

# Private Sanitary Sewer Replacements Non-PVC Pipe Area

## Paxton Creek Mini-Basin PC-3E Clermont Neighborhood

Public Meeting:  
March 2, 2023



**William Weaver**  
Lower Paxton Township Sewer  
Department Director

# Project Team

- Property Owners
- Board of Supervisors/Sewer Authority Board
- Bradley Gotshall, Township Manager
- Sewer Department Staff
  - Bill Weaver, Director
  - John Shear, E.I.T., Sewer Department Engineer
  - Jim Wetzel, Operations Supervisor
  - John Deibler, I/I Coordinator
  - Clint Kreiger, Construction Crew Leader
  - Eric Morgan, Inspection Leader
  - Michele Kwasnoski, Sewer Administration Staff
  - Alex Manikas, GIS Technician

## Project Team

- Authority Consulting Engineer – Herbert Rowland & Grubic, Inc. (HRG)
  - Jason Hinz, P.E., Group Manager/Civil
  - Justin Mendinsky, P.E., Group Manager/Wastewater
  - Joshua Sheetz, P.E., Project Engineer
  - Chris Ferdik, P.E., Project Engineer
  - Brenden Miller, E.I.T., Staff Professional
  - Jake Hoffman, E.I.T., Staff Professional

# Recognized Infiltration/Inflow (I/I) Problems

- Overflowing Manholes
- Sewer Basement Backups
- PADEP, Act 537, Chapter 94 and Clean Stream Violations
- Exceeding Interceptor Capacity Limits within Inter-Municipal Agreements
  - Harrisburg
  - Susquehanna
  - Swatara





# Examples of System Failures

- Offset Joints/Shear Breaks
- Bad Transitions to private sewer





## Examples of System Failures



## Second Amendment to the Consent Decree Requirements – Paxton Creek Basin

- Replace Asbestos Cement and Clay Sanitary Sewers that have reached their useful life including private sewers
- Projects selected and prioritized by drainage area
  - Sewers in PC-3E were metered showing excessive I/I

## Second Amendment to the Consent Decree Requirements – Paxton Creek Basin

- Eliminate Overflows and Basement Back-ups by 2022
- Reduce Sewer System Hydraulic Overload by 2027
  - Reducing the flow in the sewer system allows it to properly function without the threat of sewer backups and overflows



# PC-3E Sanitary Sewer Overall Project

## Map - PVC and Non PVC



# PC-3E/Clermont Total Sewer/Storm Sewer Replacement Project Summary

- The project will consist of replacing 19,759 feet of ACP sanitary sewer pipe, including 271 private building sewers on private property for the non-PVC area, repairs to the PVC main sanitary sewer systems and 138 private sewers in the PVC area, portions of the 9,500 feet of the stormwater conveyance system including associated drainage structures.
- Other misc. work includes right-of-way clearing, bypass pumping, ADA ramp construction, and restoration of paving, curbs, sidewalk and yards/right-of-way.
- This project is estimated to cost \$18 Million Dollars (cost estimate to be updated after final design completion in May 2023).

## Total Project Schedule Milestones

<u>Activity</u>	<u>Milestone Date</u>
Mail Storm Sewer Survey	October 2022
Review Storm Sewer Surveys	November 2022
Design of Public Sanitary/Storm Sewers	November 2022 – November 2023
Bid Project	November 2023
Award Project	December 2023
Pre-Construction Meeting	February 2024
Construction	March 2024 – December 2025
Final Completion	December 2025
* Storm Sewer Work for some areas may be Completed by Township Replacement Crew	

## Agreements Required For Project

- 138 Private Sewer Air Testing, Repair and Replacement Agreements in PVC area – this project currently under construction with Township Construction Crew
- 271 Private Sewer Replacement Agreements for non- PVC area
- Agreement Discussion to be held at the end of the presentation
- Off Street Stormwater Drainage easements and Sanitary Sewer easements will be required and will be mailed to the affected property owners when final design is completed by HRG in May 2023



# Process for Private Sanitary Sewers

- Conduct Neighborhood Meeting
- Receive Private Sewer Replacement Agreements
- Perform House Inspections
- Replace Laterals and Building Sewers – to be completed by work zone and following the sewer main installation in the street.
- Restore Areas Affected by Construction

# Private Sewer Agreements/House Inspections Schedule Milestones

<u>Activity</u>	<u>Milestone Date</u>
Receive Agreements	March 2023 – May 2023
Perform House Inspections	March 2023 – May 2023
Private Sewer Replacements by Work Zone following sewer main replacement in your area	March 2024 – December 2025

