US Army Corps
of Engineers®

Pittsburgh District

Planning and Environmental Branch
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222

Public Notice Date: 2 September 2022
Expiration Date: 17 September 2022

NOTICE OF AVAILABILITY

Draft Environmental Assessment

Misty Lane and Cove Run Sewer Line Replacement and Extension
North Union Township, Fayette County, Pennsylvania

The U.S. Army Corps of Engineers, Pittsburgh District (USACE) is evaluating a Federal funding request for proposed construction of the North Union Township Misty Lane and Cove Run Sewer Line Replacement and Extension Project in Fayette County, Pennsylvania. The proposed project includes replacement of damaged segments of existing sewer line and construction of new sewer line to expand the service area. Section 313 of the Water Resources Development Act (WRDA) of 1992 (Public Law 102-580), as amended, allows to the Corps to consider reimbursement for design and/or construction of environmental infrastructure projects in Pennsylvania.

The USACE invites submission of comments on the environmental impact of the approval of the request. The USACE will consider all submissions received before the expiration date of the public comment period. The nature or scope of the proposal may be changed upon consideration of the comments received.

The draft Environmental Assessment and draft Finding of No Significant Impact are available electronically at:

http://www.lrp.usace.army.mil/Missions/Planning-Programs-Project-Management/

Comments can be submitted to the address posted at the top of this notice or via email to Jennie.M.Brancho@usace.army.mil. Comments must be received by 17 September 2022 to ensure consideration.

DRAFT FINDING OF NO SIGNIFICANT IMPACT

Misty Lane and Cove Run Sewer Line Replacement and Extension
North Union Township, Fayette County, Pennsylvania

The U.S. Army Corps of Engineers, Pittsburgh District (Corps) is presenting an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The DRAFT Environmental Assessment (EA), dated November 2021 and last revised July 2022, for the Misty Lane and Cove Run Sewer Line Replacement and Extension project, located in North Union Township, Fayette County, Pennsylvania, evaluates potential environmental impacts associated with sewer line replacement, and sewer line extensions proposed for federal funding under the Section 313 program. The Water Resources Development Act (WRDA) of 1992 (Public Law 102-580), as amended, allows the Corps to consider reimbursement for design and/or construction of environmental infrastructure in Pennsylvania.

The DRAFT EA considered two alternatives for the proposed sewage improvements. The preferred alternative, ultimately the Proposed Federal Action, includes federal funding for sewage improvements including:

- construction of a 12” gravity line and replacement of damaged segments of the existing 8” line within the Misty Lane Service Area, and
- construction of 9,851 linear feet of sewer line and 55 service connections within the Cove Run Service Area.

In addition to the preferred alternative, a “no action” alternative was evaluated, which includes construction and replacement of the sewer lines without federal funding. For both the no action and the preferred alternative, the potential effects to the following resources were evaluated:

Environmental Resource	Minor effect	No effect
Soils and topography	☒	☐
Aquatic resources	☒	☐
Wetlands	☐	☒
Floodplains	☒	☐
Terrestrial resources	☒	☐
Air quality	☒	☐
Noise	☒	☐
Aesthetics	☒	☐
Public infrastructure (utilities)	☐	☒
Transportation	☒	☐
Socioeconomic conditions	☒	☐
Child health and safety	☒	☐
Environmental justice	☐	☒
Fish and wildlife habitat	☒	☐

Water quality	☒	☐
Land use	☐	☒
Geology	☐	☒
Prime and unique farmlands	☐	☒
Threatened and endangered species	☐	☒
Designated natural areas	☐	☒
Climate change	☐	☒
Cultural resources and historic properties	☐	☒
Recreation	☐	☒
Hazardous, toxic, and radioactive substances	☐	☒
Invasive species	☐	☒
Cumulative effects	☒	☐

Minor temporary stream impacts will occur where the sewer lines cross Cove Run and tributaries to Cove Run. No compensatory mitigation is required.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the Corps determined that the preferred alternative will have no effect on threatened or endangered species. The preferred alternative will have no effect on designated critical habitat.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, the Corps subsequently determined that the Proposed Federal Action has no effect on historic or cultural resources. Correspondence dated 29 June 2021 from the Pennsylvania State Historic Preservation Office (PA SHPO) stated that the proposed project will have no effect on historic properties. The Corps requested concurrence from PA SHPO on the determination that the Proposed Federal Action will not affect historic properties via letter dated 3 August 2022. PA SHPO concurred with this determination via letter dated 31 August 2022.

Pursuant to the Clean Water Act of 1972 (CWA), as amended, temporary stream impacts are proposed where the sewer lines cross Cove Run and tributaries to Cove Run. General permits were obtained from the Pennsylvania Department of Environmental Protection authorizing the discharge of fill under Section 404 of the CWA. The project received CWA Section 401 Water Quality Certification as part of the general permit authorization.

A 15-day public comment period will occur from 2 September 2022 to 17 September 2022. The Corps will consider all submissions received before the expiration date of the public comment period. The nature or scope of the proposal may change upon consideration of the comments received. If significant effects on the quality of the human environment are identified during public comment which cannot be mitigated, the Corps will initiate an Environmental Impact Statement (EIS) and afford all of the appropriate public participation opportunities attendant to an EIS.

After having carefully evaluated all aspects of the Proposed Federal Action and based on the DRAFT EA, I have reasonably concluded that the Proposed Federal Action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not required and will not be prepared.

_____
Date

_____
ADAM J. CZEKANSKI
Colonel, Corps of Engineers
District Commander

ENVIRONMENTAL ASSESSMENT

MISTY LANE AND COVE RUN

Sewer Line Upgrade and Extension Project

November 2021
Revised January 2022
Revised February 2022
Revised March 2022
Revised May 2022
Revised June 2022
Revised July 2022

Prepared for:

North Union Township Municipal Services Authority
120 Commonwealth Drive
Lemont Furnace, PA 15456

Prepared by:
McMillen Engineering, Inc.
Civil Engineers, Land Surveyors
115 Wayland Smith Drive
Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

2019-138

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Executive Summary

McMillen Engineering, Inc. prepared an Environmental Assessment (EA) for the North Union Township Municipal Services Authority (NUTMSA) to determine whether or not federal funding for sewer line improvements and extension of public sewerage in North Union Township, Fayette County, Pennsylvania, has the potential to cause significant environmental effects. Section 313 of the Water Resources Development Act of 1992, as amended (hereafter Section 313), directs the United States Army Corps of Engineers (Corps) to provide funding for design and construction to non-Federal interests for water-related environmental infrastructure and resource development and protection projects.

The NUTMSA owns, operates, and maintains the sewerage system that serves North Union Township. The NUTMSA is part of a regional sewerage system with two other municipalities (South Union Township and the City of Uniontown) with treatment at the Greater Uniontown Joint Sewage Treatment Plant.

This EA is prepared in accordance with the National Environmental Policy Act of 1969 (NEPA). The alternatives identified for this project are the Proposed Action to receive Federal Funding for the design and construction of sewer line replacement and extension or No Action (no Federal funding). It has been determined that the NUTMSA would design and construct even if no Federal funding is provided; therefore, the Proposed Action and No Action would result in the work being completed.

All social and environmental factors are considered, including the cumulative effects thereof. This EA includes a summary of the effects of both the Proposed Action and No Action alternative for all categories. The proposed project is expected to cause short-term, minor, adverse impacts to soils, aquatic resources, floodplains, terrestrial resources, air quality, noise, aesthetics, utilities, transportation, socioeconomic conditions, child and health safety, fish and wildlife habitat, and water quality. Many of these minor impacts are expected to occur during the installation of sewer lines. Short-term benefit to the socioeconomic conditions is employing local workers to assist with construction. The long-term benefits of the improved public sewer system are to lessen the environmental impact of malfunctioning on-lot systems and wildcat sewers in the community. Access to the public sewer system will alleviate issues currently experienced by the community, including leaking septic tanks and associated health risks.

Based on this evaluation of the environmental effects, there are no significant impacts from the Proposed Action, and a Finding of No Significant Impact should be executed.

1.0 INTRODUCTION

1.1 Project Authority

Section 313 of the Water Resources Development Act of 1992 (Public Law 102-580), as amended, directs the U.S. Army Corps of Engineers (Corps) to identify and provide design and construction assistance to non-Federal interests for water-related environmental infrastructure and water resource development and protection projects in south central Pennsylvania (as amended).

Prior to providing design and construction assistance for a project, the Corps requires a Project Partnership Agreement (PPA), which is executed by the Corps and the non-Federal sponsor. The Section 313 Program provides for a federal contribution of 75 percent of the total project cost and 25 percent contribution from the non-Federal sponsor. The non-Federal interest receives credit for lands, easements, rights-of-way, and relocation towards its share of project cost, but not to exceed 25 percent of the total project cost. The non-Federal sponsor is responsible for operation and maintenance cost at 100 percent.

1.2 Project Background

The Misty Lane and Cove Run service areas consist of replacing an undersized line, extending sewer lines, and installing pump station in North Union Township, Fayette County, Pennsylvania. Refer to Appendix A for mapping of the area.

The non-Federal sponsor for this project is NUTMSA. The consulting engineering firm for the project is McMillen Engineering, Inc., who is responsible for the design and applying for applicable permits for the action and inspections during construction.

The NUTMSA has received funding from previous awards from the Corps with the most recent funding being awarded for the community of Bethelboro.

1.3 Purpose and Need

The service area, which is known as Misty Lane, is currently served by an 8" diameter line. The existing 8" diameter line has no capacity for new flow and portions of the line need replaced to continue accepting existing flow. The selected alternative for the Misty Lane area is to install a 12" diameter line to be placed parallel to the existing 8" diameter line and to repair portions of the 8" diameter line. There are no new EDUs in the Misty Land area, however, 12" diameter line will convey flows from the Cove Run area.

There are no existing municipal sewage collection and treatment facilities located in the Cove Run service areas. Sewage in this service area is primarily treated by using on-lot disposal systems (OLDS). The four primary types of OLDs found Cove Run service area are as follows.

1. Septic tank with absorption bed

2. Septic tank with absorption trenches
3. Septic tank without proper absorption
4. Wildcat sewers

The OLDS malfunctions in the Cove Run Service Area involve sewage draining into the stream which parallels Yauger Hollow Road. This unnamed stream is a tributary to Cove Run. In many areas along Yauger Hollow Road, there is a prominent odor of sewage near the stream. Based on the number of confirmed, suspected, and potentially malfunctioning systems within the Cove Run service area, it was determined to have a public health need.

The existing NUTMSA sewage collection facilities are located at the western end of Yauger Hollow Road. Existing on-lot systems are failing and allowing untreated sewage to enter the groundwater and an unnamed tributary to Cove Run. The chosen alternative for this area is to extend the sewer line along Yauger Hollow Road. This new line will connect an additional 70 Equivalent Dwelling Unit (EDUs) to the system.

Public health needs are considered to include needs associated with health hazards and water pollution associated with problems that involve discharging untreated or inadequately treated sewage to the surface of the ground or to the waters of the Commonwealth (including groundwater). The purpose of the project is to resolve the public health need by establishing an adequate plan for community wide removal of residential sewage for currently un-sewered areas of North Union Township, Fayette County.

1.4 Scope of the Environmental Assessment

The Section 313 Program provides authority to the Corps to fund the Federal share of the design and construction cost of the project. The funding would constitute a major Federal action, and an Environmental Assessment is required. To assess the impacts of the funding action, McMillen Engineering, Inc. prepared the Environmental Assessment to evaluate the potential environmental and socioeconomic impacts from design, construction, and operation of the Proposed Action.

1.5 Public Involvement

Fayette Engineering Company (former consultant to NUTMSA) submitted the scope of work to begin consultation with the Pennsylvania Historical Museum and Commission in June 2013 (Appendix F). McMillen Engineering, Inc. sent a request, dated June 29, 2021, for Pennsylvania Historic and Museum Commission (PHMC) inquiring if another clearance needed requested because the original PHMC clearance was from 2013. PHMC responded to McMillen Engineering, Inc. that if the scope has not changed from the original clearance in 2013, no additional clearance is required. McMillen Engineering, Inc. stated the scope of work remains the same.

A Pennsylvania Natural Diversity Inventory (PNDI) was prepared which resulted in no further review by PA Game Commission, PA Department of Conservation and Natural Resources, PA Fish and Boat Commission, and U.S. Fish and Wildlife Service. The PNDI was prepared on February 17, 2021 and is included in Appendix E.

A Public Notice, prepared on December 1, 2021 by McMillen Engineering, Inc., was submitted to various agencies for review and asked for comments within 15 days. A copy of the agency's correspondence is included in Appendix E.

A Notice of Availability announcing the availability of the Environmental Assessment and Finding of No Significant Impact will be provided by the Corps to those who received a copy of the Public Notice.

2.0 PROPOSED ACTION

Under the Proposed Action, the Corps would provide funding in accordance with Section 313 Program for the proposed sewer line improvements and extension of public sewer service. The NUTMSA is proposing to replace a portion of the existing sewer line and to install a new parallel sewer line in the Misty Lane Service Area and to extend public sewer service to those currently served by individual on-lot systems in the Cove Run Service Area.

The work proposed in the Cove Run Service Area consists of replacing the existing on-lot sewage disposal systems with a new gravity sewer collection system along Yauger Hollow Road connecting approximately 70 EDUs to the system. This alternative will eliminate numerous malfunctioning systems in the area and discharges into the unnamed tributary to Cove Run which parallels Yauger Hollow Road. The existing sewage treatment plant has adequate capacity to manage the additional flows.

The work proposed in the Cove Run Service Area consists of:

1. Sewer line will be 9,851 linear feet of line
2. Twelve (12) stream crossings
3. Fifty-five (55) service connections

Refer to Appendix A for Development Plans.

The work proposed in the Misty Lane Service Area consists of:

1. Construction of a 12" gravity line starting on Misty Lane to parallel an existing 8" line in Lemont Furnace. The 12" gravity line will tie into an existing manhole which contains a 12" line carrying flows downstream.
2. Replace segments of the existing 8" line as it will continue to convey flows from the Misty Lane area.

Refer to Appendix A for Development Plans.

The total amount in Federal funds that has been allocated for the project is $1.2 million. The PPA, executed on September 18, 2021, states that the total cost for the project is $1.6 million; whereas, at a 75/25 percent cost sharing, the projected Federal share is $1.2 million, and the projected non-Federal sponsor share is $400,000.00.

3.0. ALTERNATIVES TO PROPOSED ACTION

The National Environmental Policy Act (NEPA) requires the Environmental Assessment to evaluate all reasonable alternatives to the Proposed Action, including if No Action was selected. The proposed scope of work will be completed with or without Federal funding.

3.1 No Action Alternative

Under the No Action Alternative, the Corps will not provide any Federal funds to NUTMSA for the proposed project. The NUTMSA would design and construct this project without Section 313 Program funding. The NUTMSA would secure funding from other sources. The NUTMSA is committed to providing public sewage to residents who are:

1. Experiencing malfunctioning on-lot systems; or
2. Experiencing leaks in an existing pipe with inflow and infiltration because of a faulty manhole cover; or
3. Located within an area in which the existing line is undersized for the flow.

