	EA	1	1950	$	302
LH 29	EA	1	1950	$	302
EB 115	EA	1	1950	$	302
EB 114	EA	1	1950	$	302
EB 113	EA	1	1950	$	302
EB 112	EA	1	1950	$	302
LH 13	EA	1	1950	$	302
LH 12	EA	1	1950	$	302
LH 66	EA	1	1950	$	302
EB 110	EA	1	1950	$	302
EB 61.4	EA	1	1950	$	302
LH 24	EA	1	1950	$	302
EB 74	EA	1	1950	$	302
EB 88.1	EA	1	1950	$	302
EB 111	EA	1	1950	$	302
LH 31	EA	1	1950	$	302
ETSA	EA	1	1950	$	302
INT 14	EA	1	1950	$	302
EB-23.2	EA	1	1950	$	302
EB-107.1	EA	1	1950	$	302
EB-68.1	EA	1	1950	$	302
EB 90.11	EA	1	1950	$	302
EB 91.1	EA	1	1950	$	302
EB 38.1?	EA	1	1950	$	302
LH 79.1	EA	1	2014	$	3,588
LH 46.1	EA	1	1950	$	302
LH 50.1	EA	1	1950	$	302
EB 21.1	EA	1	1950	$	302
EB 26.1	EA	1	1950	$	302
EB 15.1	EA	1	1950	$	302
EB 18.1	EA	1	1950	$	302
EB 88.2	EA	1	1950	$	302
MH # ?	EA	1	1950	$	302
EB52.1	EA	1	1950	$	302
EB 4.1	EA	1	1950	$	302
EB 20.11	EA	1	1950	$	302
EB 36.1	EA	1	1950	$	302
EB 44.1	EA	1	1950	$	302
EB 44.2	EA	1	1950	$	302
EB 45.5	EA	1	1950	$	302
LH 45.5	EA	1	1950	$	302
INT 3	EA	1	1950	$	302
INT 3.1	EA	1	1950	$	302
INT 3.2	EA	1	1950	$	302

Additional 48" Sections (2014 contract)	LS	1	2014	$	47,158
72" Diameter Manhole (2014 contract)	EA	1	2014	$	29,484
Total		**224**		**$**	**203,235**

Elizabeth Borough Municipal Authority

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Summary of Account 361.99 - Collection Sewers -Gravity

Acct No.	Description	Unit	Quantity	Year		Amount
361.99	Miscellaneous	LS				
	15"x6" PVC wyes (Boat Club Area)	EA	3	1998	$	1,325
	8"x6" PVC wye pieces w/ caps	EA	5	1998	$	2,484
	12'x6' concrete chamber	EA	1	1998	$	55,200
	Mobilization for CSO Construction	LS	1	1998	$	75,900
	Manhole Covers (Standard)	EA	18	1998	$	7,452
	Manhole Covers (Watertight)	EA	4	1998	$	2,626
	Furnishing and installing shoring	LS	1	1998	$	28,800
	CSO 6 2018 Emergency Repair	LS	1	2018	$	83,831
	2018 Street Paving for Sewer Impr (depr sch)	LS	1	2018	$	123,207
	2019 Street Paving for Sewer Impr (depr sch)	LS	1	2019	$	87,382
	2020 Street Paving for Sewer Impr (depr sch)	LS	1	2020	$	166,687
	Flow Metering Equipment (depr sch)	LS	1	2019	$	26,320
	Flow Metering Equipment (depr sch)	LS	1	2020	$	15,440
	CCTV for Repairs	LS	1	2013	$	228,809
	Pipe Cleaning for CCTV and Repairs (bond)	LS	1	2014	$	24,587
	Pipe Cleaning for CCTV and Repairs (bond)	LS	1	2015	$	11,388
	Gate Repair (bond)	LS	1	2015	$	14,016
	System Repairs (bond)	LS	1	2015	$	125,850
	CSO 8 Repair (depr sch, bond)	LS	1	2015	$	758,734
	System Repairs (bond)	LS	1	2015	$	112,078
	2016 Miscellaneous Projects (depr sch)	LS	1	2016	$	26,581
	2017 Miscellaneous Projects (depr sch)	LS	1	2017	$	151,594
	2018 Miscellaneous Projects (depr sch)	LS	1	2018	$	1,599
	2018 CDBG Projects (depr sch)	LS	1	2018	$	235,593
	2023 Inlet Rehabilitation	LS	1	2023	$	82,996
	2023 CCTV Work	LS	1	2023	$	13,100
	Total				**$**	**2,463,577**

Elizabeth Borough Municipal Authority

Original Cost of Collection System
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Summary of Account 364.10 - Collection Sewers -Gravity

Acct No.	Description	Unit	Quantity	Year		Amount
364.10	Flow Measuring Devices	LS				
	Flow Metering Equipment (depr sch)	LS	1	2019	$	21,933.00
	Flow Metering Equipment (depr sch)	LS	1	2020	$	12,866.90
	Flow Metering Rentals and Services	LS	1	2013	$	100,391.00
	Flow Metering Rentals and Services	LS	1	2014	$	68,790.00
	Total				**$**	**203,980.90**

