

Technical Memorandum

February 21, 2025

To	David Blain, Chairman	Contact No.	N/A
Copy to	William Weaver, Sam Miller	Email	Melissa.smith@ghd.com
From	Melissa Tomich Smith	Project No.	11207954.2024.01
Project Name	Wilshire Road		
Subject	Cost estimate to connect homes to the public sanitary sewer system		

1. Summary of Neighborhood Meeting

As a result of the Authority's review of GHD's November 21, 2024 memo at the November 26th Board meeting, the Board directed GHD to prepare a power point presentation (copy attached) and hold a public meeting with the affected property owners. The presentation outlined the potential project to extend a low-pressure sewer extension to the 12 homes along Wilshire Road that are currently served by on-lot septic systems and the 1 vacant lot.

The Board's requested special neighborhood meeting was held on Wednesday January 29, 2025. During that meeting, the details of the low-pressure sewer extension were presented along with the costs the homeowners would incur. Those costs include the following items: 1) Front foot assessment for project design and construction, 2) Tapping Fee, 3) grinder pump purchase and installation, 4) abandonment of the septic system and rerouting the piping to the grinder pump (costs not estimated), and 5) the quarterly sewer bill. These costs differ slightly for each property due to the front foot assessment and are presented in Section 3 below.

The property owners were provided time to discuss if their on-lot systems are working or not and what concerns they have with continuing to rely on these systems. They were also asked about their appetite for extending the public sewer after knowing the costs associated with a public sewer extension.

One of the property owners that originally approached the Township was present and stressed the problems with his system. Others present discussed issues that were not previously known by the Township. In all, there appears to be four properties with on-lot systems that are not functioning as intended. These property owners requested that sewage enforcement officer (SEO) visit the properties to assess if the systems are considered failed or not.

Staff expressed that the project would only move forward if the majority of the property owners were in agreement, as all of the property owners would be required to pay the front foot assessment and connect to the sanitary sewer system if the sewer is extended. The property owners in attendance expressed interest in the project but were vocal about the high cost to connect. The property owners requested the following information and assistance from the Township and Board:

1. That the Authority provide a contribution to one or both of the following:
 - a. The front foot assessment costs;
 - b. The grinder pump purchase and installation costs;

2. That the Authority provide for the installation of the 12 grinder pumps via a Township/Authority Contract and property owners pay that cost as part of the front foot assessment;
3. That the Authority complete the project and installation of the grinder pumps and the property owners pay as an additional cost to their sewer bill.
4. What the PENNVEST loan interest rate is currently and what the estimated monthly payment would be if the project moves forward. Mr. Weaver has already followed up with the property owners as he has confirmed that the PENNVEST Loan, administered by PHFA, is still available at 1.75% and that the payment would be approximately \$124/month on a \$25,000 loan.
5. That the Authority apply for a grant for the public portion of the project. GHD has reached out to the PA Department of Community and Economic Development that issues small water and sewer program grants. Only facilities that will be publicly owned would apply for the grant and the Authority would be required to fund 15% of the project if a grant is awarded. These grants are competitive and not guaranteed.
6. Assistance in evaluating their existing on-lot septic system and on lot system replacement costs for comparison to the public sewer project.

Since there were additional requests from the property owners that could not be answered at the special meeting, a letter to each property owner asking for their vote was postponed until the Board could review the requests. Notification of the postponement has been provided to each of the thirteen (13) property owners, see attached correspondence from the Sewer Department Director. Additionally, as noted above, several owners requested immediate assistance to determine if the on-lot system is failing. See attached letter to those specific property owners requesting they contact the SEO to schedule an inspection.

2. Authority Project Costs Scenarios Including Grinder Pumps vs Excluding Grinder Pumps

2.1 Authority Installed Low-Pressure Sewer System, including grinder pumps

As previously discussed, the Authority would install a low-pressure sewer main, 13 low pressure laterals, and 13 curb stop assemblies as shown in Figure 1 below. The low-pressure main would then discharge the collected sewage into manhole BC-6B 382.13, the closest gravity manhole. A grinder pump and basin is required for each property to connect to the low- pressure main.