Residents ask when existing problems will be resolved and request extension of the public sewage during monthly meetings held by NUTMSA.

4.0 EXISTING CONDITIONS

This section of the Environmental Assessment describes the existing environmental conditions. The impact the proposed action is detailed in Section 5.

Each resource was reviewed for its applicability to the Proposed Action. Resource categories clearly not applicable to the alternatives were screened from further evaluation, whereas those affected resources applicable to the Proposed Action are discussed further in Section 5.0 Environmental Effects.

The Project Area includes Misty Lane Service Area and Cove Run Service Area. Both service areas have been previously disturbed. The proposed work will be in both existing ROWs and easements secured by the Authority. The limit of disturbance is shown on the Development Plans in Appendix A.

§4.1 Soils and Topography
The topography along the Misty Lane gravity sewer portion of the project is primarily gently undulating and the majority of the layout follows the contour of the abandoned railroad grade that is located along the length of the project. The Cove Run portion of the project is gently sloped near the downstream connection point and roughly follows a similar contour as the adjacent UNT of Cove Run along Yauger Hollow Road; gaining steepness as the layout approaches the terminal end of the proposed sewer line.

The soil survey map and descriptions were obtained from the U.S. Department of Agriculture's National Resources Conservation Service website. The maps (Appendix C) shows the kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The limitations cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

§4.2 Aquatic Resources
Both streams in the Project Area are Warm Water Fishery but neither are trout streams. The Authority recognizes that existing malfunctioning systems are causing pollutants being domestic sewage to enter the Commonwealth waterways. Any pollutants can impact the aquatic resources, even downstream where other aquatic life resources are more abundant.

§4.3 Wetlands
Wetlands are in the Misty Lane service area but not the Cove Run Service Area. Appendix D includes the National Wetland Inventory mapping for each area and the Misty Lane Service Area Wetland Determination, dated August 25, 2021, prepared by Parker Consultants.

§4.4 Floodplains
All of the Cove Run portion of the project (along Yauger Hollow Rd) and the majority of the Misty Lane section of the project will be an Area of Minimal Flood Hazard, Zone X. The lower portion of the Misty Lane project will be in the Special Flood Hazard Area, Zone AE and is shown in the Appendix G FEMA FIRM Map.

§4.5 Terrestrial Resources
The Project Area is built-up residential. The terrestrial resources are identified wildlife for the area (birds, rabbits, deer, racoons, snakes, bear, mice, squirrel, and chipmunks). There are no known sensitive resources present. The proposed sewer line will be constructed in existing rights-of-ways or granted easements from the property owner.

§4.6 Air Quality
Fayette County is a designated attainment area for pollutants, as per the Pennsylvania Department of Environmental Protection database.

§4.7 Noise
There are no industrial/manufacturing operations in the area. The average daily noise is vehicular traffic with occasional emergency vehicle or public transit provider, routine lawncare (lawnmowers), and children outside playing.

§4.8 Aesthetics
The aesthetics in the Project Area are residential properties. The Project Area includes residential buildings, landscaping, and open spaces. In the Misty Lane portion of the project the existing homes are primarily old company homes that are duplex in style. In the Cove Run section of the project the homes are primarily frame single family homes with a mix of brick and siding veneer. There are also a few mobile homes mixed within the Project Area.

§4.9 Utilities
Both service areas are currently served by public water, electric, gas, and public sewage (in the Misty Lane area only).

Cove Run Service Area is served by individual malfunctioning on-lot systems, including some properties having wildcat sewer systems which are not permitted by the PA DEP.

The Misty Lane Service Area has an existing 8" sewer line that is over capacity for current flows; thus, unable to accept additional flows. Also, there are portions of the 8" line that are damaged and need to be replaced.

§4.10 Transportation
There is normal vehicular traffic in the Project Area. These areas are residential land use.

§4.11 Socioeconomic Conditions
The service areas are both older communities with a mix of working or retired individuals. The mean household income for North Union Township is $45,687.00. The service area appears to be consistent with the census data.

§4.12 Child Health and Safety
The area of construction is a residential community. At any time, depending on the time of year, there may be children around.

§4.13 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the president on February 11, 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health and environment of minority and low-income populations to the greatest extent practicable and permitted by law.

Minority populations, as defined by the "Environmental Justice Guidance Under NEPA," includes persons who identify themselves as Asian or Pacific Islander, Native American or Alaskan Native, Black, or Hispanic. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations are identified using poverty threshold, which is based on income and family size. The Census Bureau defines a "poverty area" as a census tract with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level.

According to the Census of 2010 (U.S. Census Bureau, released June 2011), the population in North Union Township is 12,733 people with total households being 5,411. The population by races included 94.7% white, 3.2% Black/African American, 0.1% Native American, and 2.0% other race. The median family income level is $49,067 and the per capita income is at $23,068. Approximately 12.1% families are below the poverty level and 17.1% of the population was below the poverty line. North Union Township is not identified as an Environmental Justice Area.

§4.14 Fish and Wildlife Habitat

Current users in Cove Run have individual on-lot sewage systems that are malfunctioning. If sewage is only partially treated before it is disposed of, sewage can contaminate waters and land, harming both aquatic and terrestrial wildlife.

Current users in Misty Lane are served by the public sewer system, However, the 8" line has areas that need rehabilitated and the existing 8" line is not large enough to accept additional flows; thus, the parallel line is proposed.

There are streams and wooded areas in the Project Area.

§4.15 Water Quality

Those properties currently served by an individual on-lot sewage system (Cove Run) were installed before PADEP regulations; thus, water quality standards are not currently applicable to these systems; therefore, aquatic life and national resources may be impacted by these existing systems.

Therefore, Misty Lane users having public sewer system are impacting the water quality because the 8" line needs rehabilitation work.

§4.16 Land Use
The Project Area consists of residential dwellings and open space/vacant land.

§4.17 Geology
Existing bedrock geology throughout project length consists primarily of 3 Pennsylvanian Age formations including: Allegheny Formation Sandstone, Casselman Formation Shale, and Monongahela Group Limestone.

§4.18 Prime and Unique Farmlands
There is no identified prime farmland in the service area as defined by the U.S. Department of Agriculture.

§4.19 Threatened and Endangered Species
There are no listed species present under the authority of PA Game Commission, PA Department of Conservation and Natural Resources, PA Fish and Boat Commission, and U.S. Fish and Wildlife Services.

§4.20 Designated Natural Areas
There are no Wild or Scenic Rivers, Natural Parks, or Natural Forests in the Project Area.

§4.21 Climate
The Project Area climate is classified as humid continental with hot summers and year-round precipitation.

§4.22 Cultural Resources
Under the guidance of Pennsylvania Historic and Museum Commission (PHMC), any structure over 40 years old may be considered to be a cultural resource. The Project Area is not a designated a historic district. There are residential dwellings over 40 years old, however these structures are not designated historic structures.

§4.23 Recreation
There are no recreation areas present in the Project Area.

§4.24 Hazardous, Toxic, and Radioactive Substances
Refer to Appendix H for the Limited Phase I Hazardous, Toxic and Radioactive Waste Investigation. No hazardous, toxic, or radioactive substances/materials are known to be present in the Project Area.

§4.25 Invasive Species
Research of the USDA database of invasive and noxious plants, Pennsylvania had no results for the Project Area.

5.0 ENVIRONMENTAL EFFECTS

The Environmental Assessment of the Proposed Action was based on an evaluation of the impacts from design, construction, and operation of the proposed project. The No Action Alternative assumed that the NUTMSA will still proceed with the project if no Section 313 Program funding was available; therefore, the Environmental Effects are the same as those for either the Proposed Action or No Action Alternative.

Various agency reviews, permitting requirements, design, and construction activities are used to determine the environmental effects of the proposed project. Also considered is the operation of the project for long-term impacts after construction is complete.

Below details mitigation measures for the specific resource affected by the project. All mitigation is the responsibility of NUTMSA.

§5.1 Soils and Topography
While the Misty Lane Service Area is currently served by public sewage, there will be minor, short-term affect to the soils during the installation of the 12" sewer line parallel to the existing line and to the repair of segments of the existing 8" line.

The Cove Run Service Area too will have minor, short-term affect to soils during the installation of the sewer line. By providing public sewage in the Cove Run Service Area and by repairing segments of the 8" line in Misty Lane, the soils will improve by eliminating the contaminants/pollutants from the malfunctioning systems (Cove Run) and the existing line needing repairs (Misty Lane).

§5.2 Aquatic Resources
The Misty Lane stream crossings are approved by PADEP under General Permit Number GP055261520 9. The Cove Run stream crossings are approved by PA DEP under General Permit Number GP052618207. The Misty Lane area will make two stream crossing; whereas Cove Run area will make twelve stream crossings. Misty Lane drains into an unnamed Tributary to Cove Run. Both waterways are Warm Water Fishery, but neither are trout streams. Cove Run drains into Redstone Creek. Appendix I includes the permits.

The stream crossings in the Project Area constitute minor, short-term effects. There will be no permanent impact to the aquatic resources. The stream crossing permit must be complied with by the selected Contractor during construction.

§5.3 Wetlands
There is no proposed disturbance in or along identified wetlands in the Misty Lane service area. A wetland delineation was completed in the Misty Lane Service Area, August 25, 2021, prepared by Parker Consultants. Based on the wetland's delineation for Misty Lane, the Proposed Action will not disturb the wetlands and avoids them as shown on the Development Plans in Appendix A. No wetlands are present on the Cove Run area.

§5.4 Floodplains
There will be some segments of the line in the floodplain area. The Project Area is located in FIRM Map 4205C0366E as shown in Appendix G. There will be short-term adverse impacts during construction. The impact will be during excavation and backfill; however, at the end of construction, the two areas will be returned to the original contour.

§5.5 Terrestrial Resources
Disturbance of wildlife will be short-term during construction activities and will temporarily displace wildlife; however, upon completion wildlife may choose to return to the area. The proposed sewer line will be constructed in existing rights-of-way or granted easements from the property owner; whereas the sewer line will be fully underground.

§5.6 Air Quality
The Proposed Action will have short-term adverse localized effect on air quality due to emissions from construction equipment. No long-term effects are expected. The impacts will be de minimis. The methods to minimize emissions include avoidance of burning debris; and dampen roadways to minimize dust during construction and at the end of each day.

Air Quality impacts will temporary, localized, and construction related. Emissions will include dust and equipment exhaust because of the installation of the sanitary sewer lines. The impacts are temporary and localized and will not result in significant direct or indirect impacts to the population.

§5.7 Noise
There will be a short-term adverse effect during construction activities. Normal and ordinary measures to minimize noise during construction will be asked of the selected contractor. The Contractor will be asked for the construction equipment to be equipped with appropriate noise reduction mufflers. It is anticipated that the work will occur during typical construction hours and not take place in the evening hours or weekends.

During construction activity, the operating equipment will be near/at residential areas for connection to public sewage, but after the line is installed, loud equipment is removed.

§5.8 Aesthetics
The minor adverse impact will be visual aesthetics from construction equipment and excavation work for those adjacent to the site. The impact will be temporary and only during the construction activities.

§5.9 Utilities
There are no short-term or long-term adverse effects on utilities from this Proposed Action. A positive impact to extending sewer lines in the Cove Run Service Area is eliminating malfunctioning systems that are flowing into the ground and waterways. The Misty Lane Service Area is rehabilitating an existing 8" line and constructing a 12" line parallel to accept additional flows. Overall, this Proposed Action is a positive on all utilities as not only will existing infrastructure be rehabilitated but also the sewer line extension all for the overall operation of

the NUTMSA system to be as efficient and effective as possible in the Project Area, The utility demand for the extension of sanitary lines can be met by the Greater Uniontown Joint Sewage Authority.

§5.10 Transportation
Providing traffic control in accordance with Title 67 Chapter 212 of the Pennsylvania Code will mitigate the temporary effects to the transportation pattern. All easements will be secured prior to construction. There will be temporary road closures and detours during construction.

§5.11 Socioeconomic Conditions
There are no significant socioeconomic environmental consequences to the repair of existing sanitary lines and extension of sanitary lines. Short-term benefits are from temporary increase in design and construction workforce; however, the long-term effect of resolving I & I issues and extend public sewerage will allow the NUTMSA to have a more efficient system and eliminate environmental concerns of those individual properties with an on-lot system. The project will not result in any individual needing to relocate and there will be opportunities for employment in construction and technical services while under construction.

The Cove Run Service Area users will receive a monthly bill for public sewage. The Misty Lane Service Area users already pay a monthly bill for service. Fortunately, the NUTMSA has been proactive in securing funding from the Corps to keep the monthly user rate affordable for all users.

§5.12 Child Health & Safety
The potential impact to child health and safety is short-term, minor impact during construction activities. The contractor is responsible for the safety of all persons as well as public and private properties.

§5.13 Environmental Justice
As shown in Section 4.11, the proposed project is not considered to be an area of concentrated minority population or an area of concentrated poverty. Based on the analysis, the Proposed Action will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898. No further Environmental Justice analysis is required.

§5.14 Fish and Wildlife Habitat
The impacts to fish and wildlife habitat during construction will be minimized through compliance with all requirements of the PA DEP stream crossing permits. The Cove Run Service Area will be a directional bore method to eliminate impacts to the waterway. However, Misty Lane Service Area will be an open-cut method that will temporarily disturb the streambed, but restored upon completion.

§5.15 Water Quality
The connection to public sewage will eliminate the individual on-lot sewage systems. The connection to the public system will eliminate impacts to waterways and the environment of the Commonwealth caused by failing or deficient on-lot sewage systems. The construction will be conducted in accordance with the approved Erosion and Sediment Control Plan for the

project. Appendix A includes the plans for erosion and sediment control plan, which were approved on April 25, 2019 from the Fayette County Conservation District.

Compost filter socks will be used as the primary method of erosion and sediment control. Additionally, best management practices will be employed to minimize erosion and sediment pollution from leaving the site. The proposed BMPs will prevent any offsite sedimentation, or erosion impacts. The erosion control BMPs have been designed in accordance with the PA DEP Erosion and Sediment Pollution Control Program Manual.

§5.17 Land Use
The sewer line will not impact the current uses or any future development; thus, no impact to land use.

§5.18 Geology
No changes to geology are anticipated.

§5.19 Prime and Unique Farmlands
The Project Area includes farmland of statewide importance; whereas the proposed project will not convert farmland; thus, no impact.

§5.20 Threatened and Endangered Species
There are no listed species present under the authority of PA Game Commission, PA Department of Conservation and Natural Resources, PA Fish and Boat Commission, and U.S. Fish and Wildlife Services; thus, no impact.

§5.21 Designated Natural Acres
There are no Wild or Scenic Rivers, Natural Parks, or Natural Forests in the project area; thus, no impact.