Appendix E

Elizabeth Borough Municipal Authority

Original Cost of Pump Station
as of March 31, 2023

Summary of Pump Station Assets

Acct No.	Description	Unit	Quantity		Amount
354.2	Structures and Improvements	LS	1	$	6,902,762
355.2	Power Generation Equipment	LS	1	$	120,666
360.2	Collection Sewers - Force	LS	1	$	254,698
365.2	Flow Measuring Installations	LS	1	$	6,814
366.2	Reuse Systems	LS	1	$	88,521
371.2	Pumping Equipment	LS	1	$	98,671
380.2	Treatment and Disposal Equipment	LS	1	$	740,637
381.2	Plant Sewers	LS	1	$	750,255
398.2	Other Tangible Plant	LS	1	$	194,468
Total Asset Cost				**$**	**9,157,492**

Elizabeth Borough Municipal Authority

Original Cost of Pump Station
as of March 31, 2023

Pump Station Inventory

Acct No.	Description	Unit	Quantity	Year	Amount
354.20	Shoring	1	LS	2022	$1,939,321
354.20	Retaining Walls (Incl. Guide Rail)	1	LS	2022	$39,603
354.20	Construction Dewatering	1	LS	2022	$143,562
354.20	Sanitary and Combined Bypass Pumping	1	LS	2022	$29,702
354.20	Construction Surveying	1	LS	2022	$19,802
354.20	Site Preparation	1	LS	2022	$35,890
354.20	Earth Moving	1	LS	2022	$189,353
354.20	Railroad Coordination	1	LS	2022	$18,564
354.20	Traffic Maintenance	1	LS	2022	$6,188
354.20	Demolition-Existing Lift Station Building	1	LS	2022	$53,217
354.20	Demolition-Existing Residential Buildings	1	LS	2022	$13,614
354.20	Erosion and Sedimentation Control	1	LS	2022	$25,990
354.20	Berms	1	LS	2022	$3,713
354.20	Temporary Fence	1	LS	2022	$3,403
354.20	Permanent Fence	1	LS	2022	$38,799
354.20	Exploratory Excavation	1	LS	2022	$6,807
354.20	Storm Sewer Catch Basin	1	LS	2022	$16,708
354.20	Storm Water Endwall / Headwall	1	LS	2022	$2,723
354.20	Milling	1	LS	2022	$7,396
354.20	Non-Woven Geotextile Fabric (Class 4)	1	LS	2022	$5,908
354.20	9.5 mm Superpave Wearing Course (1.5" thk.)	1	LS	2022	$28,835
354.20	19 mm Superpave HMA Binder Course (3.5" thk	1	LS	2022	$40,590
354.20	25 mm Superpave HMA Base Course (4" thk.)	1	LS	2022	$47,784
354.20	Subbase No. 2A Stone (6" thk.)	1	LS	2022	$29,918
354.20	Imported / Borrow Materials	1	LS	2022	$6,188
354.20	1-1/4" HDPE Service Water Line	1	LS	2022	$11,757
354.20	1-1/2" Natural Gas Service Line	1	LS	2022	$11,138
354.20	Masonry	1	LS	2022	$300,490
354.20	Metals	1	LS	2022	$241,001
354.20	Roofing	1	LS	2022	$110,765
354.20	Metal Doors & Frames & Hardware	1	LS	2022	$11,559
354.20	OH Doors	1	LS	2022	$26,008
354.20	Access Hatches	1	LS	2022	$25,155
354.20	Paint	1	LS	2022	$35,395
354.20	Fire Extinguishers	1	LS	2022	$879
354.20	Flumes	1	LS	2022	$18,242