Figure 1: Low Pressure Sewer Extension Layout



The full cost for the Authority to design and install the main, laterals, curbstops and flushing manhole are estimated at \$368,000, including the purchase and installation of the grinder pumps, as shown in Table 1 below.

Excluding the purchase of the grinder pumps, the full cost for the Authority to design and install the main, laterals, curbstops and flushing manhole are estimated at \$152,000, as shown in Table 1A below.

Table 1

LOW PRESSURE SEWER EXTENSION ESTIMATED AUTHORITY PROJECT COSTS INCLUDING GRINDER PUMPS

Item Description			Quantity	Cost
Low Pressure Force Main and Laterals with Curb Stops				
1.5" HDPE Lateral ⁽¹⁾	LF	\$45	260	\$11,700
2" HDPE Low-Pressure in Road with Tracer Wire - Assume directionally drilled.	LF	\$55	975	\$53,625
Terminal Flushing Manhole	EA	\$12,500	1	\$12,500
Grinder Pump and Basin	EA	\$15,000	12	\$180,000
1.5" Curb Stop Assembly	Each	\$300	13	\$3,900
Misc.				
Pavement Restoration. 10x10 patches for lateral connection, complete in place ⁽²⁾	SY	\$45	120	\$5,400
Curb Replacement, complete in place. Concrete Curb	LF	\$155	60	\$9,300
Tie into Existing Gravity Sewer ⁽³⁾	LS	\$5,000	1	\$5,000
SUBTOTAL				\$281,425
CONTINGENCY 20%				\$56,285
ENGINEERING				\$30,000
TOTAL ESTIMATED PROJECT COSTS (rounded)				\$368,000
<u>Notes:</u>				
(1) Length of pipe cost estimate does not include the building sewer. Laterals are assumed to be 20 LF.				
(2) Assumes no overlay pavement is required.				
(3) Tie into existing gravity sewer cost estimate includes paving around MH 382.13.				

Table 2A

LOW PRESSURE SEWER EXTENSION ESTIMATED AUTHORITY PROJECT COSTS EXCLUDING GRINDER PUMPS

Item Description			Quantity	Cost
Low Pressure Force Main and Laterals with Curb Stops				
1.5" HDPE Lateral ⁽¹⁾	LF	\$45	260	\$11,700
2" HDPE Low-Pressure in Road with Tracer Wire - Assume directionally drilled.	LF	\$55	975	\$53,625
Terminal Flushing Manhole	EA	\$12,500	1	\$12,500
1.5" Curb Stop Assembly	Each	\$300	13	\$3,900
Misc.				
Pavement Restoration. 10x10 patches for lateral connection, complete in place ⁽²⁾	SY	\$45	120	\$5,400
Curb Replacement, complete in place. Concrete Curb	LF	\$155	60	\$9,300
Tie into Existing Gravity Sewer ⁽³⁾	LS	\$5,000	1	\$5,000
SUBTOTAL				\$101,425
CONTINGENCY 20%				\$20,285
ENGINEERING				\$30,000
TOTAL ESTIMATED PROJECT COSTS (rounded)				\$152,000
<u>Notes:</u>				
(1) Length of pipe cost estimate does not include the building sewer. Laterals are assumed to be 20 LF.				
(2) Assumes no overlay pavement is required.				
(3) Tie into existing gravity sewer cost estimate includes paving around MH 382.13.				

3. Costs to the Property Owner

The following summarizes the costs to the Property Owners under the following conditions:

Option 3A-Grant is obtained:

- Authority applies for and is awarded the grant. Each Property Owner would only pay a Tapping Fee of \$3,143.00 to the Authority.