§5.22 Climate
The project will have no effect on the climate.

§5.23 Cultural Resources
McMillen Engineering, Inc. reviewed the project area and determined that this project will have no impact on historic properties. McMillen Engineering, Inc. submitted this determination to the State Historic Preservation Office (SHPO), and the SHPO concurred on the no effect determination via email on 29 June 2021 (Appendix F). The Corps contacted the SHPO via letter dated 3 August 2022 to notify the SHPO that the Corps is the lead Federal agency for the project and confirm the no effect determination made by McMillen Engineering, Inc. The SHPO concurred with the Corps' determination via letter dated 31 August 2022 (Appendix F).

§5.24 Recreation
There are no recreation areas present in the Project Area; thus, no impact to the Project Area.

§5.25 Hazardous, Toxic, and Radioactive Substances
Refer to Limited Phase I Hazardous, Toxic and Radioactive Waste Investigation. No hazardous, toxic, or radioactive substances/materials are known to be present in the Project Area; thus, no

further discussion. The project expects to generate minimal to no hazardous waste, which would be disposed of according to State and Federal regulations.

§5.26 Invasive Species
There are no invasive species identified in the Project Area; thus, no impact.

§5.27 Cumulative Impacts
The definition of cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, or near future action regardless of what agency or person undertakes such other actions." Evaluations of cumulative impacts include consideration of the Proposed Action with known past and present actions, as well as near future actions.

The work proposed under the Section 313 Funding is to allow the NUTMSA provide sewer to additional users within their regional sewer system. There have been no significant adverse impacts associated with this work. There are no known other past, present, or future actions in the Project Area that would create significant impacts when considered in conjunction with the Proposed Action.

The long-term benefit of the Proposed Action will allow the NUTMSA to provide additional users public sewerage and, most importantly, decreasing pollution in the Commonwealth waterways due to the cessation of use of the malfunctioning individual sewage systems.

§5.28 Irreversible and Irretrievable Commitment of Resources
An irreversible or irretrievable commitment of sources refers to impacts on or losses to resources that cannot be recovered or reversed. Irreversible is a term that describes the loss of future options. It applies primarily to the impacts of use of nonrenewable resources, such as minerals or cultural resources, soil productivity, which are renewable only over lengthy periods of time. Irretrievable is a term that applies to the loss of production, harvest, or use of natural resources. For example, if farmland is used for a non-agricultural event, some or all the agricultural production from an area of farmland is lost irretrievably while the area is temporarily used for another purpose.

Based on the Proposed Action by the NUTMSA, the short-term irreversible commitments of resources include planning and engineering costs, material and supplies and their cost, during construction cost of energy resources, labor cost, dust emission and noise (both temporary). No irretrievable commitment of resources would result from the Proposed Action.

6.0 CONCLUSION

McMillen Engineering, Inc. prepared the Environmental Assessment to determine whether or not Federal funding of the proposed North Union Township Municipal Services Authority (NUTMSA) for sewer line extensions and replacement of existing sewer line in Misty Lane and Cove Run Sewer Line Extension in North Union Township, Fayette County, Pennsylvania, as authorized under Section 313 of the Water Resources Development Act has potential to cause significant environmental effects.

Under the Proposed Action, the Corps would provide 75 percent of the design and construction costs of $1.6 million for the proposed scope of work.

Below is a summary of the Effects of the Proposed Action and the No Action Alternative:

RESOURCE	PROPOSED ACTION	NO ACTION ALTERNATIVE
Land Use	No Effect	No Effect
Geology	No Effect	No Effect
Soils and Topography	Short-term, minor impact	Short-term, minor impact
Prime and Unique Farmlands	No Effect	No Effect
Aquatic Resources	Short-term, minor impact	Short-term, minor impact
Wetlands	No Effect	No Effect
Floodplains	Short-term, minor impact	Short-term, minor impact
Terrestrial Resources	Short-term, minor impact	Short-term, minor impact
Threatened and Endangered Species	No Effect	No Effect
Designated Natural Areas	No Effect	No Effect
Climate	No Effect	No Effect
Air Quality	Short-term, minor impact	Short-term, minor impact
Noise	Short-term, minor impact	Short-term, minor impact
Cultural Resources	No Effect based on PHMC Response	No Effect based on PHMC Response
Aesthetics	Short-term, minor impact	Short-term, minor impact
Recreation	No Effect	No Effect
Utilities	Short-term, minor impact; Long-term benefit to the sewer system	Short-term, minor impact; Long-term benefit to the sewer system

Transportation	Short-term, minor impact	Short-term, minor impact
Socioeconomic Conditions	Short-term, minor impact	Short-term, minor impact
Hazardous, Toxic, and Radioactive Substances	No Effect	No Effect
Child Health and Safety	Short-term, minor impact	Short-term, minor impact
Environmental Justice	No Effect	No Effect
Invasive Species	No Effect	No Effect
Fish and Wildlife Habitat	Short-term, minor impact	Short-term, minor impact
Water Quality	Short-term, minor impact	Short-term, minor impact

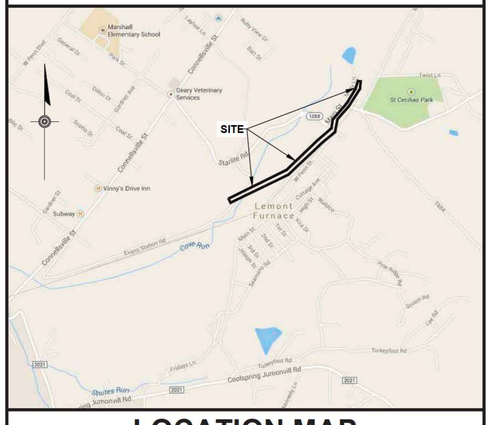
Based on the analysis and evaluation of the environmental effects described in Section 5.0, there are no significant impacts from the Proposed Action, and a Finding of No Significant Impact will be prepared.

7.0 APPENDICES

Appendix A	Development Plan
Appendix B	USGS Location Map
Appendix C	Soil Map
Appendix D	National Wetland Inventory Map
Appendix E	Agency Coordination
Appendix F	PHMC Correspondence
Appendix G	Floodplain – FEMA Firmette Map
Appendix H	Limited Phase I Hazardous, Toxic, and Radioactive Waste Investigation
Appendix I	Stream Crossing Permits

APPENDIX A
DEVELOPMENT PLAN

INDEX OF DRAWINGS



LOCATION MAP

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SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01

PREPARED FOR

NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY

120 COMMONWEALTH DRIVE, SUITE 101
LEMONT FURNACE, PA 15456

OCTOBER 2015
NOVEMBER 2015 (Revised)
MAY 2016 (Revised)
FEBRUARY 2018 (Revised)
April 2021 (Revised)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

PREPARED BY

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

UTILITY COMPANIES

1. Gas
   Texas Eastern / Spectra
   Contact Person: Randy Putt
   Phone Number: (724) 425-2115

2. Sewage
   North Union Township Municipal Authority
   Contact Person: Bob Softcheck
   Phone Number: (724) 323-2339

3. Water
   Pennsylvania American Water Authority
   Contact Person: Clayton Wene
   Phone Number: (724) 880-3809

   North Fayette County Municipal Authority
   Contact Person: Robert Softcheck
   Phone Number: (724) 626-1211

4. Electric
   West Penn Power
   Contact Person: USIC Locating Services Personnel
   Phone Number: (724) 425-2665

5. Telecommunications
   Verizon Pa, Inc.
   Contact Person: Mike Fowkes
   Phone Number: (724) 838-5805

6. Cable
   Atlantic Broadband
   Contact Person: Mark Billek
   Phone Number: (724)439-1233

LEGEND

T	Existing Telephone (Overhead)
UT	Existing Telephone (Underground)
W	Existing Water Line
S	Existing Sanitary
FM	Existing Sanitary Force Main
G	Existing Gas Line
E	Existing Electric (Overhead)
UE	Existing Electric (Underground)
	Existing Stormwater
C	Existing Cable
UC	Existing Cable (Underground)
T	Proposed Telephone
W	Proposed Water Line
S	Proposed Sanitary Sewer
G	Proposed Gas Line
E	Proposed Electric
	Proposed Stormwater
C	Proposed Cable
OP	Proposed Fiber Optic
E/T/C	Proposed Electric, Cable, Telephone (Underground)
	Traffic Signal Pole
	Existing Inlet
	Water Valve
	Water Line Marker
	Water Meter
	Gas Valve
	Gas Line Marker
	Gas Meter
	Utility Pole
	Guy Wire
	Sign
	Light Pole
	Existing Fire Hydrant
SS	Existing Sanitary Manhole
ST	Existing Stormwater Manhole
MH	Utility Manhole
T	Transformer Pad
E	Electrical Box
	Existing Yard Drain
	Handicap Parking Stall
	Proposed Inlet
	Proposed Yard Drain
	Proposed Stormwater Manhole
S	Proposed Sanitary Manhole
	Proposed Fire Hydrant
	Fence Line
Top	Top of Inlet
Invert	Invert Elevation
T.C.	Top of Curb
B.C.	Bottom of Curb
T.W.	Top of Wall
B.W.	Bottom of Wall
R	Radius
	Tree
	Shrub
	Curb
	Mailbox
X 1192.85	Spot Elevation
BM 1	Benchmark (#1)
P	Pedestal
	Concrete
	Pavement
	Concrete Parking Block

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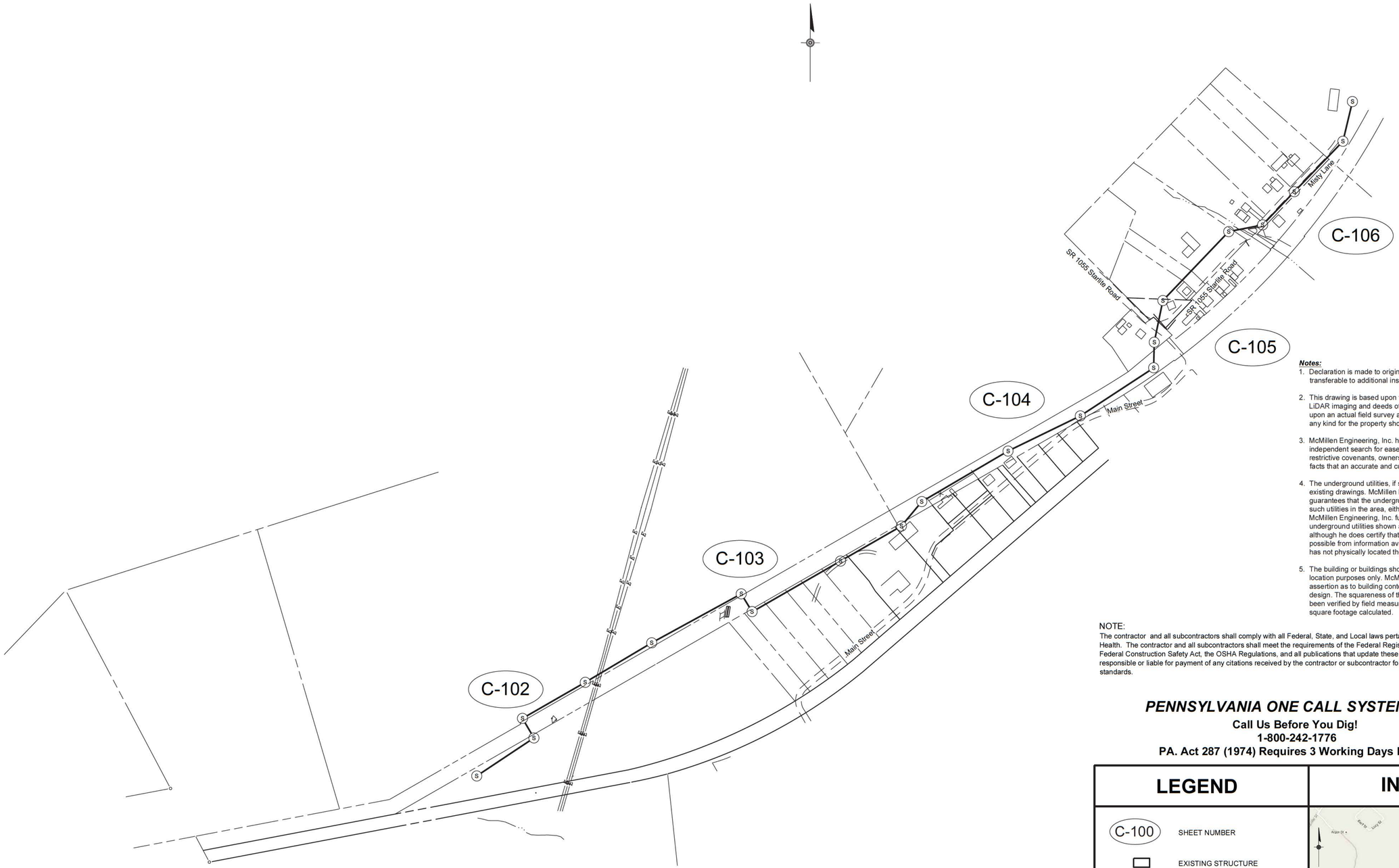

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4. The underground utilities, if shown, have been located from existing drawings. McMillen Engineering, Inc. makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. McMillen Engineering, Inc. further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. McMillen Engineering, Inc. has not physically located the underground utilities.
5. The building or buildings shown on this plan are shown for location purposes only. McMillen Engineering, Inc. makes no assertion as to building contents or conformity to architectural design. The squareness of the building or buildings has not been verified by field measurements which may affect the square footage calculated.