354.20	Single Girder Crane Systems	1	LS	2022	$200,636
354.20	North Admin. BLD SOG	1	LS	2022	$16,398
354.20	North Admin. BLD Walls	1	LS	2022	$36,134
354.20	North Admin. BLD SOG / Haunch	1	LS	2022	$22,827
354.20	Dry Side Infill	1	LS	2022	$105,639
354.20	Wet Side Weir Wall	1	LS	2022	$28,695
354.20	Wet Side Separation Wall & Beams	1	LS	2022	$21,552
354.20	Wet Side Fillet & Reinforcing	1	LS	2022	$12,800
354.20	Site Concrete	1	LS	2022	$29,231
354.20	Main Structure Mat	1	LS	2022	$324,723
354.20	Main Structure Walls	1	LS	2022	$728,367
354.20	Main Structure Columns	1	LS	2022	$31,987
354.20	Main Structure Deck EL 751	1	LS	2022	$46,152
354.20	Intake Structure Mat 710.50 - 714.50	1	LS	2022	$28,812
354.20	Intake Structure Walls	1	LS	2022	$115,826
354.20	Intake Structure EL V SLAB 729 - 730	1	LS	2022	$5,579
354.20	Intake Structure LID 751 - 751.66	1	LS	2022	$15,830
354.20	Intake Structure Infill Channels 714.5 - 718.5	1	LS	2022	$9,074
354.20	CO-18-1A-3 Door Lintel	1	LS	2022	$94
354.20	CO-18-1A-4 Job Trailer	1	LS	2022	$11,077
354.20	CO-18-1A-6 Martin Door	1	LS	2022	$44,931
354.20	CO-18-1A-7 Deck Support Angle	1	LS	2022	$10,317
354.20	CO-18-1A-11 Fence only (Asphalt in above)	1	LS	2022	$5,783
354.20	Electrical Switchgear Cost	1	LS	2022	$215,590
354.20	UTIL-CT-1 & UTIL-CT-2	1	LS	2022	$3,713
354.20	SWBD-101 & SWBD-102	1	LS	2022	$7,178
354.20	ATS-101	1	LS	2022	$3,218
354.20	MCC-101	1	LS	2022	$7,426
354.20	BCP-101 & TX-101	1	LS	2022	$3,094
354.20	Pad	1	LS	2022	$7,549
354.20	Fuel	1	LS	2022	$6,807
354.20	Lighting Cost	1	LS	2022	$95,295
354.20	Solids Handling Lighting	1	LS	2022	$6,188
354.20	Pipe Gallery Lighting	1	LS	2022	$6,188
354.20	Lower Level Lighting	1	LS	2022	$3,094
354.20	Electrical Service	1	LS	2022	$100,246
354.20	Equipment Terminations	1	LS	2022	$51,979
354.20	Equipment Feeders	1	LS	2022	$86,632
354.20	Lighting and Branch Power Feeders	1	LS	2022	$30,940
354.20	Manholes / Handholes	1	LS	2022	$14,232
354.20	Junction Boxes	1	LS	2022	$27,227
354.20	Equipment Racks	1	LS	2022	$7,426
354.20	Grounding	1	LS	2022	$5,569
354.20	RTU-100 & OIT-200	1	LS	2022	$111,384
354.20	Instruments	1	LS	2022	$75,494
354.20	Instrument Termination	1	LS	2022	$49,504
354.20	Gas Monitoring	1	LS	2022	$22,277

354.20	Gas Monitoring System Terminations	1	LS	2022	$8,044
354.20	Instrument Feeders	1	LS	2022	$30,940
354.20	Cables	1	LS	2022	$8,663
354.20	Fiber Cable	1	LS	2022	$6,183
354.20	Change Order Duct Bank O1a	1	LS	2022	$15,470
354.20	Change Order Duct Bank O1b	1	LS	2022	$8,663
354.20	Change Order Duct Bank O5a	1	LS	2022	$76,731
354.20	Change Order Exhaust Fan	1	LS	2022	$7,477
354.20	Change Order Exterior Lights	1	LS	2022	$944
354.20	Change Order Remote Access	1	LS	2022	$2,634
354.20	Change Order Dialer - Call Out Alarms	1	LS	2022	$3,314
354.20	Labor	1	LS	2022	$18,713
354.20	Materials	1	LS	2022	$3,337
354.20	Equipment	1	LS	2022	$183,828
354.20	Insulation	1	LS	2022	$1,566
354.20	Ductwork	1	LS	2022	$79,929
354.20	Balancing	1	LS	2022	$1,293
354.20	Controls	1	LS	2022	$8,713
354.20	Crane	1	LS	2022	$2,135
354.20	Change Order 1 Add Unit Heaters	1	LS	2022	$6,188
354.20	Plumbing Mobilization	1	LS	2022	$8,010
354.20	Below Slab San/Vent	1	LS	2022	$12,581
354.20	Bldg San to Manhole	1	LS	2022	$8,077
354.20	San/Vent Above Grade	1	LS	2022	$7,376
354.20	Domestic Water Piping	1	LS	2022	$13,354
354.20	Piping Insulation	1	LS	2022	$3,049
354.20	Core Drilling	1	LS	2022	$5,285
354.20	Fire Stopping	1	LS	2022	$2,017
354.20	Plumbing Fixtures	1	LS	2022	$16,032
354.20	Demobilization	1	LS	2022	$5,536
355.20	Emergency Generator	1	LS	2022	$114,478
355.20	250 KW Generator	1	LS	2022	$3,713
355.20	ATS-102	1	LS	2022	$2,475
360.20	30" Dia DIP Force Main	1	LS	2022	$171,037
360.20	8" Dia DIP Force Main w/ valves and fittings	1	LS	2022	$83,662
365.20	Integrating (2) Flow Meters	1	LS	2022	$6,814
366.20	4" Dia. DIP Effluent Reuse Extension	1	LS	2022	$75,674
366.20	4" Dia. Gate Valve with Valve Box Assembly	1	LS	2022	$2,084
366.20	Effluent Reuse System Modifications	1	LS	2022	$8,002
366.20	Change Order Reuse Pump	1	LS	2022	$2,760
371.20	Submersible Soilids Handling Pumps	1	LS	2022	$88,318
371.20	Horizontal Centrifugal Pump	1	LS	2022	$10,353
380.20	Mechanical Equipment Install	1	LS	2022	$354,895
380.20	Sluice & Slide Gates	1	LS	2022	$62,858
380.20	Bulk Material Conveyors	1	LS	2022	$54,934
380.20	Mechanically Cleaned Bar Screen	1	LS	2022	$78,218
380.20	Screen Washing and Compacting Eqp.	1	LS	2022	$43,103