Option 3B-Grant is not obtained:

- Property Owners pays the front foot assessment, grinder pump purchase and installation, tapping fee and the costs to abandon the existing septic system and connect to the public sewer system.
- The costs to abandon the existing septic system and connect to the public sewer system were not estimated as the location and type of existing system is not known. Property Owners will need to obtain quotes from plumbers and electricians and personally contract and pay for that work.

Table 2 Option 3B- Grant is not obtained

Property Address	Length of Street Frontage per Property (ft)	Front Foot Assessment per Property	Estimated Price per Grinder Pump	Tapping Fee	Total Estimated Cost per Property Owner
Vacant Lot	87	\$8,093.02	\$15,000.00	\$3,143.00	\$26,236.02
5363 Wilshire Road	151	\$14,046.51	\$15,000.00	\$3,143.00	\$32,189.51
5364 Wilshire Road	110	\$10,232.56	\$15,000.00	\$3,143.00	\$28,375.56
5370 Wilshire Road	96	\$8,930.23	\$15,000.00	\$3,143.00	\$27,073.23
5371 Wilshire Road	101	\$9,395.35	\$15,000.00	\$3,143.00	\$27,538.35
5372 Wilshire Road	104	\$9,674.42	\$15,000.00	\$3,143.00	\$27,817.42
5374 Wilshire Road	177	\$16,465.12	\$15,000.00	\$3,143.00	\$34,608.12
5375 Wilshire Road	201	\$18,697.67	\$15,000.00	\$3,143.00	\$36,840.67
5377 Wilshire Road	100	\$9,302.33	\$15,000.00	\$3,143.00	\$27,445.33
5378 Wilshire Road	127	\$11,813.95	\$15,000.00	\$3,143.00	\$29,956.95
5379 Wilshire Road	101	\$9,395.35	\$15,000.00	\$3,143.00	\$27,538.35
5380 Wilshire Road	156	\$14,511.63	\$15,000.00	\$3,143.00	\$32,654.63
5381 Wilshire Road	123	\$11,441.86	\$15,000.00	\$3,143.00	\$29,584.86
Total	1,634	\$152,000.00			

4. Recommendations

It is recommended the Board apply for the grant and put the project on hold until the decision regarding the award is made by the Commonwealth Financing Authority.



LOWER PAXTON TOWNSHIP

BRADLEY N. GOTSHALL,
Township Manager

Department of Sewer

William Weaver, *Director*

BOARD OF SUPERVISORS:

ROBIN L. LINDSEY, *Chair*
NORMAN C. ZOUMAS, *Vice-Chair*
CHRIS JUDD, *Secretary*
PAUL W. NAVARRO, *Treasurer*
PAMELA M. THOMPSON, *Asst. Secretary/Treasurer*

February 14, 2025

NAME
ADDRESS
ADDRESS

**RE: Wilshire Road Sanitary Sewer Extension – Low Pressure Force Main Project
Summary of the Neighborhood Meeting held on Wednesday, January 29, 2025, at 7 PM**

Dear:

The following is a summary of our special neighborhood meeting held on Wednesday January 29, 2025, for the proposed Wilshire Road Sewer Extension, Low Pressure Force Main project. Property Owners in attendance expressed an interest in the public sewer project contingent upon the final project costs to each property owner. Therefore, the survey of each of the property owners for an answer of yes or no on this project will be postponed to a later date.

The Lower Paxton Township Sewer Department staff and GHD will be providing the meeting summary to the Authority at the regular meeting scheduled for Tuesday, February 25, 2025, at 7 PM. Residents in attendance at the neighborhood meeting requested more information before completing the survey, including; 1) Authority contribution to the front foot assessment costs; 2) Authority contribution to the Grinder Pump Installation Costs; 3) Can the Authority provide for the installation of the 12 grinder pumps via a Township/Authority Contract and property owners pay as part of the front foot assessment; 4) Following answers to #1-#3, what is the PENNVEST loan interest rate and estimated monthly payment. Note: Following the meeting staff confirmed PENNVEST Loan, administered by PHFA, is still at 1.75% and the payment would be approximately \$124/month on a \$25,000 loan.