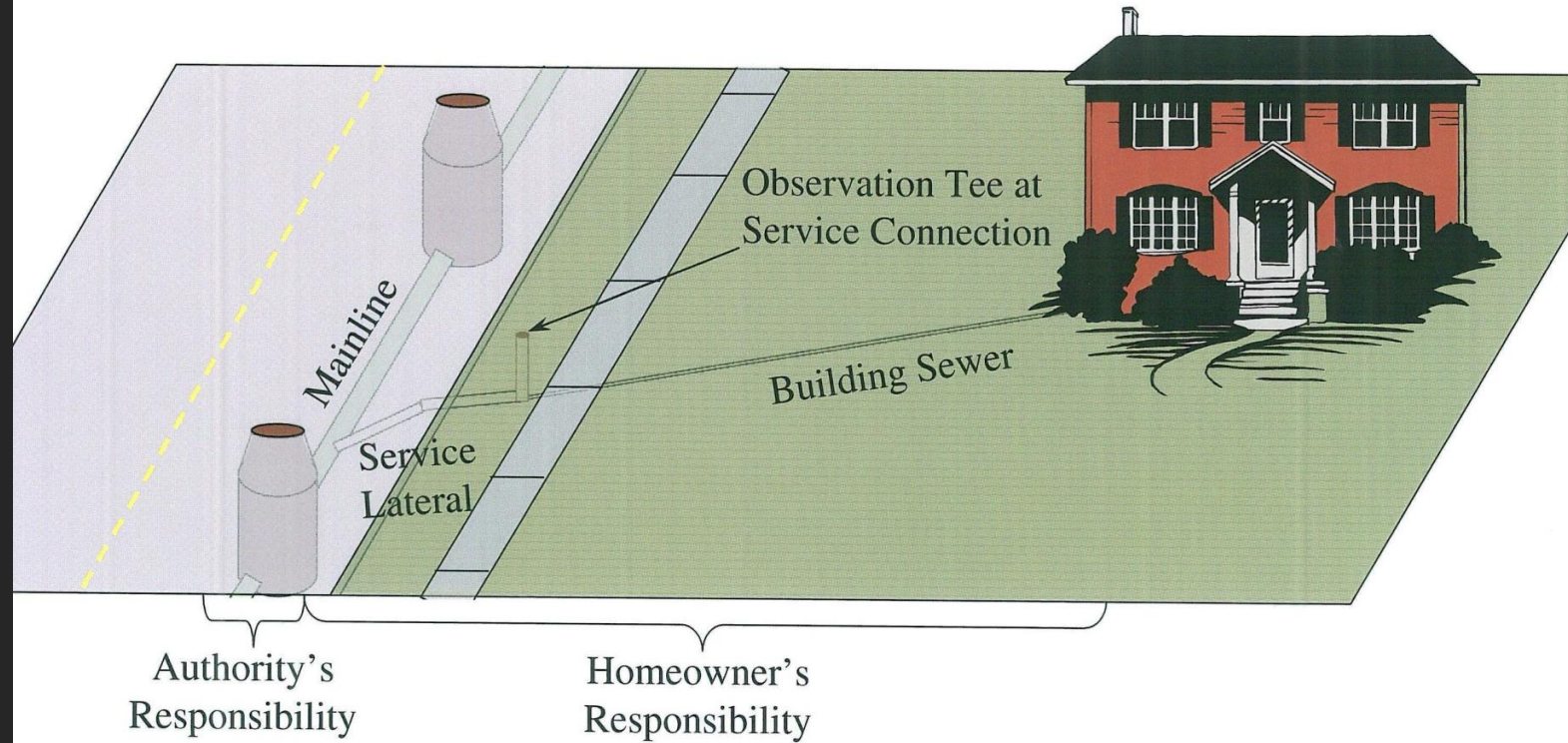
# Draft Work Zone Map



Work Zone Areas are Subject to be  
Adjusted Upon Completion of Design

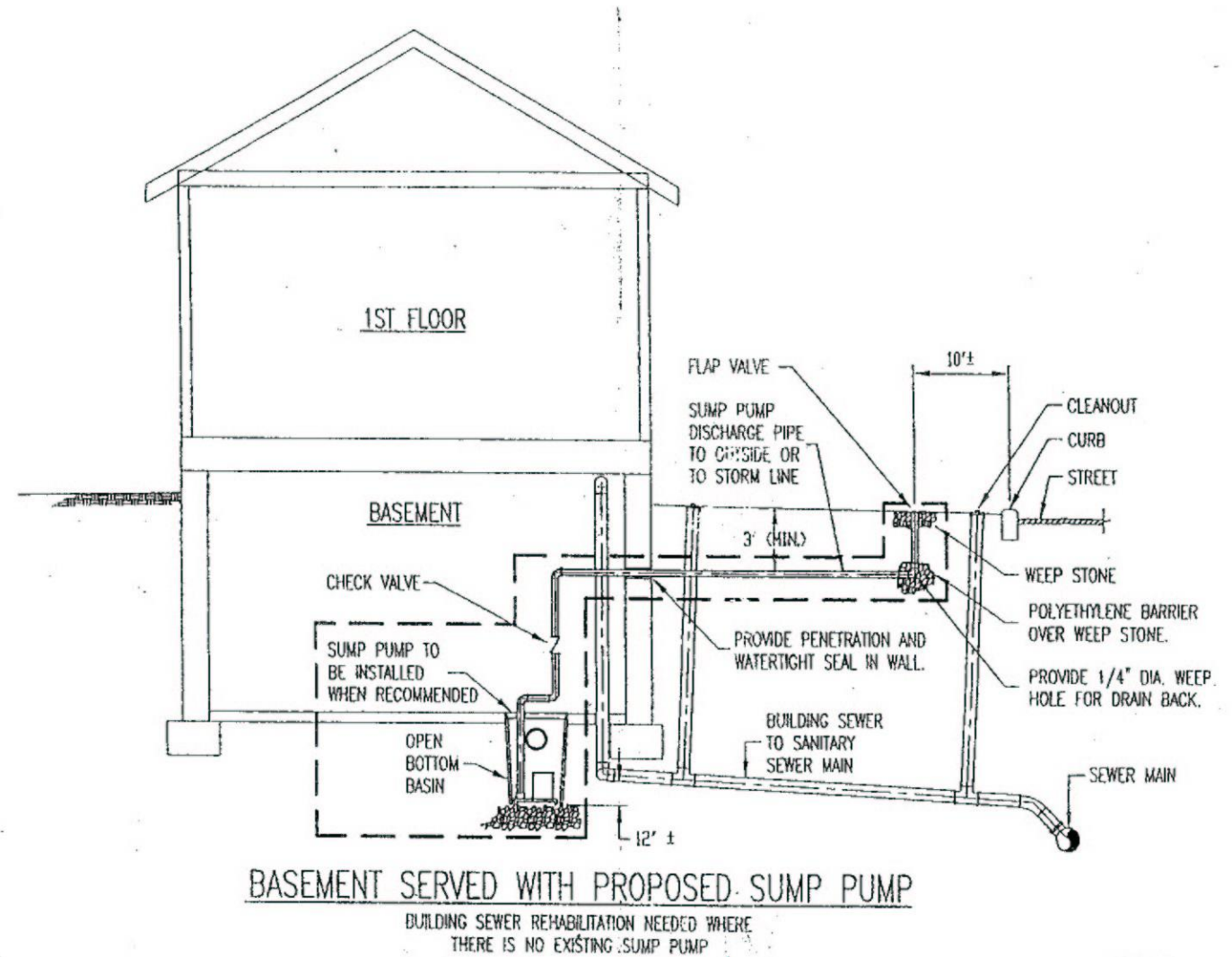