380.20	Vortex Grit & Grit Dewatering Screw	1	LS	2022	$119,693
380.20	Cantilever Slide Gate with Electrical Operator	1	LS	2022	$24,752
380.20	CO-18-1A-5 Auma Actuators	1	LS	2022	$2,185
361.20	10" Dia. SDR-26 PVC Pipe	1	LS	2022	$10,392
381.20	27" Dia. CL-46 PVC Pipe	1	LS	2022	$263,968
381.20	Boring, 27" Dia. CL-46 PVC Pipe x 36" Dia. Steel	1	LS	2022	$245,045
381.20	48" Dia. CL-46 PVC Pipe	1	LS	2022	$10,891
381.20	15" HDPE Corrugated Storm Sewer Pipe	1	LS	2022	$18,564
381.20	18" HDPE Corrugated Storm Sewer Pipe	1	LS	2022	$2,710
381.20	48" Dia. Pre-Cast Concrete Manholes (0-10 ft.)	1	LS	2022	$37,128
381.20	48" Dia. Manhole Riser (>10 ft.)	1	LS	2022	$15,520
381.20	60" Dia. Pre-Cast Concrete Manhole (0-10 ft.)	1	LS	2022	$55,692
381.20	60" Dia. Manhole Riser (> 10 ft.)	1	LS	2022	$16,708
381.20	72" Dia. Pre-Cast Concrete Manhole	1	LS	2022	$17,326
381.20	CSO Interceptor Modifications	1	LS	2022	$3,713
381.20	Abandoning Ex. Manholes Sewer Lines	1	LS	2022	$44,554
381.20	CSO #3 Overflow Structure Modifications	1	LS	2022	$6,188
381.20	Change Order CSO #3	1	LS	2022	$1,856
398.20	General Contract Mobilization	1	LS	2022	$110,147
398.20	Electrical Contract Insurance and Bonds	1	LS	2022	$26,608
398.20	Electrical Contract Mobilization	1	LS	2022	$39,975
398.20	Electrical Contract Submittals	1	LS	2022	$12,376
398.20	HVAC Bonds	1	LS	2022	$3,587
398.20	Plumbing Permits	1	LS	2022	$681
398.20	Plumbing Bonds	1	LS	2022	$1,095
	TOTAL ASSET ORIGINAL COST				**$9,157,492**

Appendix F

Elizabeth Borough Municipal Authority

Original Cost of WWTP
as of March 31, 2023

Summary of WWTP Assets

Acct No.	Description	Unit	Quantity		Amount
354.3	Structures and Improvements	1	LS	$	1,040,090
364.3	Flow Measuring Installations	1	LS	$	16,255
371.3	Pumping Equipment	1	LS	$	95,292
380.3	Treatment and Disposal Equipment	1	LS	$	566,826
381.3	Plant Sewers	1	LS	$	173,407
382.3	Outfall Sewers	1	LS	$	126,076
389.3	Other Plant and Miscellaneous Equipment	1	LS	$	14,436
Total Asset Cost				**$**	**2,032,383**

Elizabeth Borough Municipal Authority

Original Cost of WWTP
as of March 31, 2023

WWTP Inventory

Acct No.	Description	Unit	Quantity	Year	Amount
354.30	Digester Foundations	LS	1	1972	$16,078
354.30	Digester Floors on Grade	LS	1	1972	$4,582
354.30	Digester Superstructure	LS	1	1972	$11,400
354.30	Digester Roofing	LS	1	1972	$3,024
354.30	Digester Exterior Walls	LS	1	1972	$21,493
354.30	Digester Partitions	LS	1	1972	$4,504
354.30	Digester Wall Finishes	LS	1	1972	$1,764
354.30	Digester Floor Finishes	LS	1	1972	$212
354.30	Digester Ceiling Finishes	LS	1	1972	$493
354.30	Digester HVAC	LS	1	1972	$1,561
354.30	Digester Plumbing	LS	1	1972	$5,316
354.30	Digester Electrical	LS	1	1972	$9,539
354.30	Aeration Foundations	LS	1	1959	$12,875
354.30	Aeration Floors on Grade	LS	1	1959	$3,772
354.30	Aeration Superstructure	LS	1	1959	$6,565
354.30	Aeration Roofing	LS	1	1959	$64
354.30	Aeration Exterior Walls	LS	1	1959	$19,529
354.30	Aeration Partitions	LS	1	1959	$9,372
354.30	Aeration Plumbing	LS	1	1959	$2,788
354.30	Aeration Electrical	LS	1	1959	$3,906
354.30	Mechanical Foundations	LS	1	1972	$2,005
354.30	Mechanical Floors on Grade	LS	1	1972	$768
354.30	Mechanical Superstructure	LS	1	1972	$1,682
354.30	Mechanical Roofing	LS	1	1972	$464
354.30	Mechanical Exterior Walls	LS	1	1972	$3,775
354.30	Mechanical HVAC	LS	1	1972	$324
354.30	Mechanical Electrical	LS	1	1972	$10,835
354.30	Drainage Sump Foundations	LS	1	1992	$2,023
354.30	Drainage Sump Floors on Grade	LS	1	1992	$201
354.30	Drainage Sump Superstructure	LS	1	1992	$295
354.30	Drainage Sump Exterior Walls	LS	1	1992	$6,375
354.30	Drainage Sump Electrical	LS	1	1992	$197
354.30	Settling Tanks Foundations	LS	1	1992	$19,797
354.30	Settling Tanks Floors on Grade	LS	1	1992	$9,191
354.30	Settling Tanks Superstructure	LS	1	1992	$11,978
354.30	Settling Tanks Exterior Walls	LS	1	1992	$42,602
354.30	Settling Tanks Partitions	LS	1	1992	$24,674
354.30	Settling Tanks Electrical	LS	1	1992	$8,971