Also, property owners in attendance would like assistance in evaluating the existing on-lot septic system and on lot system replacement costs for comparison to the public sewer project. As indicated at the meeting, the Authority is not permitted to provide engineering for private systems, however, if approved by the Authority, staff can evaluate systems in the neighborhood and provide recommendations. This request will also be presented to the Board. Staff will be sending separate letters to schedule inspections for residents who indicated they are currently having issues with the private on lot system.

If you have any questions, please do not hesitate to email me or call me at 717-657-5617, extension 1112.

Sincerely,

A handwritten signature in blue ink, appearing to read "W.R. Weaver".

William R. Weaver
Sewer Department Director/Authority Liaison

425 PRINCE STREET, HARRISBURG, PA 17109
717-657-5600 / FAX 717-724-8311
www.lowerpaxton-pa.gov



LOWER PAXTON TOWNSHIP

BRADLEY N. GOTSHALL,
Township Manager

Department of Sewer

William Weaver, *Director*

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PAMELA M. THOMPSON, *Asst. Secretary/Treasurer*

February 14, 2025

NAME
ADDRESS
ADDRESS

**RE: Wilshire Road Sanitary Sewer Extension – Low Pressure Force Main Project
Summary of the Neighborhood Meeting held Wednesday, January 29, 2025, at 7 PM**

Dear:

Thank you for attending our special neighborhood meeting held on Wednesday January 29, 2025, for the proposed Wilshire Road Sewer Extension, Low Pressure Force Main project. It is our understanding that you may be having issues with your private on lot system. The Township SEO, Heather Myers, is available to perform an inspection of your private on lot system. Please schedule the inspection with Heather Myers directly at Heather.Myers@ghd.com, or by phone at 717-585-6431.

If you have any questions, please do not hesitate to email me or call me at 717-657-5617, extension 1112.

Sincerely,

A handwritten signature in blue ink, appearing to read "W.R. Weaver".

William R. Weaver
Sewer Department Director/Authority Liaison

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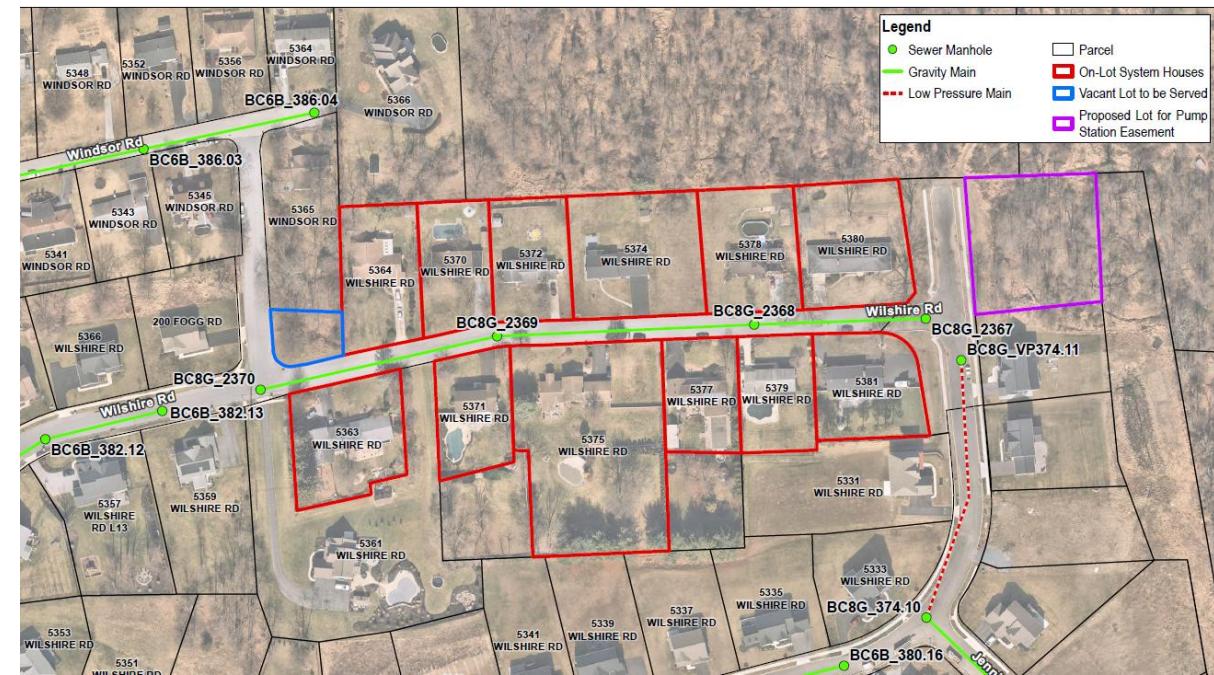
→ Melissa Tomich Smith, PE
Project Director