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LEGEND

C-100	SHEET NUMBER
	EXISTING STRUCTURE
	PROPOSED SANITARY LINE
S	PROPOSED SANITARY MANHOLE
	SERVICE CONNECTION*
	GATE VALVE
	LEGAL RIGHT OF WAY
	EDGE OF PAVEMENT
	ROAD CENTERLINE
	OUTSIDE EDGE OF SHOULDERS

*Final location to be field determined

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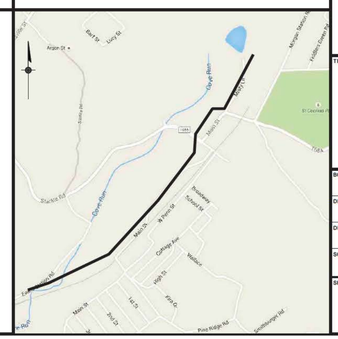

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civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
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MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

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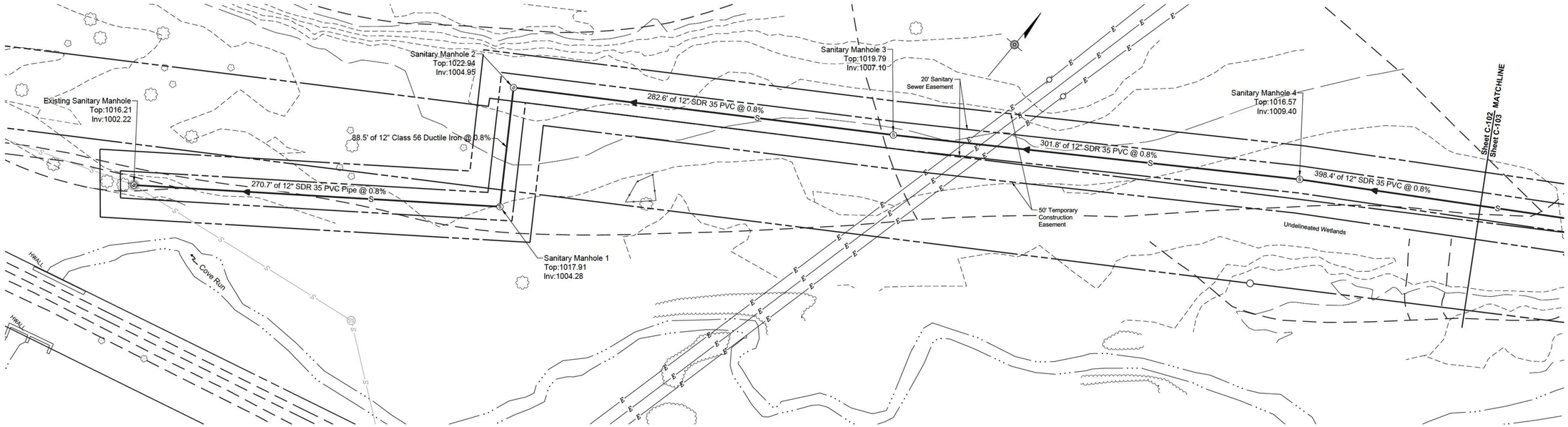

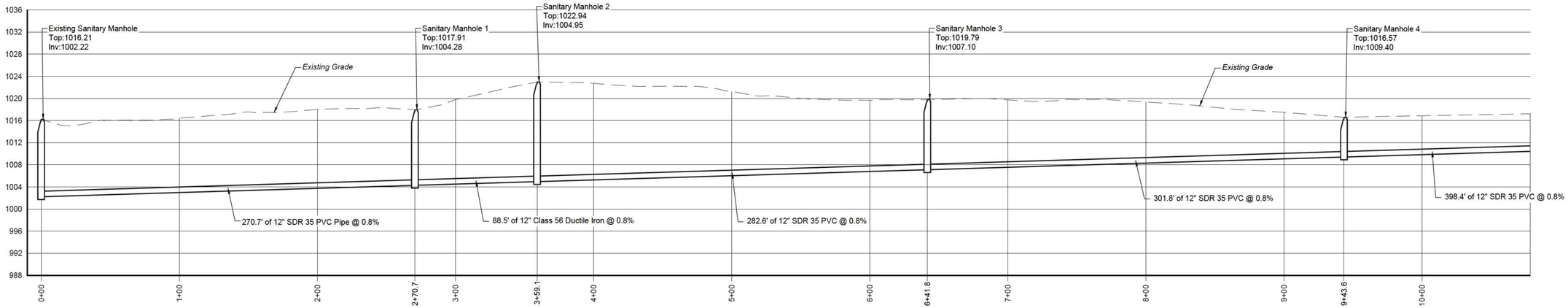

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40' 20' 0' 40' 80'
Bar Scale

LEGEND

- EXISTING STRUCTURE
- S — PROPOSED SANITARY SEWER
- (S) PROPOSED SANITARY MANHOLE
- LEGAL RIGHT OF WAY
- EDGE OF PAVEMENT

*Final location to be field determined

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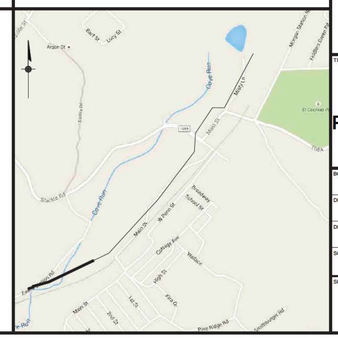

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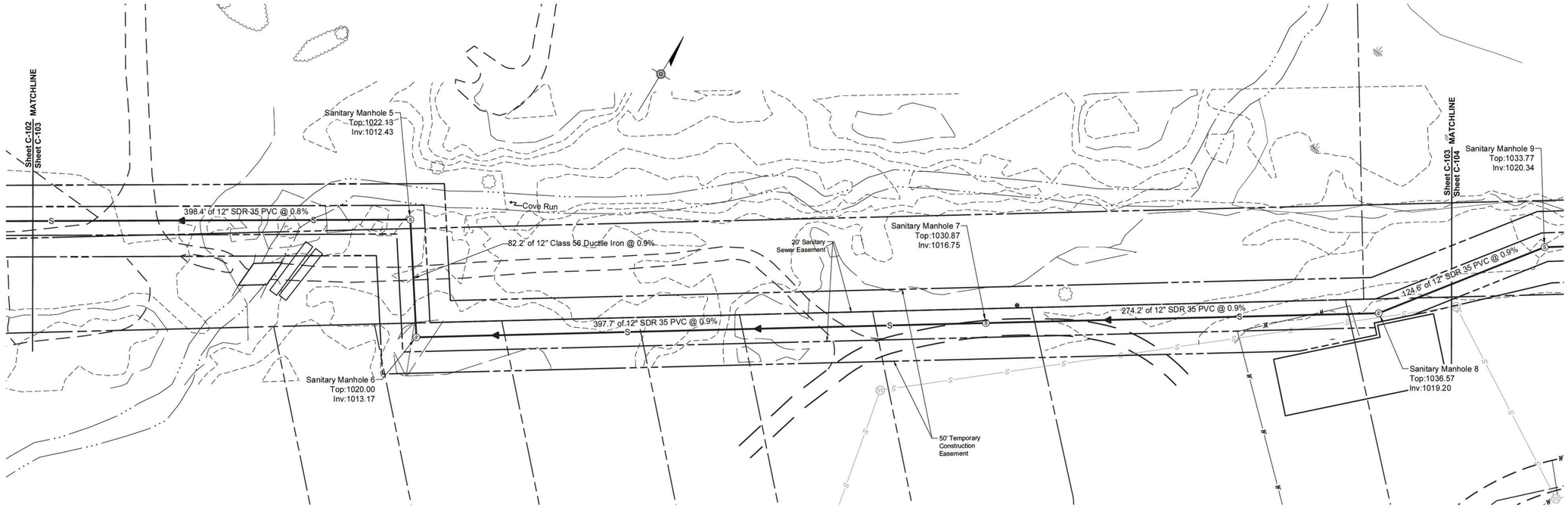

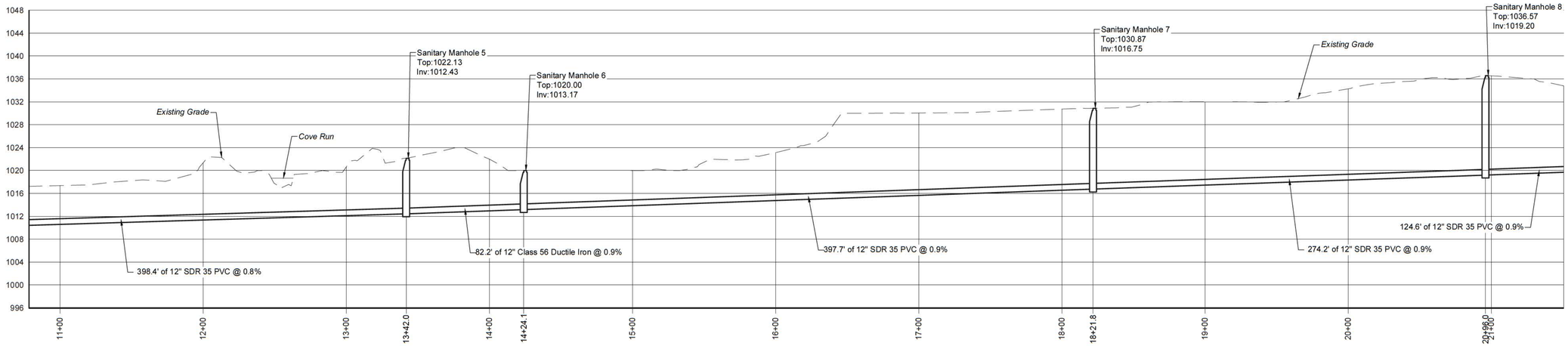

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Bar Scale

LEGEND

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- PROPOSED SANITARY MANHOLE
- LEGAL RIGHT OF WAY
- EDGE OF PAVEMENT

*Final location to be field determined

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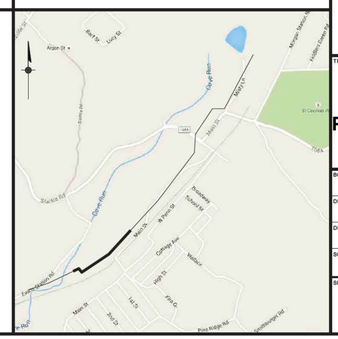

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Phone: 724-439-8110
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NORTH UNION TOWNSHIP, FAYETTE COUNTY, PENNSYLVANIA

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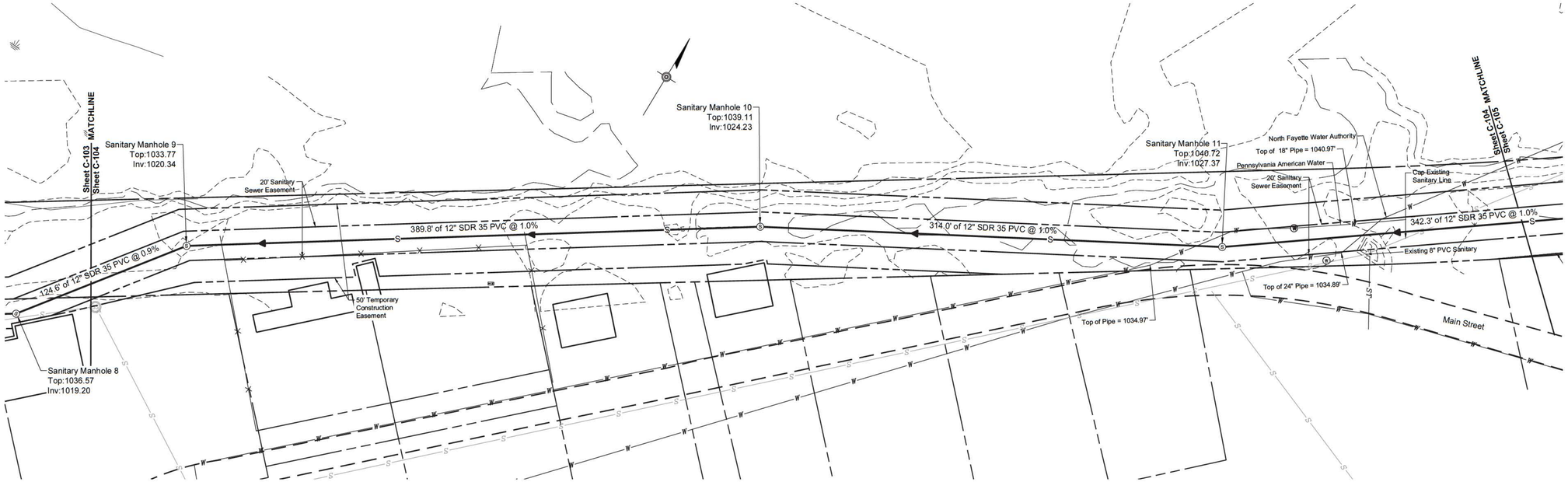

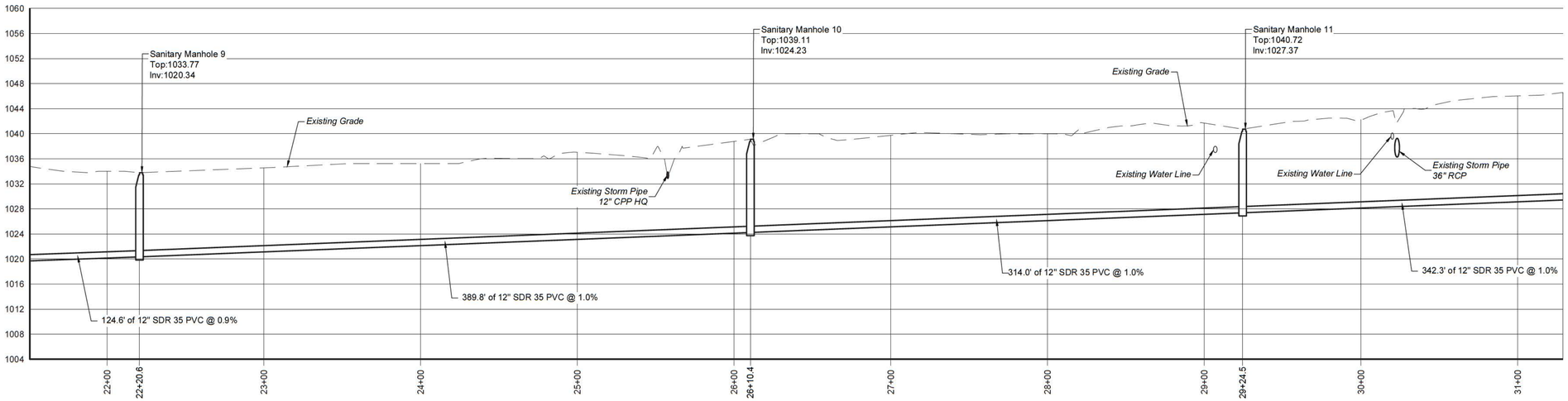

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Bar Scale

LEGEND

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- PROPOSED SANITARY MANHOLE
- LEGAL RIGHT OF WAY
- EDGE OF PAVEMENT

*Final location to be field determined

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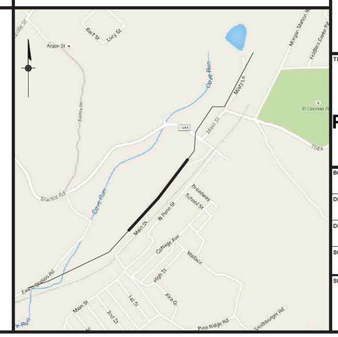