354.30	Return Sludge Foundations	LS	1	1959	$646
354.30	Return Sludge Floors on Grade	LS	1	1959	$120
354.30	Return Sludge Superstructure	LS	1	1959	$145
354.30	Return Sludge Exterior Walls	LS	1	1959	$1,217
354.30	Return Sludge Electrical	LS	1	1959	$117
354.30	Chlorine Building Foundations	LS	1	1972	$1,044
354.30	Chlorine Building Floors on Grade	LS	1	1972	$490
354.30	Chlorine Building Superstructure	LS	1	1972	$2,200
354.30	Chlorine Building Roofing	LS	1	1972	$236
354.30	Chlorine Building Exterior Walls	LS	1	1972	$2,639
354.30	Chlorine Building Partitions	LS	1	1972	$391
354.30	Chlorine Building Wall Finishes	LS	1	1972	$172
354.30	Chlorine Building Floor Finishes	LS	1	1972	$17
354.30	Chlorine Building Ceiling Finishes	LS	1	1972	$78
354.30	Chlorine Building HVAC	LS	1	1972	$1,010
354.30	Chlorine Building Electrical	LS	1	1972	$152
354.30	Chlorine Contact Tank Foundations	LS	1	1992	$13,905
354.30	Chlorine Contact Tank Floors on Grade	LS	1	1992	$4,736
354.30	Chlorine Contact Tank Superstructure	LS	1	1992	$1,880
354.30	Chlorine Contact Tank Exterior Walls	LS	1	1992	$21,286
354.30	Chlorine Contact Tank Partitions	LS	1	1992	$6,672
354.30	Garage Foundations	LS	1	1992	$3,519
354.30	Garage Floors on Grade	LS	1	1992	$2,240
354.30	Garage Superstructure	LS	1	1992	$4,905
354.30	Garage Roofing	LS	1	1992	$1,130
354.30	Garage Exterior Walls	LS	1	1992	$10,208
354.30	Garage Wall Finishes	LS	1	1992	$749
354.30	Garage Ceiling Finishes	LS	1	1992	$1,268
354.30	Garage HVAC	LS	1	1992	$944
354.30	Garage Electrical	LS	1	1992	$2,320
354.30	1992 STP Structures and Impr (PR 10)	LS	1	1992	$286,927
354.30	Aeration Tank Repairs (depr sch)	LS	1	2019	$19,108
354.30	Tank Painting and Wash (depr sch)	EA	1	2020	$25,175
354.30	Plant Improvements (depr sch)	EA	1	2017	$4,804
354.30	Plant Improvements (depr sch)	EA	1	2015	$332,650
364.30	Ultrasonic Flowmeters	LS	1	1996	$5,855
364.30	1992 STP Flow Measuring Impr (PR 10)	LS	1	1992	$10,400
371.30	Froth Spray Pumps in Digester Bldg	LS	1	1972	$1,756
371.30	Sludge Pumps and Dives	LS	1	1972	$7,025
371.30	Flygt Pump (depr sch)	EA	1	2017	$6,967
371.30	Flygt Pump (depr sch)	EA	1	2017	$6,813
371.30	Pump Rebuild (depr sch)	EA	1	2017	$11,817
371.30	Pump Backup Feed (depr sch)	EA	1	2021	$60,915
380.30	Digester Fixed Equipment	LS	1	1972	$3,503
380.30	Aeration Fixed Equipment	LS	1	1959	$9,677
380.30	Mechanical Fixed Equipment	LS	1	1972	$7,511
380.30	Drainage Sump Fixed Equipment	LS	1	1992	$11,752