Wilshire Road Proposed Sewer Extension/Low Pressure Force Main

Welcome

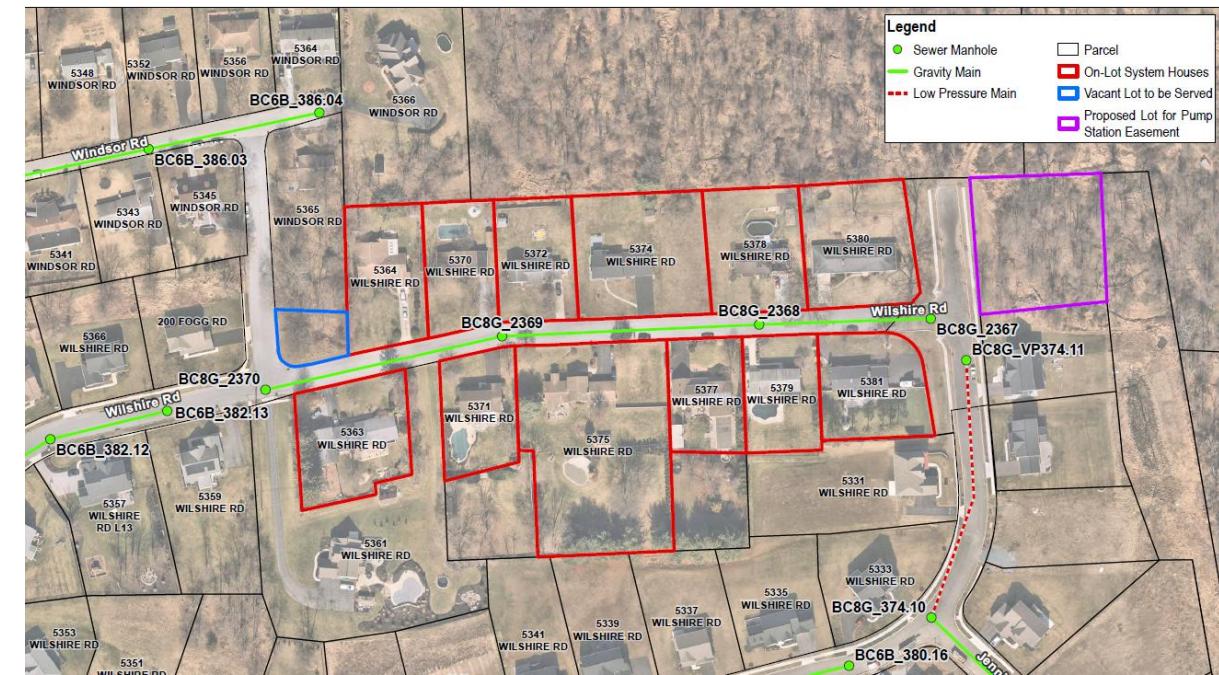
Introduction

- In 1988 a dry sewer was installed along Wilshire Road.
 - The installation anticipated future connection to a public sewer system through future development extended sanitary sewers.
 - Twelve houses (outlined in red) and one vacant lot (outlined in blue) along Wilshire Road are currently served by on lot septic systems.
 - A few of the homeowners have requested connecting into the public sanitary sewer system.