# House Inspection – Typical Sanitary Sewer System Layout



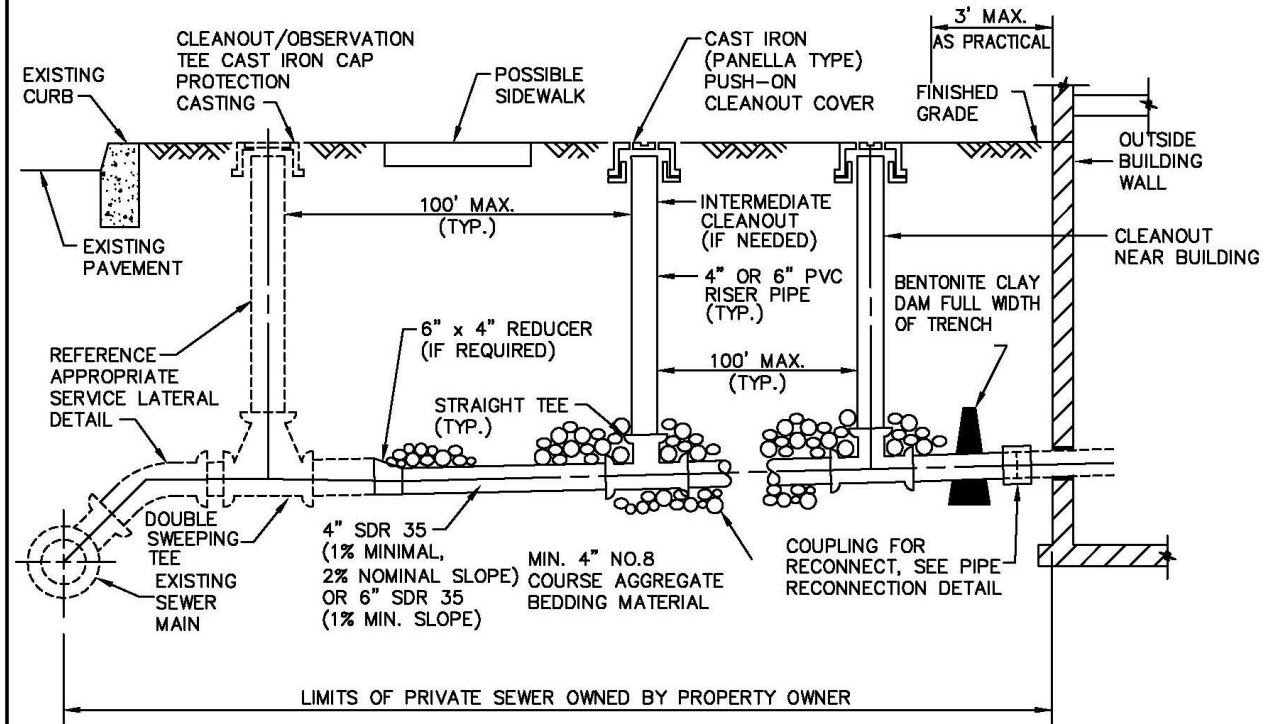


# House Inspection – Typical Sump Pump