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CONTRACT 2019-01
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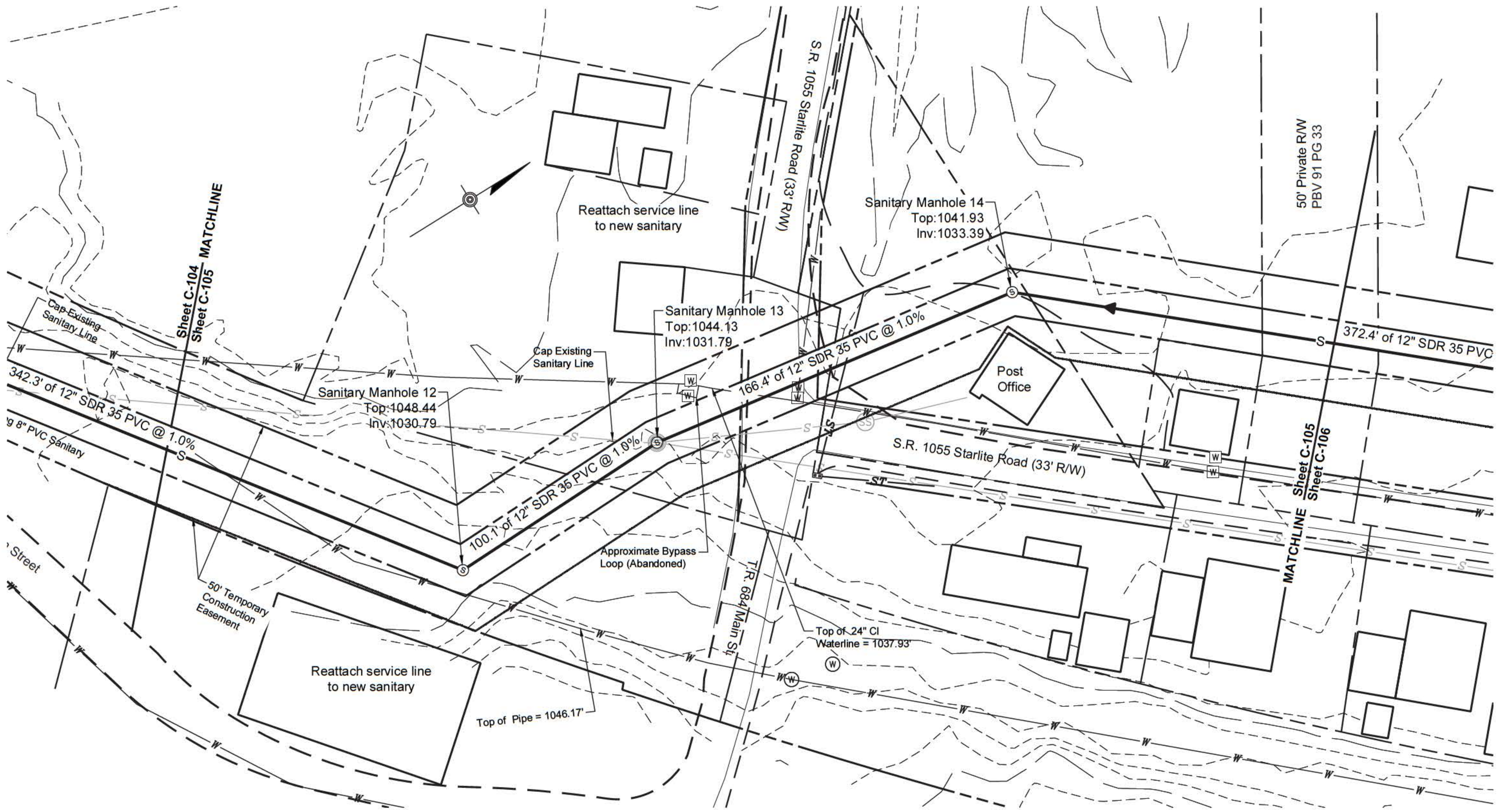

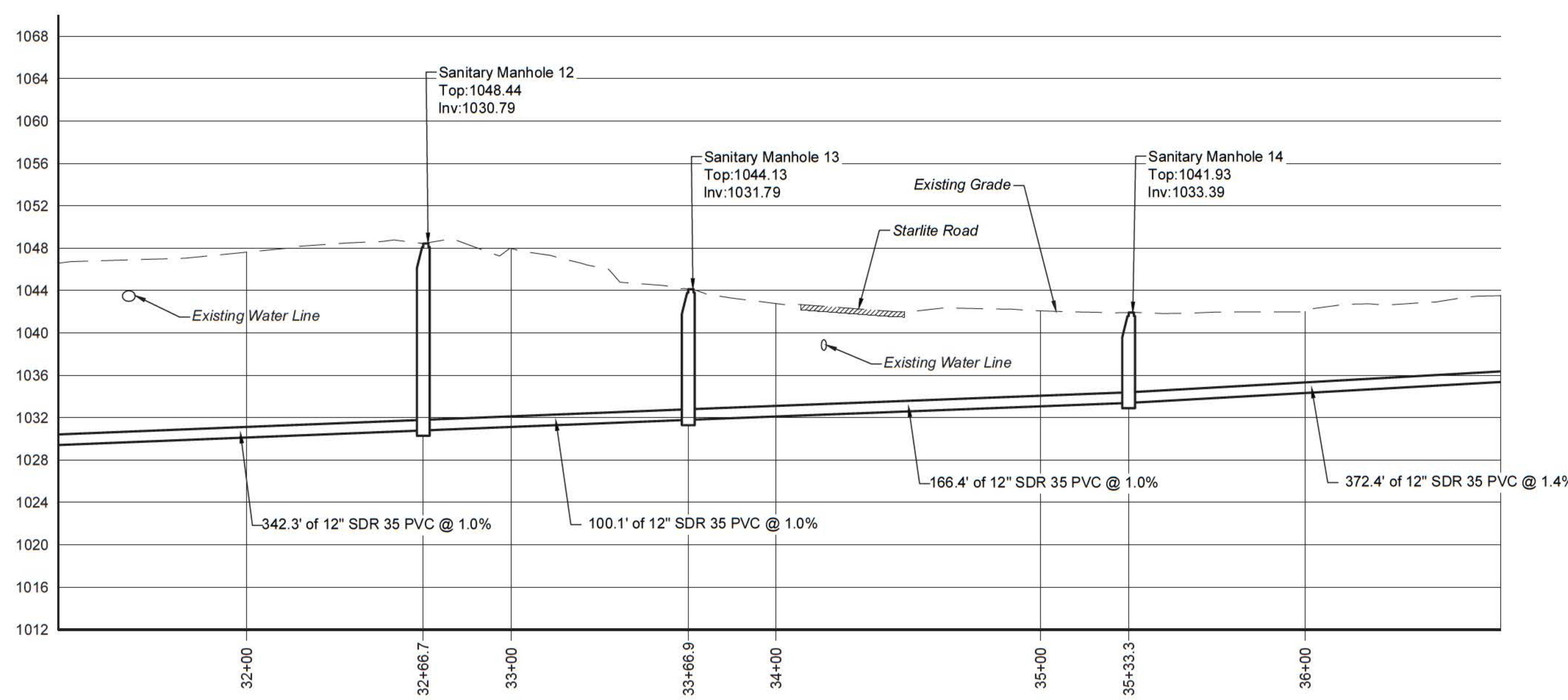

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Bar Scale

LEGEND

▭	EXISTING STRUCTURE
—S—▶—	PROPOSED SANITARY SEWER
Ⓢ	PROPOSED SANITARY MANHOLE
— - — -	LEGAL RIGHT OF WAY
— — —	EDGE OF PAVEMENT

*Final location to be field determined

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McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

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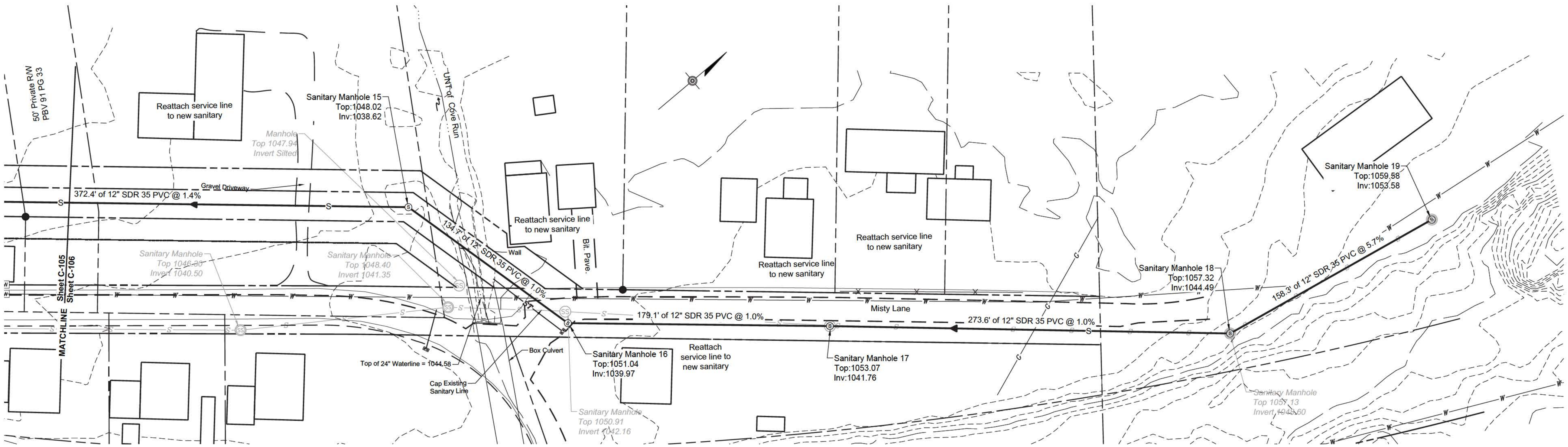

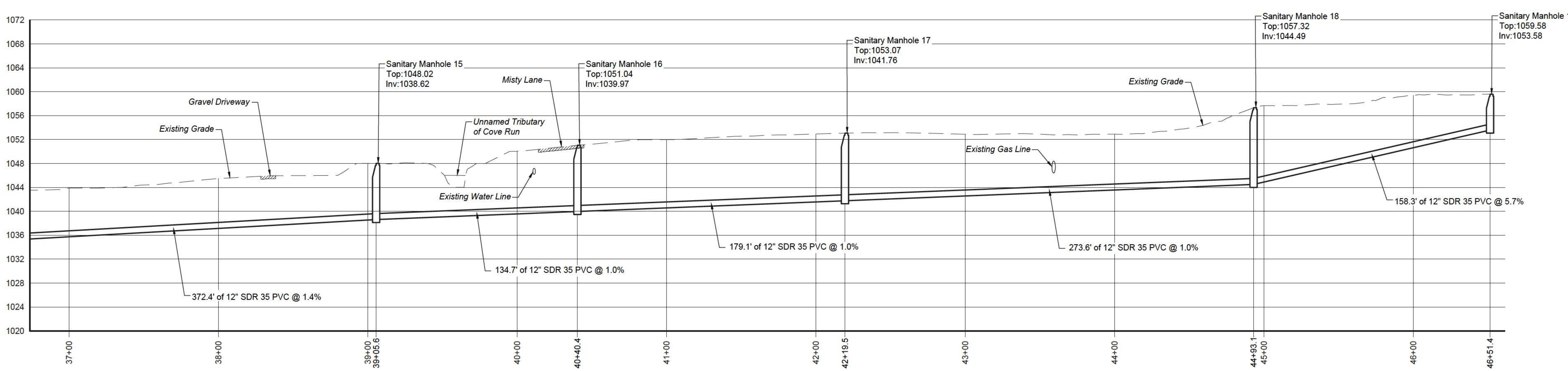

SANITARY SEWER PROFILE

NOTE:
The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.

PENNSYLVANIA ONE CALL SYSTEM, INC.
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PA. Act 287 (1974) Requires 3 Working Days Notice

Notes:
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40' 20' 0' 40' 80'
Bar Scale

LEGEND

▭	EXISTING STRUCTURE
—S—▶	PROPOSED SANITARY SEWER
Ⓢ	PROPOSED SANITARY MANHOLE
— - — - —	LEGAL RIGHT OF WAY
— — —	EDGE OF PAVEMENT

*Final location to be field determined

INDEX

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
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Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	Cap Existing Line.	4/29/21	JE

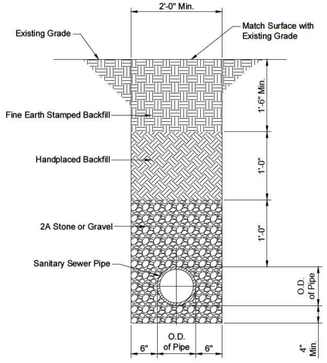
SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
CONSTRUCTION PLAN AND PROFILE

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	11/15/18	CHECKED JS	11/15/18
DESIGN JE	11/15/18	APPROVED TMJR	11/15/18

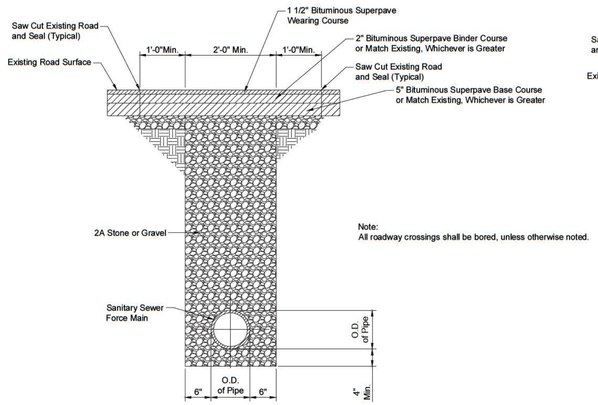
SCALE
AS NOTED

SHEET NUMBER
C106



GRAVITY SANITARY SEWER TRENCH

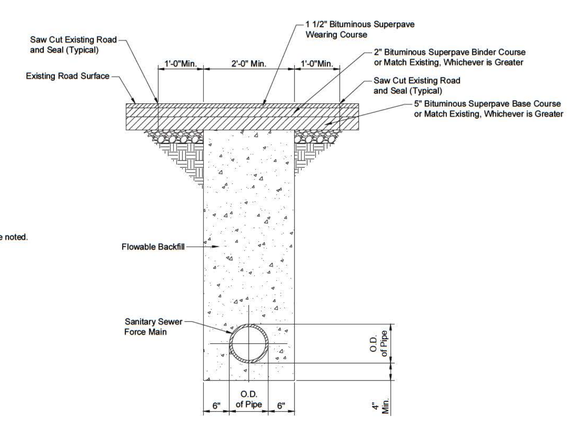
N.T.S.



Note:
All roadway crossings shall be bored, unless otherwise noted.

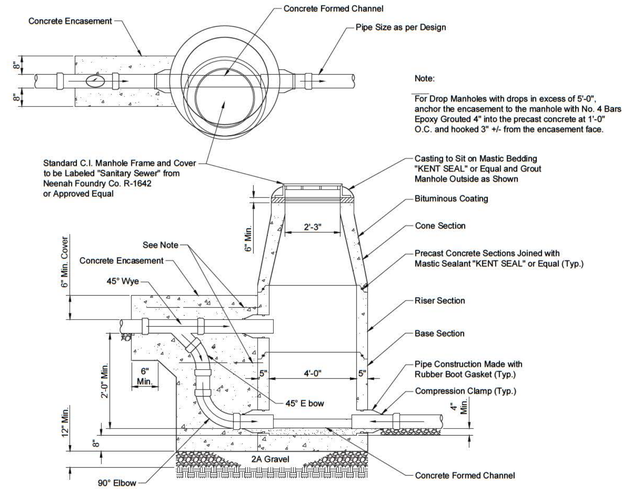
SANITARY SEWER TRENCH UNDER ROAD SURFACE OR PAVED BERM

N.T.S.