Study to Provide Public Sanitary Sewer Service

- The developer for Wilshire Estates Phase 2 designed the development so that they did not require a pumping station. Therefore, there is no pumping station for the existing dry sewer to tie into and gravity sewers cannot tie into the low-pressure sewer main installed by the developer (dashed red line).
- Developers are not required to provide service for properties adjacent to their land.
- The developer did offer to donate the land (outline in purple) to the Authority.
- A study was done to provide options to provide public sanitary sewer.



OPTION 1 –Pumping Station and Force Main

- Option 1 consists of the following:
 - Utilizing the dry gravity sanitary sewer and laterals that are already in place
 - Installing approximately 150 linear feet of new 8-inch gravity pipe to connect the dry sewer to a new wet well
 - Installing an above ground Gorman Rupp ASVP Lift Station, and
 - Installing 1,200 linear feet of 4-inch force main. The force main would then pump the collected sewage to manhole BC-6B 382.13, the closest gravity manhole.
 - Property owners would be required to hire a contractor to connect the house to the public system.



OPTION 2 – Low Pressure Sewer System

- Option 2 consists of the following:
 - Abandoning the dry sewer.
 - Installing approximately 1,200 LF of low-pressure sewer main
 - Installing 13 low pressure laterals with curb stop assemblies
 - The low-pressure sewer system would discharge the collected sewage to manhole BC-6B 382.13, the closest gravity manhole.
 - Property owners would be required to hire a contractor to purchase and install a grinder pump and connect the house to the public system.



Chosen Option

→ Option 2 – Low Pressure Sewer Extension

Option 2 was chosen for the following reasons:

- The condition of the dry sewer is unknown.
- The estimated project cost was significantly less.
 - Option 1 = \$507,000
 - Option 2 = \$152,000