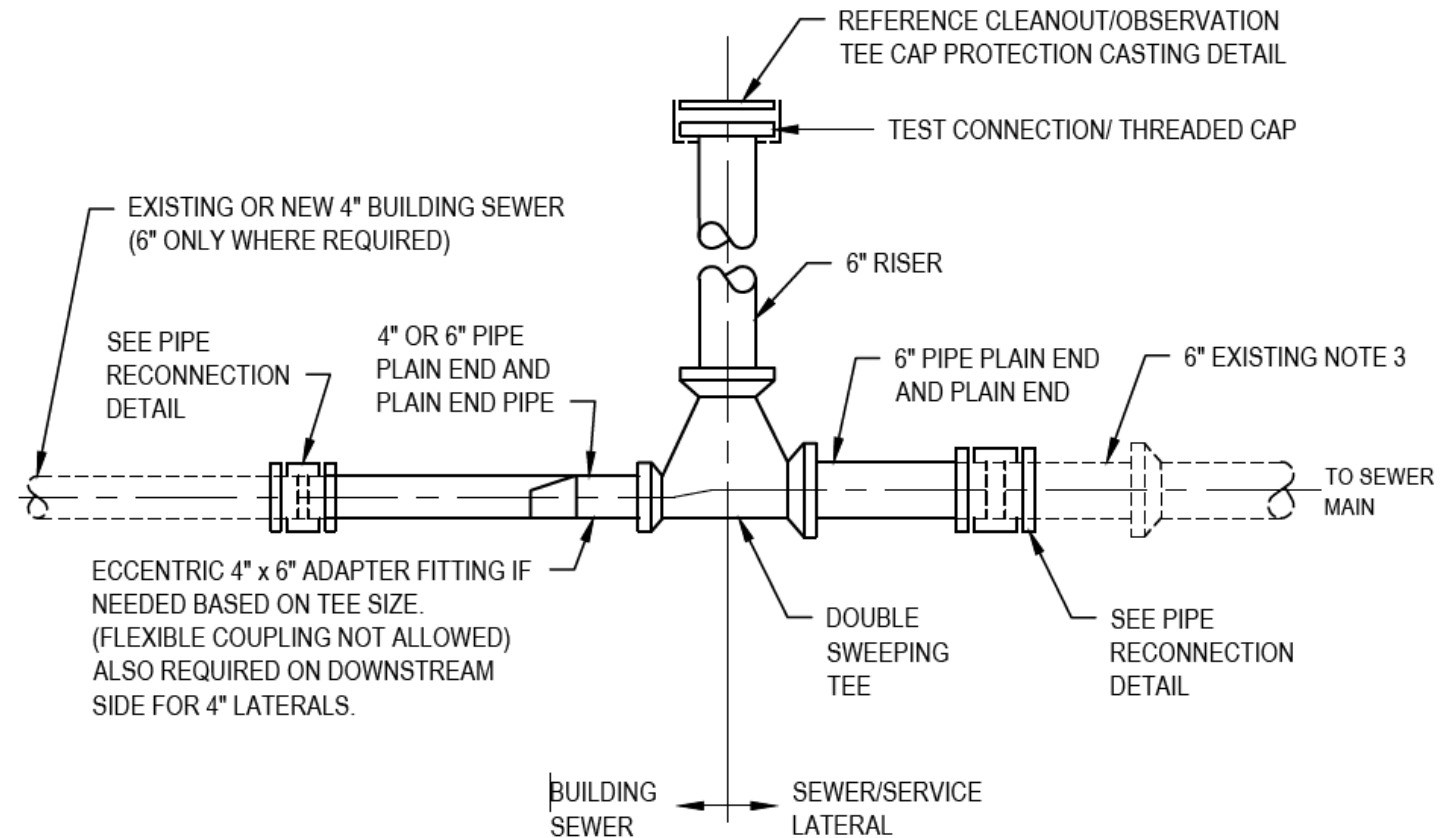


# Service Laterals & Building Sewers

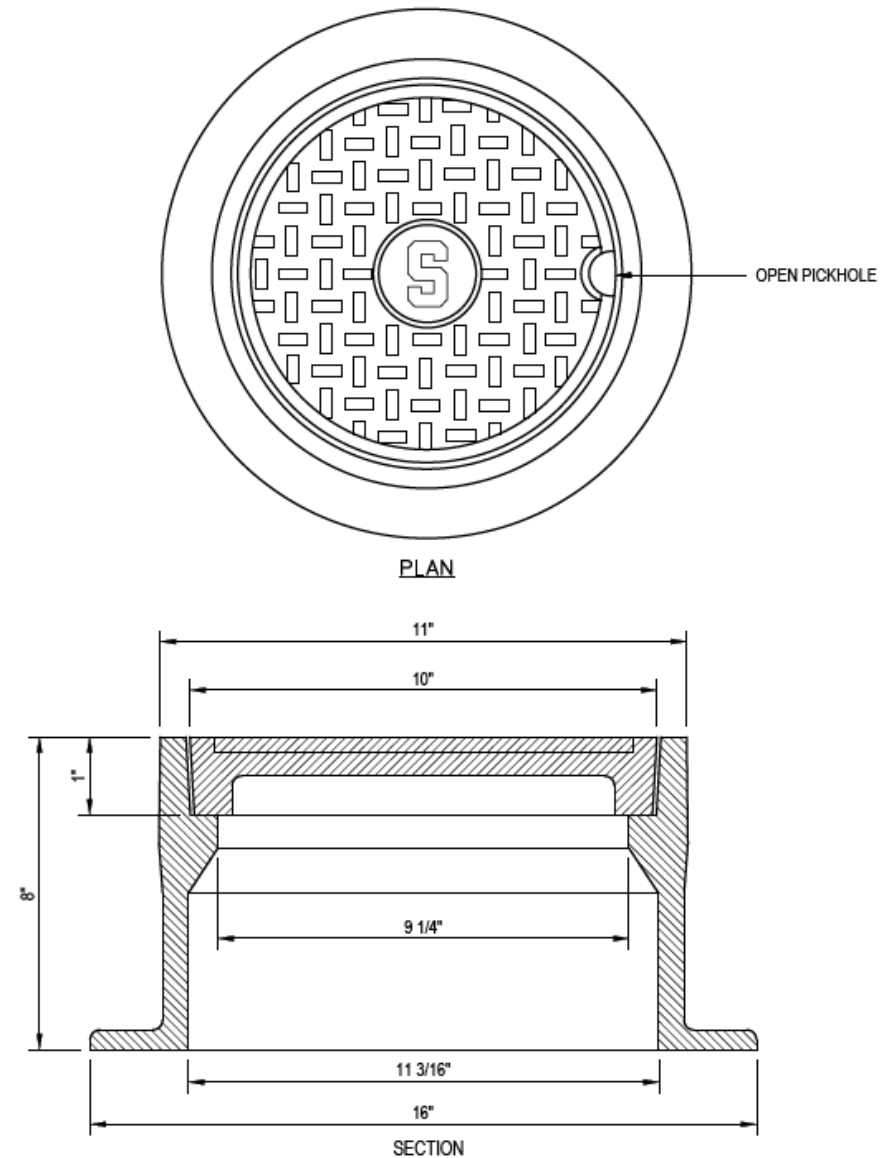
## PRIVATE SEWER INSTALLATION/REPLACEMENT