380.30	Settling Tanks Fixed Equipment	LS	1	1992	$45,425
380.30	Return Sludge Pumps	LS	1	1959	$1,582
380.30	Chlorine Building Conveying Systems	LS	1	1972	$1,035
380.30	Chlorine Building Fixed Equipment	LS	1	1972	$2,634
380.30	Chlorine Contact Tank Fixed Equipment	LS	1	1992	$2,921
380.30	1992 STP Treatment Equip Impr (PR 10)	LS	1	1992	$76,460
380.30	2016 Miscellaneous Projects (depr sch)	LS	1	2016	$22,151
380.30	2017 Miscellaneous Projects (depr sch)	LS	1	2017	$126,328
380.30	2018 Miscellaneous Projects (depr sch)	LS	1	2018	$1,333
380.30	Plant Equipment (depr sch)	LS	1	2015	$166,608
380.30	Plant Equipment (depr sch)	LS	1	2016	$11,053
380.30	Plant Equipment (depr sch)	LS	1	2016	$3,080
380.30	Plant Equipment (depr sch)	LS	1	2016	$12,680
380.30	Channel Monster (depr sch)	EA	1	2019	$20,611
380.30	Spare Blower (depr sch)	EA	1	2019	$5,685
380.30	PLC Replacement (depr sch)	EA	1	2015	$12,574
380.30	Electrical Work (depr sch)	EA	1	2016	$9,260
380.30	Repair Clarifier Chain and Flights (depr sch)	EA	1	2018	$12,964
381.30	Interconnecting Piping Foundations	LS	1	1992	$35,829
381.30	Interconnecting Piping Floors on Grade	LS	1	1992	$5,777
381.30	Interconnecting Piping Superstructure	LS	1	1992	$6,666
381.30	Interconnecting Piping Exterior Walls	LS	1	1992	$3,500
381.30	Interconnecting Piping Plumbing	LS	1	1992	$89,785
381.30	1992 STP Plant Sewers (PR 10)	LS	1	1992	$31,850
382.30	Outfall Interconnecting Piping	LS	1	2004	$126,076
389.30	6 MP Ruggedized Sec Camera (depr sch)	EA	1	2019	$4,999
389.30	Install of Asset 28 (depr sch)	EA	1	2019	$9,437

	TOTAL ASSET ORIGINAL COST				**$2,032,383**

Appendix G

Elizabeth Borough Municipal Authority

Original Cost of Other Plant Assets
as of March 31, 2023

Summary of Other Plant Inventory

Acct No.	Description	Unit	Quantity		Amount
390.4	Office Furniture and Equipment	1	LS	$	58,067
391.4	Transportation Equipment	1	LS	$	1,950
393.4	Tools, Shop and Garage Equipment	1	LS	$	232,348
394.4	Laboratory Equipment	1	LS	$	19,293
395.4	Power Operated Equipment	1	LS	$	23,297
396.4	Communication Equipment	1	LS	$	1,025
Total Asset Cost				**$**	**335,980**

Elizabeth Borough Municipal Authority

Original Cost of Other Plant Inventory
as of March 31, 2023

Other Plant Inventory

Acct No.	Description	Unit	Quantity	Year	Amount
390.40	Dell 2135cn Printer	Each	1	2009	$ 549.00
390.40	Dell 1765cdn Printer	Each	1	2017	$ 259.00
390.40	Lexmark Printer	Each	1	2005	$ 199.00
390.40	Security Cameras	Each	13	2021	$ 13,531.00
390.40	Dell Power Edge Server	Each	1	2017	$ 13,114.33
390.40	Dell Desktop Computers	Each	6	2017	$ 1,596.24
390.40	Dell Monitors	Each	2	2017	$ 549.00
390.40	Dell Laptop Computer	Each	2	2017	$ 1,777.04
390.40	APC Smart UPS	Each	1	2017	$ 479.55
390.40	Dell Firewall	Each	1	2017	$ 182.75
390.40	Dell Sonic Wall	Each	1	2017	$ 723.75
390.40	Toshiba 55" TV Monitor	Each	3	2017	$ 1,439.97
390.40	Desk & Hutch (OM Office)	Each	1	2017	$ 1,152.90
390.40	Chair (OM Office)	Each	1	2017	$ 260.00
390.40	Bush Bookcase (OM Office)	Each	1	2005	$ 249.00
390.40	Presentation Board (Conference Room)	Each	1	2017	$ 382.00
390.40	Conference Room Table	Each	1	2005	$ 400.00
390.40	Conference Room Chairs	Each	12	2005	$ 2,400.00
396.40	Avaya Phone System	Each	1	2014	$ 7,600.00
390.40	Dell Server	Each	1	2019	$ 8,404.00
390.40	Desk & Hutch (Secretary Office)	Each	1	2019	$ 1,650.00
390.40	Wardrobe (Secretary Office)	Each	1	2019	$ 275.00
390.40	Chair (OM Office)	Each	1	2019	$ 260.00
390.40	Drawing File Cabinet [A]	Each	2	1995	$ 633.73
390.40	Filing Cabinet [A]	Each	12	1995	$ 1,195.77
394.40	Hach Pocket Colorimeter [A]	Each	1	1995	$ 260.76
394.40	Sybron Thermoline Muffle Furnace	Each	1	1979	$ 492.97
394.40	Millipore Single Chamber Incubator	Each	1	1997	$ 481.07
394.40	Thermo Orion 3 Star D.O. Meter	Each	1	2006	$ 858.26
394.40	Thermo Orion 3 Star pH Meter	Each	1	2012	$ 712.07
394.40	Heinicke Autoclave	Each	1	1979	$ 952.43
394.40	Thermo Scientific Stir Plate [A]	Each	1	2009	$ 147.69
394.40	VanGuard Microscope	Each	1	2006	$ 1,452.40
394.40	American Optical Stereoscope	Each	1	1979	$ 133.55
394.40	Raven Centrifuge	Each	1	2008	$ 853.99
394.40	Frigidare Refrigerator [A]	Each	1	2019	$ 624.14