SANITARY SEWER TRENCH UNDER STATE ROAD SURFACE

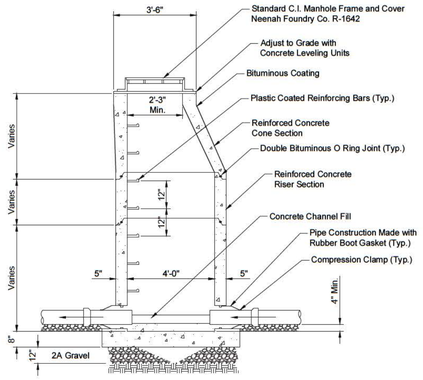
N.T.S.



Note:
For Drop Manholes with drops in excess of 5'-0", anchor the encasement to the manhole with No. 4 Bars Epoxy Grouted 4" into the precast concrete at 1'-0" O.C. and hooked 3" +/- from the encasement face.

DROP MANHOLE

N.T.S.

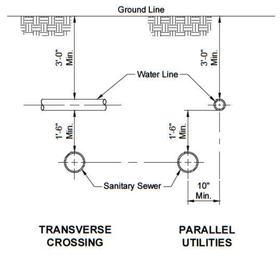


STANDARD MANHOLE WITH PRECAST BASE

N.T.S.

Notes:

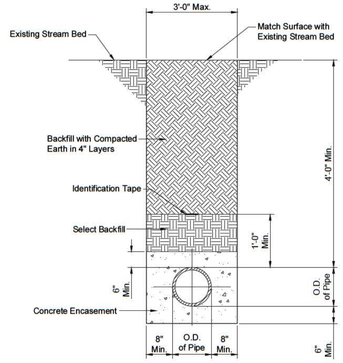
1. Concrete encasement of the sanitary sewer is required for any crossing of 12" or less with a storm sewer or collector line.
2. Construct the sanitary sewer first during all new construction.



TRANSVERSE CROSSING PARALLEL UTILITIES

SANITARY SEWER PLACEMENT ADJACENT TO WATER LINE

N.T.S.



STREAM CROSSING TRENCH

N.T.S.

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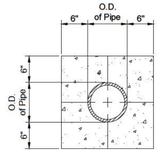
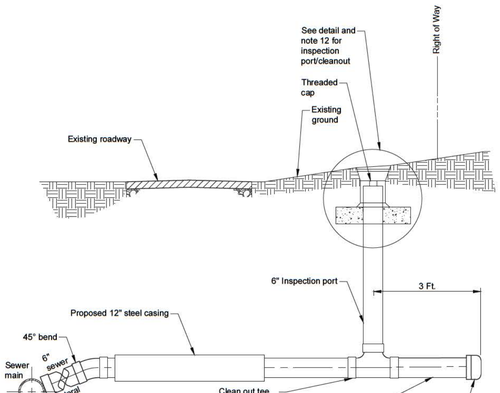
Concrete encasement of the sanitary sewer is required for any crossing of 12" or less with a storm sewer or collector line.



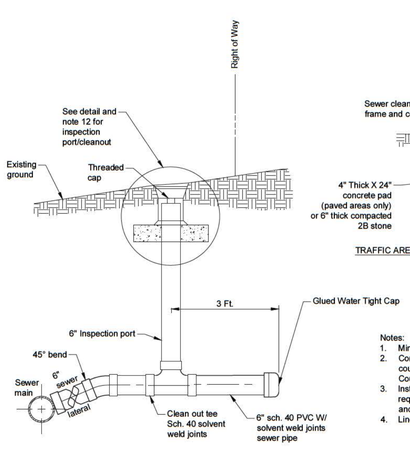
PIPE ENCASEMENT

N.T.S.



GRAVITY SEWER SERVICE CONNECTION ACROSS ROADWAY

N.T.S.

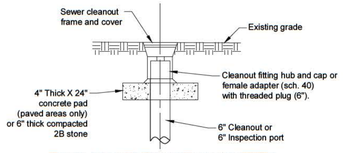


Notes:

1. Minimum pipe slope shall be 1/8" per ft. for 6" pipe.
2. Connections to existing pipe may utilize a transition coupling with stainless steel shear ring. (Fernco Coupling)
3. Installation of cast iron cleanout frame and cover is required in traffic areas, and plastic cleanout frame and cover in non-traffic areas.
4. Line Contractor shall be responsible for this detail.

GRAVITY SEWER SERVICE CONNECTION

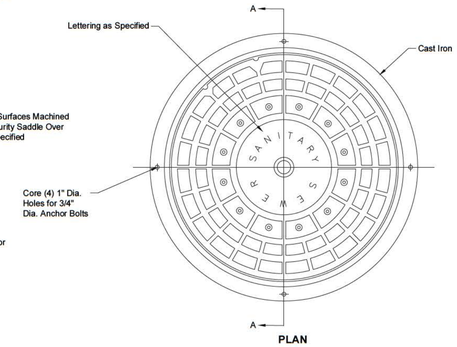
N.T.S.



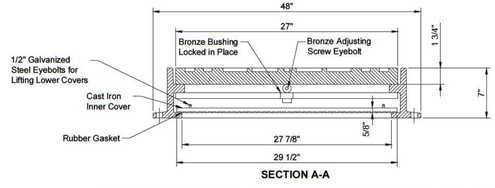
TRAFFIC AREA INSPECTION PORT / CLEANOUT DETAIL

Notes:

1. All Contact Surfaces Machined
2. Provide Security Saddle Over Eyebolt if Specified



PLAN



SECTION A-A

WATERTIGHT MANHOLE FRAME AND COVER

N.T.S.

CONNECTION TO EXISTING FACILITIES

A. General Requirements - The contractor shall make all required connection of the proposed sanitary sewer into existing sewer facilities, where are as shown on the drawings.

B. The cost of making connections shall be included with the unit price bid for the pipe, complete in place.

SERVICE LINES

A. The contractor shall install 45° wye branches in the sanitary sewer mains in all locations where building sewer service line connections are shown on the drawings directly entering the sewer main. Connection of the sanitary sewer service lines shall be made into the wye branches by means of 45° bends. The connection shall be made thoroughly watertight, and Class C concrete shall be placed under each connection to bear on undisturbed earth to firmly support the connection. At least 2 ft. of the lateral pipe with a cap shall be placed beyond a wye branch on the main line.

B. The contractor shall mark the location of each "Y" branch with a hardwood stake extending from the sewer to the surface of the ground.

C. The contractor shall locate and keep a record of all openings and "Y" branches as located by measurement to the nearest downstream manhole. Such records shall be delivered to the engineer during the progress of the work.

TESTS

A. General Requirements - The contractor shall test the completed sewers, including manholes for leakage, compaction and deflection as specified herein after the trench backfill is completed. The tests will be conducted as approved by the engineer.The contractor shall furnish all necessary equipment, materials and labor for performing the tests as specified.

The contractor shall notify the engineer and municipal authority at least 48 hours prior to the start of testing. Testing shall only be performed in the presence of the township engineer and municipal authority representative. Sections of pipe tested prior to completion of the project shall be subject to additional leakage tests, if warranted in the opinion of the township engineer prior to acceptance of the project.

B. Procedure and Method of Testing - All sewer lines shall be thoroughly flushed with water to obtain free flow through the lines. All obstructions shall be removed and all defects corrected prior to testing. The sewer lines shall be given the following tests:

Air Testing - All gravity sewers shall be subject to a low pressure air test. The contractor shall furnish all necessary labor, equipment and material to perform the test. After flushing and removal of all obstruction, the sections of sewer line shall be tested from manhole to manhole. All openings, laterals, stubs, branches, wyes, tees and pipe ends shall be securely capped or plugged and adequately braced. Air testing may be dangerous if, because of carelessness, a line is improperly prepared for testing. An improperly installed plug could cause a sudden explosion. No one shall be allowed in the manholes during testing. The air test should consist of inflating the system to 5 psi and maintaining the pressure for 5 minutes without any pressure drop.

Deflection Tests - After installation and final backfill, all pipelines constructed of flexible materials shall be measured for vertical ring deflection by passing a test ball or "go no go" gauge through them to demonstrate that the deflection is less than 3-1/2% of the diameter of the pipe.

Weir Test - The sanitary sewer may also be required to be checked for actual infiltration by installation of a V-notch weir at the lower terminus of the new work or each section of new work. Measurements shall be made immediately following periods of extended rain or when the ground is saturated with water. The maximum infiltration permitted for the system shall be 100 gallons per inch of pipe diameter per mile of pipe per day. The sources of any infiltration shall be determined and corrected.

C. Correction of Defective Work - If leakage exceeds the specified amount, the contractor shall, at his own expense, make the necessary repairs or replacements required to permanently reduce the leakage to within the specified limit, and the tests shall be repeated until the leakage requirement is met.

Any defects found in the system are to be repaired at the expense of the contractor so as to conform strictly to the specifications. All repairs shown necessary by the tests are to be made, broken or cracked pipe replaced, all deposits removed, and sanitary sewer left true to line and grade and entirely clean, free from lumps of cement, protruding gaskets, bulkheads, etc., and ready for use before final acceptance by the owner.

CLEANING AND REPAIR

A. The contractor will be required to clean the entire sanitary sewer system of all debris and obstructions. This shall include, but is not limited to removal of all form work from structures, concrete and mortar droppings, construction debris and dirt. The system shall be thoroughly flushed clean and the contractor shall furnish all necessary hose, pumps, pipe and other equipment that may be required for this purpose. No debris shall be flushed into existing sanitary sewers. All debris shall be removed from the system.

B. After the system has been cleaned, the contractor shall thoroughly inspect the system, and all repairs shown to be necessary shall be properly performed by the contractor. All work of cleaning and repair as specified herein shall be performed at the contractor's expense.

FINAL INSPECTION

Upon completion of the work and before final acceptance by the owner, the entire sanitary sewer system shall be subject to a final inspection in the presence of the engineer and/or owner's representative. The work shall not be considered complete until all requirements for line, grade, cleanliness, leakage, tests, restoration, and workmanship have been met.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS FOR CONSTRUCTION PREPARED FOR THE NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS			
NO.	DESCRIPTION	DATE	BY

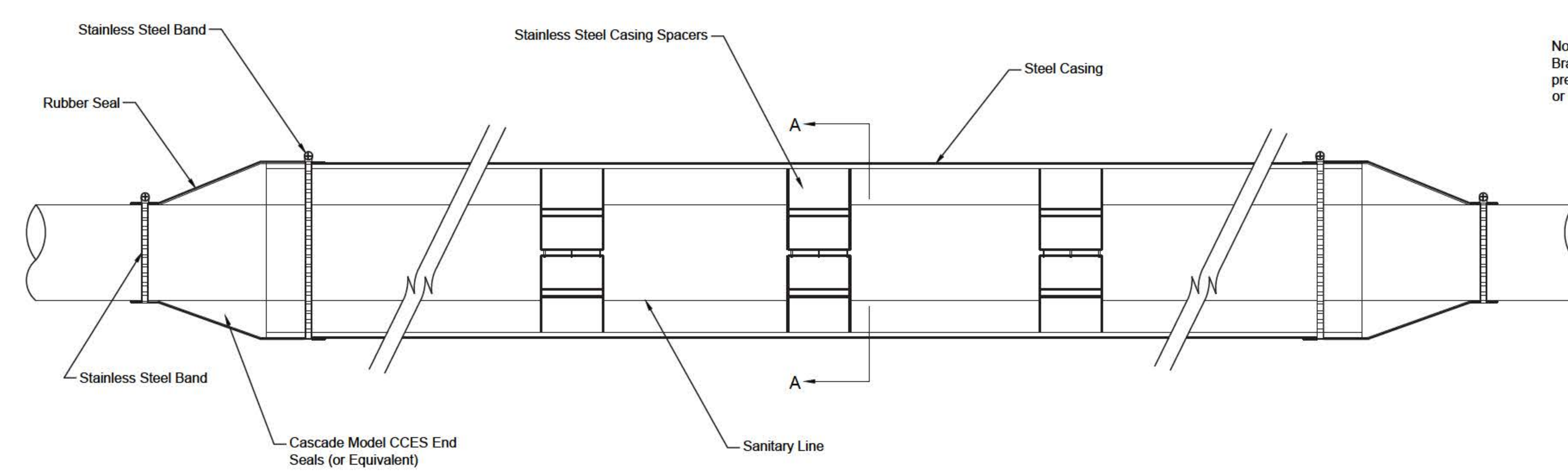
SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
GENERAL DETAILS

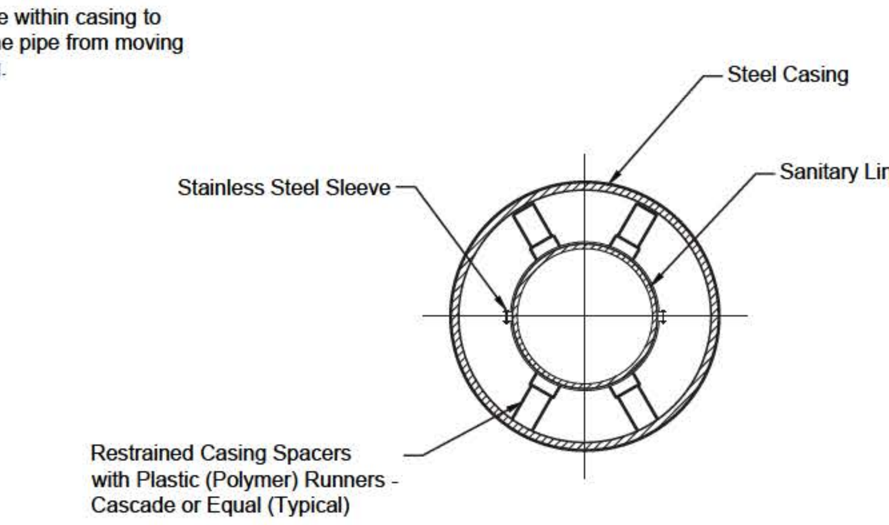
BOOK NO.	**	JOB NO.	2017-68
DRAWN	JE 11/15/18	CHECKED	JS 11/15/18
DESIGN	JE 11/15/18	APPROVED	TMJR 11/15/18
SCALE	AS NOTED		
SHEET NUMBER	C107		

FILE: K:\2017\2017-68\Drawings\Layout\2017-68-C107.dwg

Pipe Size	Casing Size	Minimum Casing Wall Thickness	Maximum Casing Support Spacing	No. of Runners
12"	24"	0.375"	7'-4"	4



Note:
Brace pipe within casing to prevent the pipe from moving or floating.