# Observation Tee/Test Tee



# Observation Tee Casting





**What kind of disruption can be  
expected during construction  
on your property?**

# Building Sewer Replacement

- Building Sewer Replacement:
  - Crew will Replace pipe to the house
  - More than 1 area may need to be excavated to find where sewer pipe exits house



Typical Building Sewer Replacement During Construction

# Typical Building Sewer Replacement Prior to Restoration





# Typical Sidewalk and Lawn Restoration After Building Sewer Replacement





# Grading and Seeding Policy

## CONGRATS ON YOUR NEW SANITARY SEWER LATERAL!

### What's next?

It is Lower Paxton Township's goal to return your property as close as possible to its previous condition. This document outlines the work that was completed by Lower Paxton Township or its Contractor, along with the next steps for proper lawn care. Please be reminded that the Private Sewer Agreement states that your property will be seeded one time. The property owner takes possession of the lawn after the first seeding is completed. Lower Paxton Township specifies only quality materials and grass seed is to be used in order to re-establish a healthy lawn. The property owner is responsible for maintaining the lawn. Lower Paxton Township will not repair areas of a lawn damaged due to a lack of proper care by the Owner. If the initial work was determined to be defective or settling occurs on your property, Lower Paxton Township will review and repair these areas as necessary.

### Work Completed

The sewer trench was backfilled and compacted, and a layer of screened topsoil was placed over the disturbed area. Since the topsoil was screened, it should not contain large roots, stones, or other extraneous materials that could affect plant growth. After the screened topsoil was installed, the lawn was seeded with the specified seed mixture contained in table 1 (see below). Lower Paxton Township will randomly collect samples of the topsoil used by our Contractor in your neighborhood in order to verify that it meets certain minimum specifications.

The seed is traditionally applied by a seed spreader or by an alternative method called hydroseeding. The traditional method of seeding is performed by mixing grass seed, fertilizer, and lime together and broadcast spreading or using a drop seeder. Hydroseeding is a planting process in which seed, fertilizer, lime and water are mixed with cellulose mulch into a semi liquid mixture and sprayed onto the newly topsoiled area to sow the seed and help prevent erosion. Depending on the nature of your property and the seed mix used, a plain straw, straw matting, or cellulose mulch has been used to protect the seed and prevent erosion of the new topsoil.

### Caring for a Newly Seeded Lawn

The health of your newly seeded lawn is dependent on the following:

- Adequate Topsoil Installation
- Feeding the Lawn
- Overseeding the lawn
- Seed Installation
- Regular Irrigation
- Aeration (after seedlings mature)
- Weed Control
- Regular Mowing

See Reverse Side for More Details



### Care Instructions (continued) Weeks 1 - 5

The disturbed portion of the property has been graded and the seed, fertilizer, lime has been applied. The Owner's care of the lawn begins immediately by keeping people and pets off the newly seeded areas until the grass is 2-3 inches tall. You should irrigate the seeded areas as described below and add fertilizer every 30 to 60 days through the first growing season.

### Months 1 - 5

Lawn mowing can begin as soon as the grass is 4-5 inches tall. Mowing the lawn regularly encourages denser grass growth that will crowd out weeds. The fertilizer that was applied has a high nitrogen and phosphorus content. The nitrogen produces top growth, while the phosphorus helps the establishment of a vigorous root system. These fertilizers include a slow release agent so that 40 - 50% of the value is available for up to 60 days. We encourage you to feed the lawn every 30 - 60 days through the first growing season.

### Additional Tips

#### Irrigation (Watering)

The purpose of irrigation prior to seed germination is to keep the seed moist and encourage germination. Irrigation should be completed 2 - 3 times a day for 15 - 25 minutes each time until germination occurs. After germination occurs, irrigation should be adjusted to 2 to 3 times a week for longer periods of time (30 - 45 minutes). The purpose of irrigation after germination is to promote growth of the root system. Owners should follow the sprinkler manufacturer's recommendations to achieve the desired results on a newly seeded lawn.

#### Weed Control

Weed control is a delicate process and essential to a newly established lawn. If your lawn was seeded in the spring, crabgrass will be the primary concern through the summer and fall. Owners should continue to follow these guidelines and consider the use of a pre-emergent herbicide the following spring in order to stop crabgrass growth which can choke out the grass.

#### Straw Matting

The straw matting that may have been used on your property or is in the swales or waterways, is a bio-degradable product. It has a life expectancy of 6 - 18 months. It is designed to stay in the grass and not be pulled up. However, there are times when you may feel as though it is no longer needed or it is not aesthetically pleasing, and you may want to pull it up and discard it. Please note that there are steel staples that anchor the straw to the soil that should be collected if you are pulling up the matting. The mulch used as part of the hydroseeding process is bio-degradable and does not need to be removed by the property owner.