394.40	Magic Chef Refridgerator (mini) [A]	Each	1	2016	$ 231.85
394.40	Labnet Digital Dry Bath	Each	1	2012	$ 213.12
394.40	A&D International Analytical Balance	Each	1	2010	$ 1,754.00
394.40	Weber Scintific NIST Thermometer	Each	1	2007	$ 295.07
394.40	QCEC Influent Sampler	Each	1	2013	$ 9,810.00
394.40	QCEC Effluent Sampler	Each	1	2013	$ 5,632.00
394.40	Miscellaneous Lab Equipment (various brands)	Lump Sum	1	2022	$ 8,747.79
391.40	Ford Super Duty Dump Truck [A]	Each	1	1989	$ 24,517.50
391.40	Ford F450 Service Truck	Each	1	2008	$ 60,549.30
391.40	Ford F250 Truck	Each	1	2015	$ 26,450.00
393.40	Trailer	Each	1	2022	$ 10,295.00
393.40	Cues CCTV Camera System	Each	1	2021	$ 65,052.78
395.40	Toro Wheel Horse Tractor	Each	1	1990	$ 5,000.00
395.40	Honda 21" Lawn Mower	Each	1	2007	$ 1,129.99
395.40	Fisher Snow Plow	Each	2	1989	$ 3,100.00
395.40	Stihl Blower B	Each	1	1995	$ 270.00
395.40	Stihl Weed Wacker [B]	Each	1	1995	$ 300.00
393.40	Briggs & Stratton Pressure Washer	Each	1	2016	$ 1,100.00
393.40	Tsunami Submersible Pump 1/2 H.P.	Each	2	2014	$ 615.42
393.40	Chicago Air Impact Wrench	Each	1	2014	$ 34.00
393.40	Snap Ring Pliar Set	Each	1	2014	$ 19.00
393.40	Kesson Measuring Wheel	Each	1	2015	$ 89.95
393.40	Manhole Extractor	Each	1	2015	$ 209.95
393.40	Marking Wand	Each	1	2018	$ 43.95
393.40	Milwaukie Impact Wrench	Each	1	2021	$ 494.99
393.40	Chapin Backpack Sprayer	Each	1	2021	$ 176.99
393.40	Powerhorse Telescoping Pressure Washer Wan	Each	1	2021	$ 144.99
393.40	Proto Torque Wrench	Each	1	2010	$ 126.55
393.40	Catch Basin Slip Rings	Each	1	2010	$ 152.50
393.40	Magnetic Locator Wand	Each	1	2012	$ 854.95
393.40	Milwaukee 18 Volt 3aH Batteries	Each	2	2013	$ 102.60
393.40	Lincoln Grease Gun	Each	3	2013	$ 81.00
393.40	Milwaukee 5 piece cordless tool kit	Each	1	2017	$ 599.99
395.40	Peerless Electric Hoist [B]	Each	1	1995	$ 2,460.00
393.40	Tripod Harness Kit [B]	Each	1	1996	$ 1,649.00
393.40	Confined Space Kit [B]	Each	1	1996	$ 2,495.00
393.40	Ingersol Rand 80 Gallon Air Compressor [B]	Each	1	2015	$ 1,000.00
393.40	Gorman Rupp Submersible Pump [B]	Each	1	1995	$ 3,000.00
393.40	Gorman Rupp Overload Panel Subm Pump [B]	Each	1	1995	$ 500.00
393.40	Milwaukie Holesaw Kit [B]	Each	1	2005	$ 120.00
393.40	Kobalt Tool Kit	Each	2	2019	$ 220.00
395.40	Honda Portable Generator [B]	Each	1	1995	$ 2,799.00
395.40	Delta Drill Press [B]	Each	1	1995	$ 1,059.89
395.40	Lincoln 225V Welder [B]	Each	1	2015	$ 1,927.25
393.40	Dyna Glo Portable Kerosene Heater [B]	Each	1	1995	$ 214.99