SECTION A-A

STEEL CASING DETAIL

N.T.S.

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ENGINEER
PE-057459

NO.	REVISIONS DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

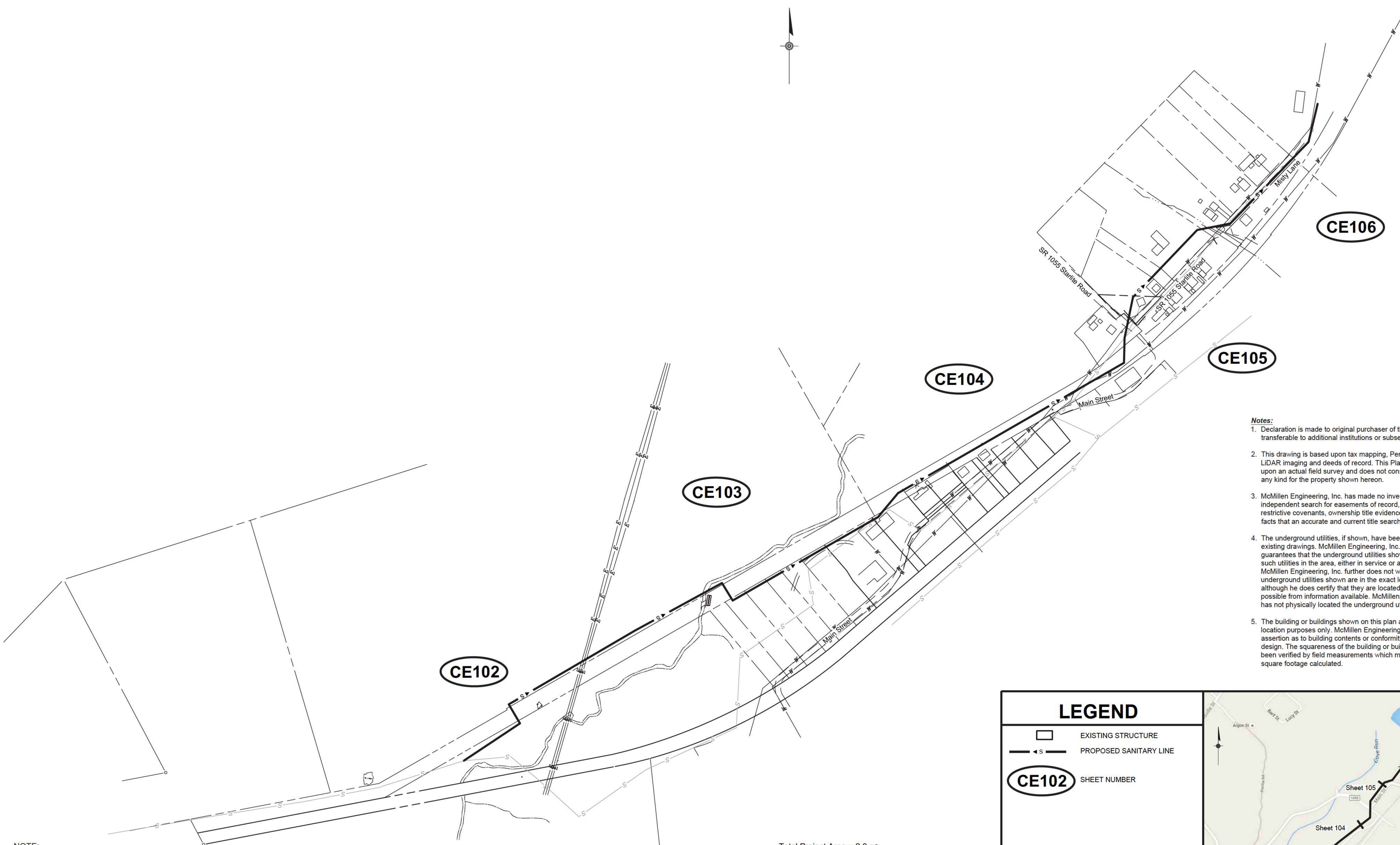
TITLE

CASING DETAILS

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	**	CHECKED JS	**
DESIGN JE	**	APPROVED TMJR	**

SCALE
AS NOTED

SHEET NUMBER
C108



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4. The underground utilities, if shown, have been located from existing drawings. McMillen Engineering, Inc. makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. McMillen Engineering, Inc. further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. McMillen Engineering, Inc. has not physically located the underground utilities.
5. The building or buildings shown on this plan are shown for location purposes only. McMillen Engineering, Inc. makes no assertion as to building contents or conformity to architectural design. The squareness of the building or buildings has not been verified by field measurements which may affect the square footage calculated.

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1-800-242-1776
PA. Act 287 (1974) Requires 3 Working Days Notice
Design Serial No. 20150640350

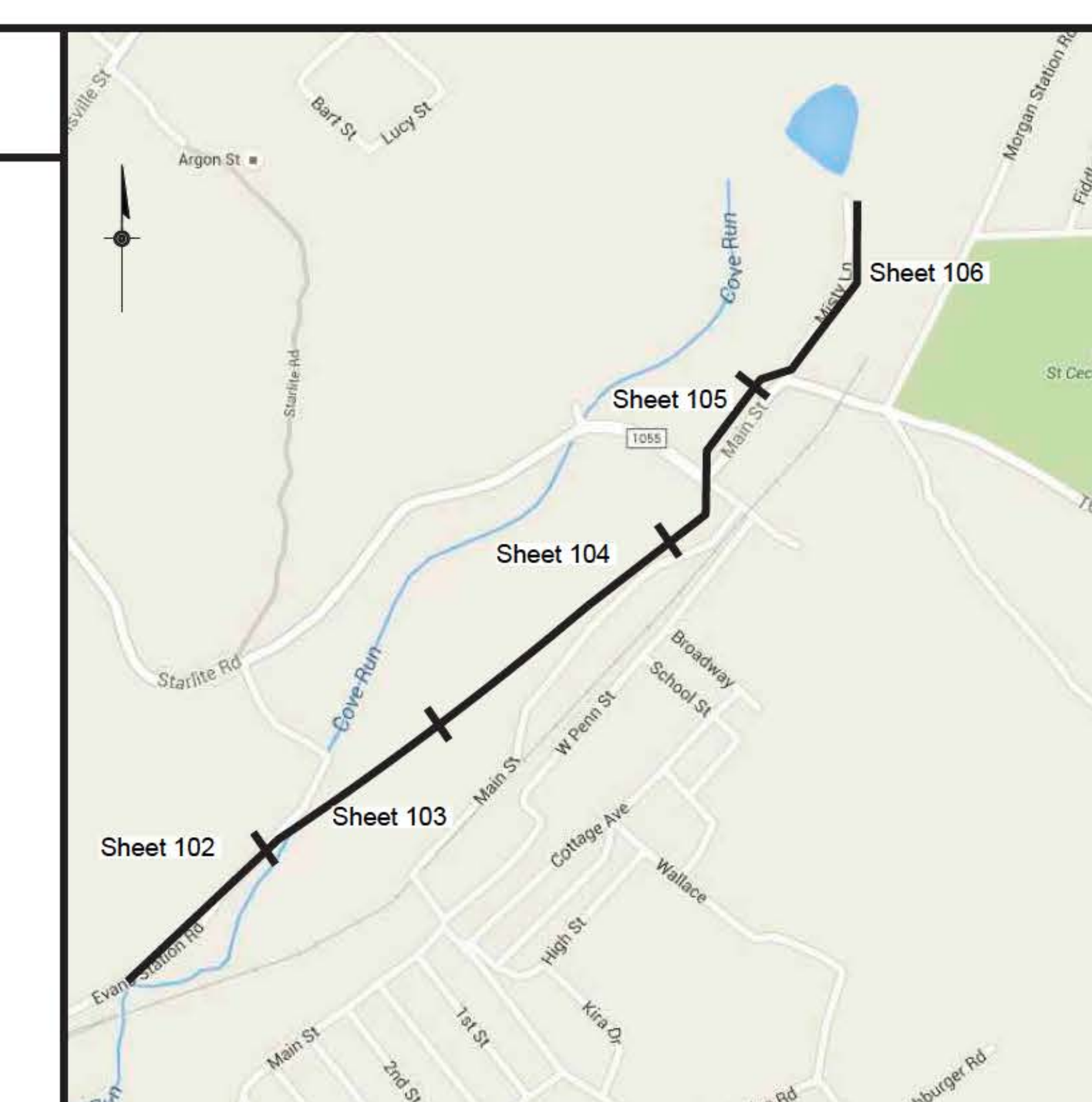
Total Project Area = 2.0 ac.
Disturbed Area = 2.0 ac.
Impervious Area Added = 0.0 ac.

Developer / Applicant:
North Union Township Municipal Services Authority
120 Commonwealth Drive, Suite 101
Lemont Furnace, PA 15456

200' 100' 0' 200' 400'
Bar Scale

LEGEND

▭	EXISTING STRUCTURE
—◄S—	PROPOSED SANITARY LINE
(CE102)	SHEET NUMBER



INDEX KEY
SCALE: 1"=800'

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COMMONWEALTH OF PENNSYLVANIA
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ENGINEER
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REVISIONS

NO.	DESCRIPTION	DATE	BY

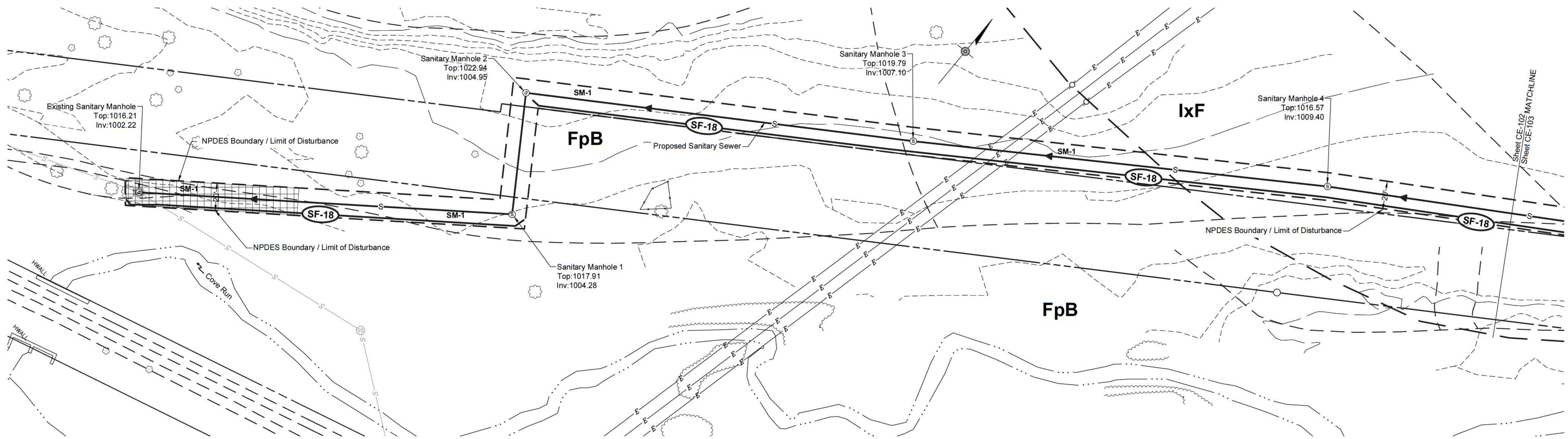
SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL INDEX PLAN

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	11/15/18	CHECKED JS	11/15/18
DESIGN JE	11/15/18	APPROVED TMJR	11/15/18

SCALE
AS NOTED

SHEET NUMBER
CE101



UTILITY LINE INSTALLATION PROCEDURES

1. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.

2 Limit daily trench excavation to the length of pipe placem ent, installation and backfilling that can be completed the same day.

3 Trenching shall be done in accordance with layout shown on the site layout plan.

4 Water which accumulates in the open trench will be complet ely removed by pumping before pipe placement and/or backfilling begins.

5 On the day following pipe placement and trench backfilling , the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measure/facilities will be installed. Seeding and mulching of all utility line installation disturbed areas will be done at the end of each week as specified in the Final Site Preparation for Turfgrass Establishment.

6 Exceptions - In certain cases where trenches cannot be bac kfilled until the pipe is hydrostatically tested, or anchors and other permanent features are to be installed. In these cases, all of the requirements listed above will remain in effect with the following exceptions:
a. Daily backfilling of the trench may be delayed for six days.All pressure testing and the complete backfilling of the open trench must be completed by the seventh working day.
b. If daily backfilling is delayed, the disturbed area will be graded to final contour, appropriate temporary erosion and sediment control measures/facilities will be installed, and the areas seeded and mulched within the next two calendar days.

Total Project Area = 2.0 ac.
Disturbed Area = 2.0 ac.
Impervious Area Added = 0.0 ac.