# Homeowner Must Water Lawn Once Seeded





# Homeowner Must Water Lawn Once Seeded – Example of Unwatered Lawn



## Replacing Building Sewer

- Homeowner **CAN** still use toilets and sinks while their building sewer is being replaced
- Homeowner **SHOULD NOT** use washing machines, dishwashers and showers while their building sewer is being replaced



## Replacing Building Sewer - Obstructions

- As provided in the agreement, any affected bushes, flowers, gardens, etc. to be preserved must be moved by the homeowner prior to construction.
  - Township and the Construction Crew Leader will attempt to notify homeowners if items need to be moved to replace prior to work occurring
- Trees determined to be obstructions for replacement work will be removed at the Township's expense

## Replacing Building Sewer - Fences

- Any fences that impact construction must be temporarily moved and replaced by the homeowner
  - Fences not moved prior to construction will be moved and replaced by Construction Crew. **Any fences moved and replaced by the Construction Crews are not guaranteed to be in the original condition.**

# Property Owner Responsibility

- Execute and Return Private Sewer Replacement Agreement
- Schedule House Inspection
- Remove any obstructions that you wish to preserve and replace after construction is complete
  - Township and Construction Crew Leader will attempt to notify and discuss prior to work occurring
- Notify Township Staff of any underground utilities installed
  - Items such as gas/water/electric for swimming pools, dog fences, waterlines for sprinklers and electric for landscape lighting
- Water grass after planting is completed