395.40	Milwaukie Bench Grinder [B]	Each	1	1995	$	208.01
393.40	WellBilt Parts Washer	Each	1	2014	$	139.00
393.40	Rigid Pipe Threader [B]	Each	1	1985	$	5,000.00
393.40	Rigid Threader Dies [B]	Each	10	1985		$238.99
395.40	Central Machine 20 Ton Shop Press	Each	1	2018	$	249.99
393.40	Tool Box	Each	1	2015	$	700.00
393.40	Hand Tools (various) B	LS	1	2020	$	12,500.00
393.40	Eagle Flammable Storage Cabinets	Each	2	2003	$	3,590.20
393.40	Chicago 4 1/2 Angle Grinder	Each	2	2017	$	37.98
393.40	Salt Spreader	Each	1	2023	$	417.77
393.40	Axial Manhole Blower System	Each	1	2010	$	1,025.00

OTHER PLANT TOTAL **$ 335,979.66**

[A] Replacement cost was indexed back to original date of purchase

[B] Date of purchase was best estimate from former manager

Appendix H

Elizabeth Borough Municipal Authority

Original Cost of Land and Land Rights
as of March 31, 2023

Summary of Account 353.00 - Lands and Land Rights

Acct No.	Description	Year Purchased		Original Cost
Pipelines				
353.101	Deed Book 8401-5	1990	$	1.00
353.102	1133-M-167	1997	$	240.00
353.103	1133-H-95	1997	$	260.00
353.104	1133-M-117	1997	$	460.00
353.105	1133-H-98	1997	$	640.00
353.106	1133-S-107	1997	$	330.00
353.107	1133-D-40	1997	$	940.00
353.108	1133-M-189	1997	$	270.00
353.109	1133-M-195	1997	$	450.00
353.110	1133-S-188	1997	$	300.00
353.111	1133-M-169	1997	$	300.00
353.112	1133-M-163 and 1133-S-106	1997	$	1,360.00
353.113	1133-P-149	2000	$	1.00
353.114	1133-P-159	2000	$	1.00
353.115	1133-D-40	2000	$	2,063.00
353.116	1133-L-289	2000	$	614.00
353.117	1133-H-349	2000	$	1,946.00
353.118	1133-L-298	2000	$	262.00
353.119	1133-L-299	2000	$	235.00
353.120	1133-G-335	2000	$	330.00
353.121	1133-L-284	2000	$	768.00
353.122	1133-H-349	2019	$	-
353.123	1272-B-317	2021	$	1.00
353.124	1133-H-349	2019	$	-
353.125	1133-L-293	1999	$	297.00
	Pipeline Subtotal		**$**	**12,069**
Pump Station				
353.21	Pump Station Parcel 59 Church St	2018	$	40,000.00
353.22	Pump Station Lot 1133-D-40	2018	$	80,000.00
	Pump Station Subtotal		**$**	**120,000**
WWTP				
353.31	Parcel 52 Church St	2019	$	69,000.00
353.32	Parcel 53 Church St	2018	$	50,000.00
353.33	Demo 52 & 53 Church St	2019	$	22,000.00
353.34	WWTP Parcel	1957	$	26,000.00
	WWTP Subtotal		**$**	**167,000**
Total Land and Land Rights			**$**	**299,069**

Elizabeth Borough Municipal Authority

Lands and Land Rights That Need to be Retained or Executed

Deed Book	Description
3917-62	1272-B-263
42-90	1272-B-328
13766-69	1272-B-304 1026 Third Avenue Elizabeth, PA 15037
16449-91	1272-B-293
4633-361	1272-B-287
17673-460	1133-R-250 161 Center Avenue Elizabeth, PA 15037
5077-290	1133-R-188
4104-223	1133-S-325 8th and Bayard Elizabeth, PA 15037
6403-303	1133-S-324 804 Bayard Street Elizabeth, PA 15037
14965-495	1133-S-322 810 Bayard Street Elizabeth, PA 15037
12129-474	1272-B-032 220 Center Avenue Elizabeth, PA 15037
09586-237	1133-H-265 303 Second Street Elizabeth, PA 15037
17656-269	1133-R-017
17764-1	1133-R-284 160 Center Avenue Elizabeth, PA 15037
1527-304	1133-R-334
8120-215	1133-H-366 227 Water Street Elizabeth, PA 15037
17071-140	1132-E-386
15395-291	1132-E-332 1132-E-372 1132-E-376
16794-209	1132-E-329

5389-699	1132-E-240 164 McKeesport Road Elizabeth, PA 15037
14116-159	1133-H-024 156 McKeesport Road Elizabeth, PA 15037
18563-159	1133-H-028 138 McKeesport Road Elizabeth, PA 15037
8283-329	1133-H-031 140 McKeesport Road Elizabeth, PA 15037
10414-001	1133-H-032 142 McKeesport Road Elizabeth, PA 15037 1133-H-033 1133-H-037
1033-847	1133-M-071
09464-352	1133-P-209 1133-L-357
13625-406	1133-G-335 1133-H-301
15713-22	1133-R-253 163 Center Avenue