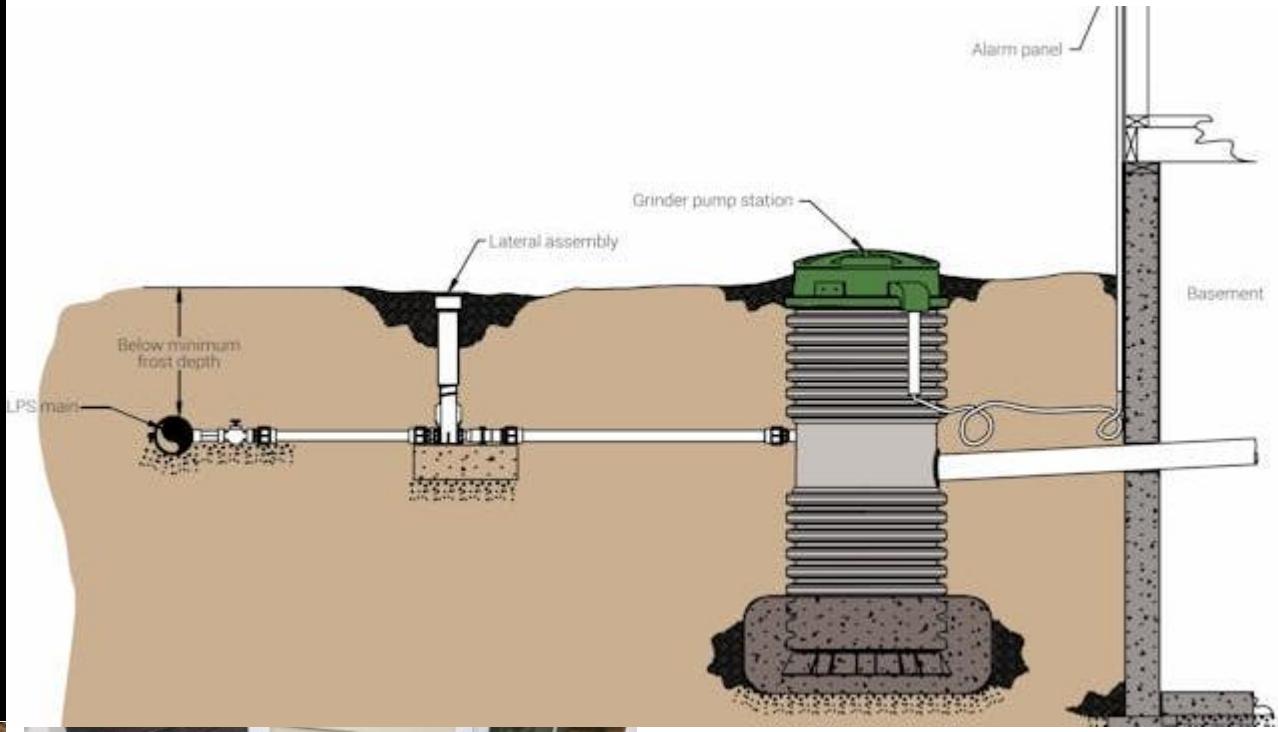
Low-Pressure Sewer System

Installing approximately 1,200 linear feet of 2-inch HDPE low-pressure pipe

Each property would need to purchase and install a grinder pump



Images of Grinder Pumps



Cost Estimate

PRELIMINARY CONSTRUCTION-COST OPTIONS				
Items	Unit	Estimated Unit Prices	Low-Pressure System	
			Quantity	Cost
1.5" HDPE Lateral ⁽¹⁾	LF	\$45	260	\$11,700
2" HDPE Low-Pressure in Road with Tracer Wire	LF	\$55	975	\$53,625
Terminal CO MH	EA	\$12,500	1	\$12,500
1.5" Curb Stop Assembly	Each	\$300	13	\$3,900
Misc.				
Pavement Restoration. 10x10 patches for lateral connection, complete in place	SY	\$45	120	\$5,400
Curb Replacement, complete in place. Concrete Curb	LF	\$155	60	\$9,300
Tie into Existing Gravity Sewer ⁽²⁾	LS	\$5,000	1	\$5,000
SUBTOTAL				\$101,425
CONTINGENCY 20%				\$20,285
ENGINEERING				\$30,000
TOTAL ESTIMATED PROJECT COSTS (rounded)				\$152,000
<u>Notes:</u>				
(1) Length of pipe cost estimate does not include the building sewer.				
(2) Tie into existing gravity sewer cost estimate includes paving around MH 382.13.				

Mandatory Connection if Sewer is Extended

- If public sanitary sewer is extended. All 12 homes will be required to connect per Ordinance No. 99-08, excerpt sited below.
- A service line and curb stop will be provided to the vacant lot, and the vacant lot will be assessed the front foot assessment. The tapping fee would be paid at the time of connection.

Per Lower Paxton Township Authority Ordinance No. 99-08, Adopted 8-17-1999 Chapter 159-26:

The owner of any improved property accessible to and whose principal building is within 150 feet of the sewer system shall connect such improved property therewith, in such manner as the Township and the Authority may require, within 60 days after notice to such owner from the Township and the Authority may require

Costs to Property Owners

If the public sanitary sewer is extended, each property owner will be required to pay the following:

- Front Foot Assessment
- Tapping Fee
- Purchase and installation of a grinder pump
- Costs for a plumber to tie the existing plumping into the public system. (These costs were not estimated and are not provided in the following cost estimate table.)
- Ongoing quarterly sewer bill. The current sewer bill is \$158/quarter.
- Ongoing electric bill: estimated to be between \$40 and \$60 a year.