## During Construction – Main Sewer Replacement



Road Conditions During Construction



## Example of Sanitary Sewer Lining

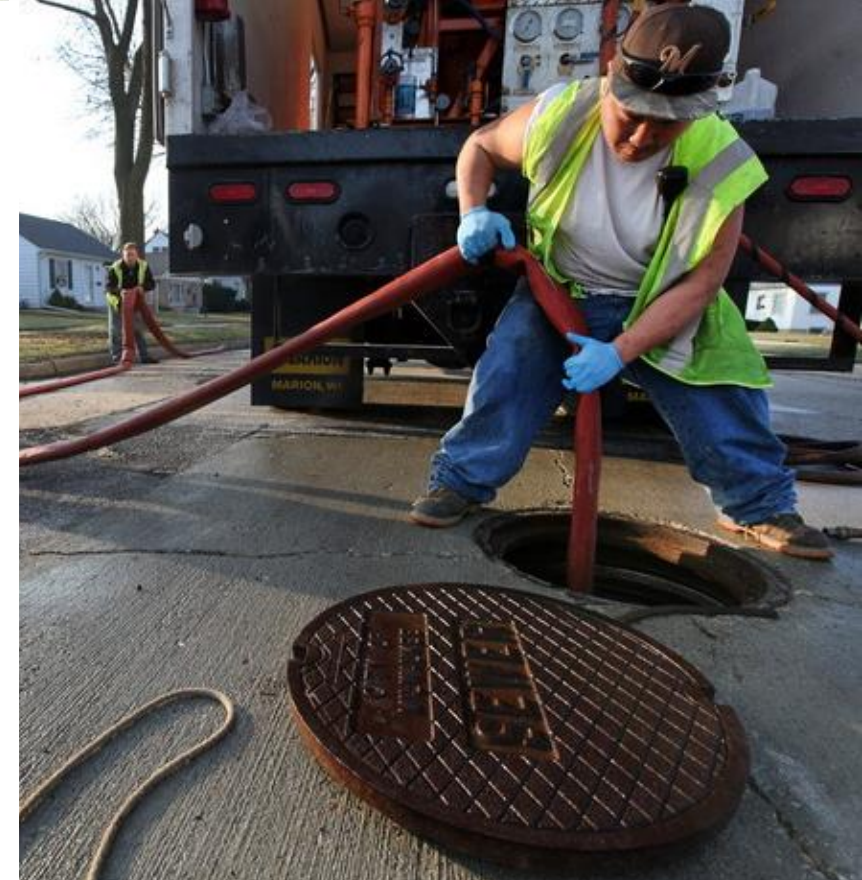


**Old Pipe**

**New  
Lining**



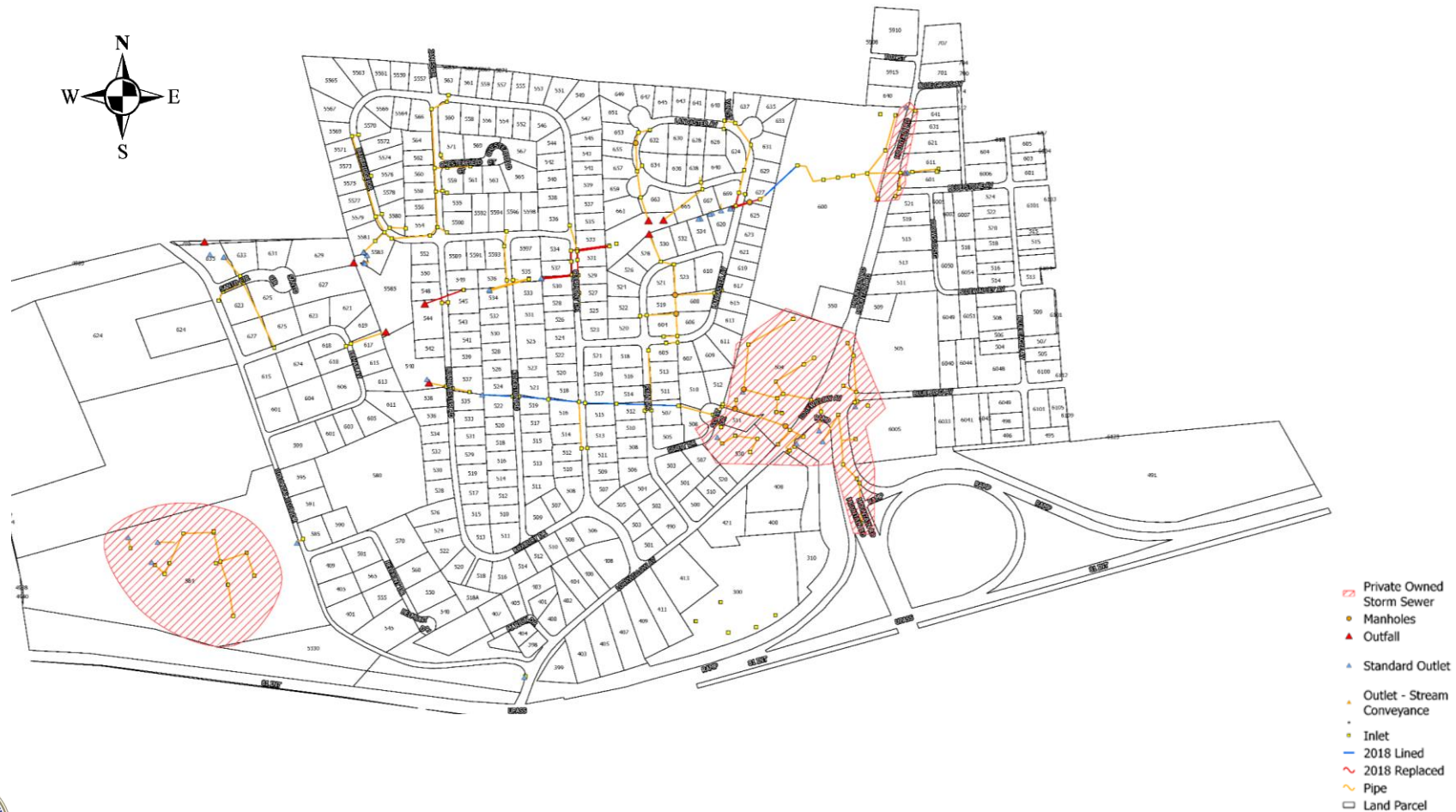




Traffic Access will be Limited or Detoured During Active Construction



# PC-3E Storm Sewer Overall Project Map – Storm Sewer Replacement funded by Stormwater Fund and Stormwater Fees



# Existing Drainage Facilities to be Replaced

- Many of the drainage facilities (pipes, inlets, manholes, endwalls, etc.) in the project area have reached and surpassed the end of their functional lifespans. Materials such as corrugated metal pipe and cast-in-place concrete or brick structures have failed in various locations.
- The project will replace the failing infrastructure with new modern materials such as smooth lined corrugated polyethylene pipe and PennDOT standard pre-cast concrete drainage structures.





# Acquisition of Sanitary Sewer and Stormwater Easements “Off Street Private Property Areas”

- The PADEP design criteria for sanitary sewer and storm sewer replacement projects requires Engineers to minimize impacts to streams and wetlands.
- The Authority may be required to acquire new sanitary sewer easements from property owners with existing easements to relocate the sewers and to minimize the impacts to wetlands and streams, as required by DEP.
- Some of these easements may be combined storm and sanitary sewer easements if a property has both facilities.

# Drainage Easement (Example First Page)

**DRAINAGE EASEMENT  
AND TEMPORARY CONSTRUCTION EASEMENT  
TAX PARCEL # \_\_\_\_\_**

**THIS INDENTURE**, made the \_\_\_\_ day of \_\_\_\_\_, in the year two thousand twenty (2020)

**BETWEEN**

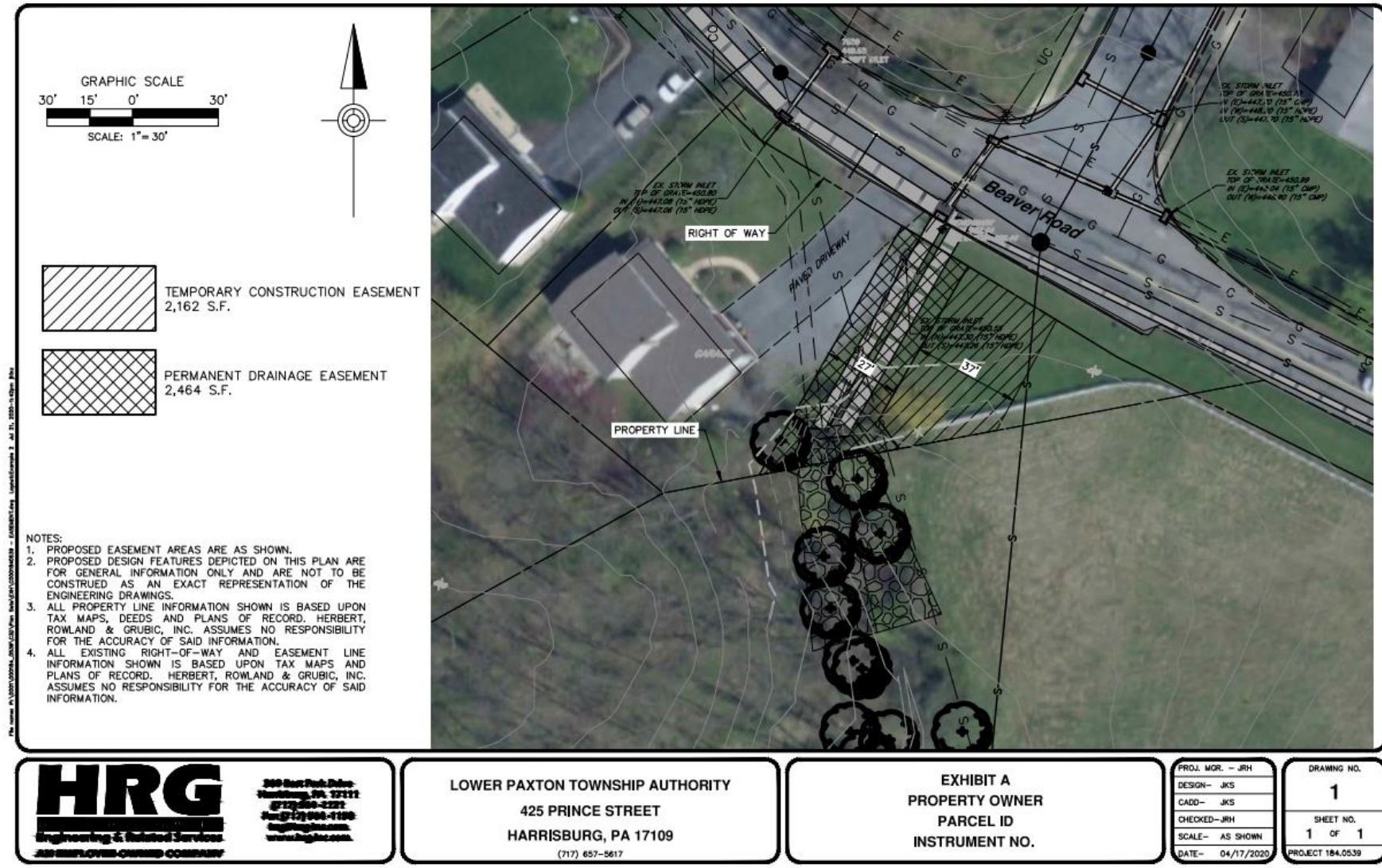
\_\_\_\_\_

**AND**

LOWER PAXTON TOWNSHIP AUTHORITY, Dauphin County, Pennsylvania Grantee

**WITNESSETH** That the said Grantors, for and in consideration of the sum of ONE DOLLAR (\$1.00), have granted, bargained, released and confirmed and by those presents do grant, bargain, release and confirm unto the said Grantee, its successors and assigns that certain permanent easement and temporary construction easement to the Lower Paxton Township Authority, County of Dauphin, Pennsylvania, as more particularly described on the attached plat marked as Exhibit "A".

# Example Easement – Permanent Drainage and Temporary Construction Easements



## Acquisition of Sanitary and Stormwater Easements (contd.)

- Upon request, Township Staff and the Engineer will meet with the affected property owners to discuss the permanent and/or temporary easement agreement and to address any concerns or impacts that the easement and relocation, as applicable, may have on the property owner.
- Following construction, all easement areas will be restored to existing condition at no expense to the property owner. Obstructions over the proposed sewer will be addressed on a case-by-case basis. Examples include sheds, fences, and trees. In most cases, sheds can be relocated, fences temporarily removed and replaced, and trees replaced in a different location adjacent to the easement area.



- To schedule a stormwater and or sanitary sewer easement meeting please call John Shear at 717-657-5617 extension 1114 or by email at [jshear@lowerpaxton-pa.gov](mailto:jshear@lowerpaxton-pa.gov).
- For a Private Sewer Agreement meeting call Jim Wetzel at 717-657-5623 or by email at [jwetzel@lowerpaxton-pa.gov](mailto:jwetzel@lowerpaxton-pa.gov). You may also send questions to [mynewsewer@lowerpaxton-pa.gov](mailto:mynewsewer@lowerpaxton-pa.gov)
- For owners with both agreements the Township staff can coordinate a combined meeting with HRG.

# Benefits to the Community

- 50-year-old public sewer system replaced/rehabilitated including private sewers
- Storm Sewer System replaced and improved
- Community asset maintained and preserved
- Neighborhood receives new paved streets
- Environment Protected
  - Elimination of overflows and basement backups

# Township Notification System - CivicReady

- Township utilizes CivicReady program for public notifications during construction
- If interested to receive notifications via email, text or calls visit [lowerpaxton-pa.gov](http://lowerpaxton-pa.gov) and click on Emergency Alerts tab
  - Cell Phone Number and/or Email Address must be provided

## Sign Up for Mass Notification System - Emergency Alerts

Residents have the ability to receive mass notifications related to emergency alerts, events, Township projects, and more.

Lower Paxton Township has partnered with CivicReady to implement its mass notification solution. Available from CivicPlus, the integrated technology platform for local government, the CivicReady solution allows Lower Paxton Township to issue urgent notifications, emergency instructions, warnings, and even routine communications to subscribed citizens via email, text message, and voicemail alert, to keep citizens safe and informed.

In the event of a local emergency, citizens subscribed to CivicReady benefit from immediate, actionable information and instructions sent via their preferred notification channel. For non-native English speaking citizens, CivicReady notifications can be automatically translated into one of 63 languages to maximize the effectiveness of the platform in ensuring mass awareness of potentially impactful situations.

Township residents have the opportunity to opt-in or out and choose the type of communications they would like to receive. Click on this link to <https://lowerpaxtontownship.reggroup.com/signup> to subscribe.





## Stay Up to Date

- Residents can stay up to date on projects by visiting [lowerpaxtonatwork.com](http://lowerpaxtonatwork.com) and clicking on the Sanitary Sewer/Stormwater tab
- Residents can email [mynewsewer@lowerpaxton-pa.gov](mailto:mynewsewer@lowerpaxton-pa.gov) to have questions answered prior to and during construction
  - Email is monitored by staff during normal business hours

# Thank you

## Questions on Private Sewer Agreements

- Residents can email [mynewsewer@lowerpaxton-pa.gov](mailto:mynewsewer@lowerpaxton-pa.gov) to have questions answered prior to and during construction
  - Email is monitored by staff during normal business hours