Front Foot Assessment

- The Municipal Authority's act allows for Authorities to recover the costs expended to extend public sanitary sewer service, from the properties that benefit from the extension using a front foot assessment.
- The cost per Linear Foot of street Frontage is the total cost of the public improvement divided by the total linear footage of street frontage.
- The assessment per Property is then calculated by multiplying the cost per linear foot of total street frontage by the individual property's length of street frontage.

Tapping Fee

- Tapping fees are charged to all properties connected to the public sanitary sewer system.
- Tapping fees are a one-time charge paid to connect a property to a public water or sewer system.
- Tapping Fees are used to recover each user's portion of the cost of building and maintaining the conveyance system and treatment facilities.
- Beaver Creek Drainage Basin Tapping Fee is \$3,143 per property
- Per Authority Resolution 23-09
 - There is hereby established, fixed and imposed a tapping fee upon the owner of each property making any connection to the Authority's sanitary sewer system directly or indirectly, regardless of whether such property is connected separately through one or more existing or new laterals sewers or sewer connections, including changing the type of use of property previously connected, increasing the volume of discharge over the original estimate, shall pay to the Authority a special purpose tapping fee per Equivalent Dwelling Unit (EDU).

Cost Estimate – Per Property

Property Address	Length of Street Frontage per Property (ft)	Front Foot Assessment per Property ⁽²⁾	Estimated Price per Grinder Pump ⁽³⁾	Tapping Fee	Total Estimated Cost per Property for the Main, Lateral and Grinder Pump
Vacant Lot	87	\$8,093.02	\$15,000.00	\$3,143.00	\$26,236.02
5363 Wilshire Road	151	\$14,046.51	\$15,000.00	\$3,143.00	\$32,189.51
5364 Wilshire Road	110	\$10,232.56	\$15,000.00	\$3,143.00	\$28,375.56
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5381 Wilshire Road	123	\$11,441.86	\$15,000.00	\$3,143.00	\$29,584.86
	1,634	\$152,000.00			\$387,859.00

Notes:

1. The cost per Linear Foot of street Frontage is the total cost of the public improvement divided by the total linear footage of street frontage.
2. The assessment per Property is the calculated by multiplying the cost per linear foot of total street frontage by the individual property's length of street frontage.
3. Homeowners will be responsible for buying the grinder pumps and hiring a plumber to install them. The Authority's project will stop at a valve placed at the property line. We recommend getting three quotes to purchase and install a grinder pump as the price could range between \$10,000 and \$20,000.

Homeowner Sewage Program

- PENNVEST, in cooperation with the Pennsylvania Housing Finance Agency (PHFA), provides low-cost financing to improve, replace, or repair individual on-lot sewage disposal systems, and existing malfunctioning connections to public sewage systems, or to connect, for the first time, to public sewer to meet public health and environmental safety standards.
- Maximum loan amount is \$25,000; minimum is \$2,500
- Up to 20 years to repay the loan balance (up to 15 years for manufactured homes)
- Fixed interest rate for life of loan, currently as low as 1.75 percent.
- Average payment for a \$25,000 loan is approximately \$124/month.

Next Steps

- The Authority has not yet approved this project and may not proceed if the majority of the property owners are not in agreement with the project.
- If the project is approved by the Authority, the Township Board of Supervisors must also approve the project. Also, it should be noted that if the project is approved, and public sewer is extended, connection to the sanitary sewer system is mandatory for all properties.
- A separate letter/survey will be sent to each of the property owners to request each property owners answer of “yes” or “no” on this project moving forward.
- The survey results will be provided to the Authority Board at the regular meeting scheduled for Tuesday February 25, 2025. This meeting is open to the public.
- Each owner will receive a notice of the final decision of the Board.



* Thank You