Developer / Applicant:
North Union Township Municipal Services Authority
120 Commonwealth Drive, Suite 101
Lemont Furnace, PA 15456

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40' 20' 0' 40' 80'
Bar Scale

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PA. Act 287 (1974) Requires 3 Working Days Notice
Design Serial No. 20150640350

LEGEND

	EXISTING STRUCTURE
S	PROPOSED SANITARY SEWER
S	PROPOSED SANITARY MANHOLE
	LEGAL RIGHT OF WAY
	EDGE OF PAVEMENT
	SOIL BOUNDARY
	LIMIT OF DISTURBANCE/ NPDES BOUNDARY
SF-18	18" SILT FENCE
SSF	SUPER SILT FENCE
ErB	SOIL DESCRIPTION
	EROSION CONTROL MAT
SM-1	PERMANENT SEED MIXTURE

*Final location to be field determined

INDEX KEY
SCALE: 1"=800'

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	Erosion Control Mat and Seed Mix	2-19-21	KK

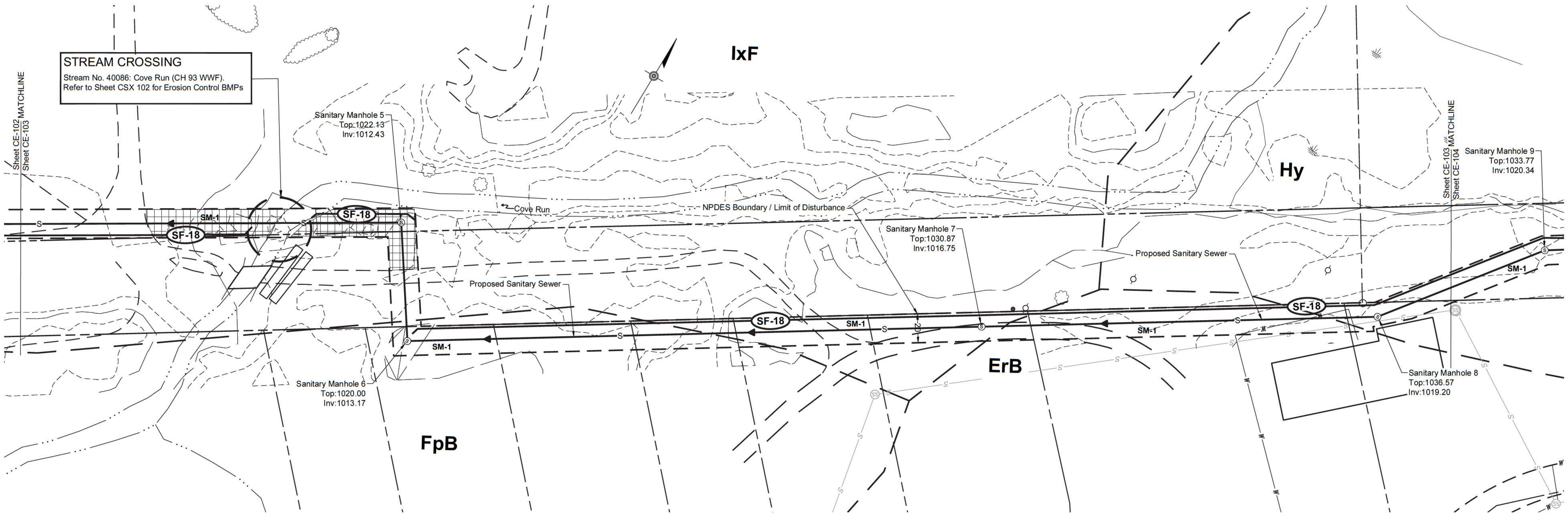
SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL PLAN

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
JE	11/15/18	JS	11/15/18
DESIGN		APPROVED	
JE	11/15/18	TMJR	11/15/18

SCALE
AS NOTED

SHEET NUMBER
CE102



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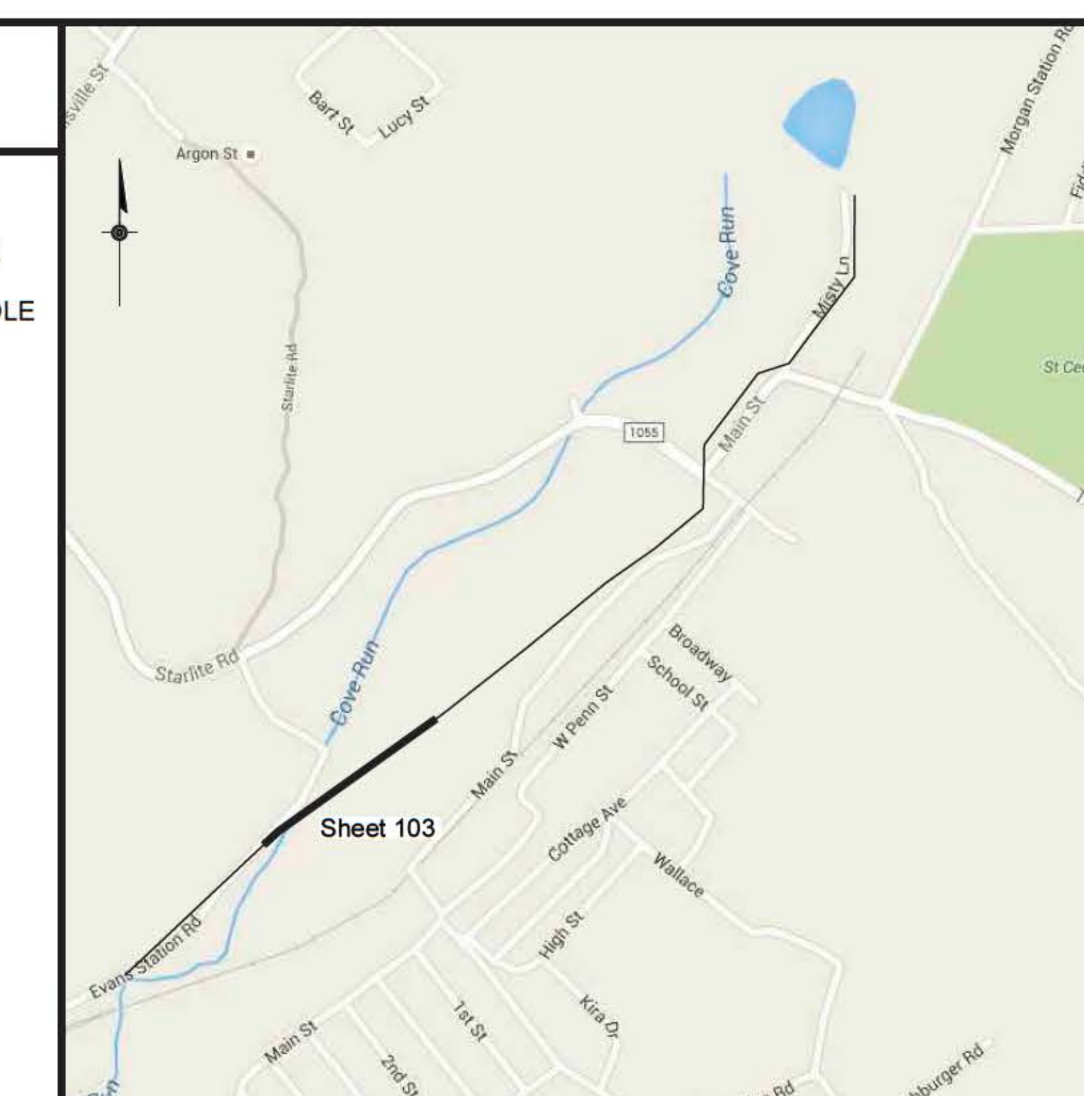
Design Serial No. 20150640350

40' 20' 0' 40' 80'
Bar Scale

LEGEND

Symbol	Description
(rectangle)	EXISTING STRUCTURE
—S—▶	PROPOSED SANITARY SEWER
(S)	PROPOSED SANITARY MANHOLE
— - - —	LEGAL RIGHT OF WAY
— — —	EDGE OF PAVEMENT
—— ——	SOIL BOUNDARY
——— ———	LIMIT OF DISTURBANCE/ NPDES BOUNDARY
SF-18	18" SILT FENCE
SSF	SUPER SILT FENCE
ErB	SOIL DESCRIPTION
(hatched grid)	EROSION CONTROL MAT
SM-1	PERMANENT SEED MIXTURE

*Final location to be field determined



INDEX KEY
SCALE: 1"=800'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	Erosion Control Mat and Seed Mix	2-19-21	KK

FILE O:\2017\2017-68\Site\Misty Lane\...

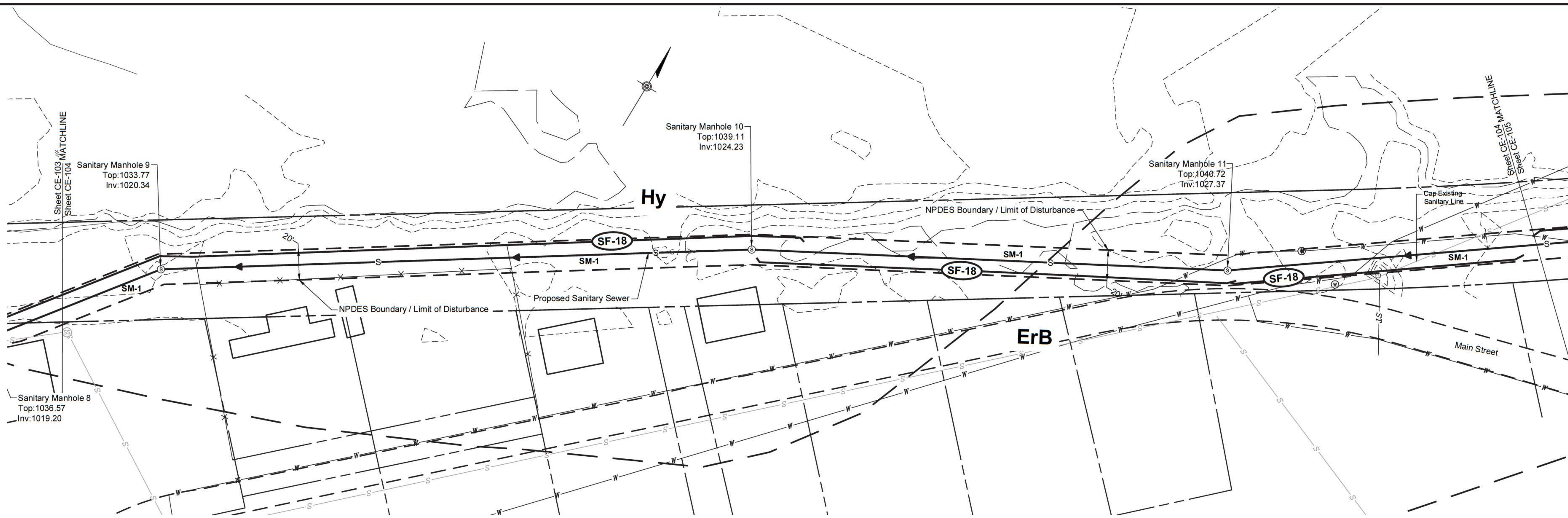
SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL PLAN

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
JE	11/15/18	JS	11/15/18
DESIGN		APPROVED	
JE	11/15/18	TMJR	11/15/18

SCALE: AS NOTED

SHEET NUMBER
CE103



UTILITY LINE INSTALLATION PROCEDURES

1. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
2. Limit daily trench excavation to the length of pipe placem ent, installation and backfilling that can be completed the same day.
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4. Water which accumulates in the open trench will be complet ely removed by pumping before pipe placement and/or backfilling begins.
5. On the day following pipe placement and trench backfilling , the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measure/facilities will be installed. Seeding and mulching of all utility line installation disturbed areas will be done at the end of each week as specified in the Final Site Preparation for Turfgrass Establishment.
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Total Project Area = 2.0 ac.
Disturbed Area = 2.0 ac.
Impervious Area Added = 0.0 ac.

Developer / Applicant:
North Union Township Municipal Services Authority
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Lemont Furnace, PA 15456

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LEGEND

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*Final location to be field determined

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PE-057459

NO.	DESCRIPTION	DATE	BY
1.	Erosion Control Mat and Seed Mix	2-19-21	KK

REVISIONS

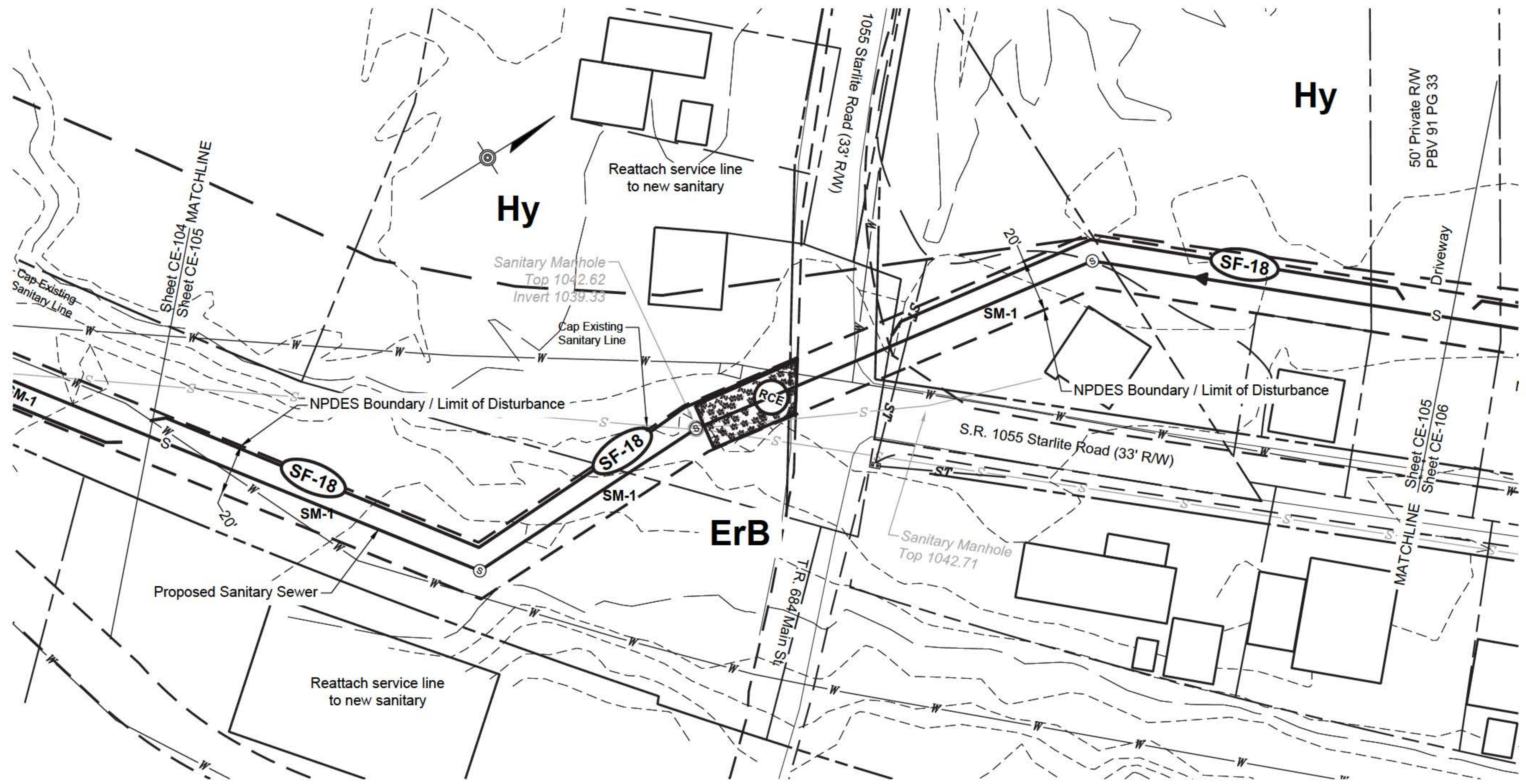
SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL PLAN

BOOK NO.	ME 293	JOB NO.	2017-68
DRAWN	JE 11/15/18	CHECKED	JS 11/15/18
DESIGN	JE 11/15/18	APPROVED	TMJR 11/15/18

SCALE
AS NOTED

SHEET NUMBER
CE104



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LEGEND

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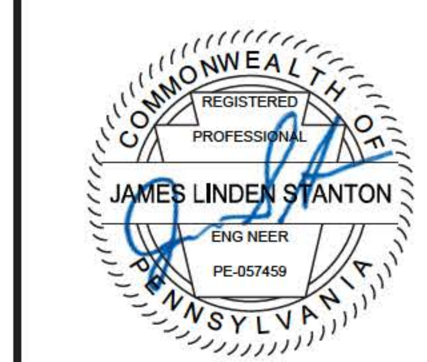

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NO.	DESCRIPTION	DATE	BY
1.	Erosion Control Mat and Seed Mix	2-19-21	KK

FILE
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SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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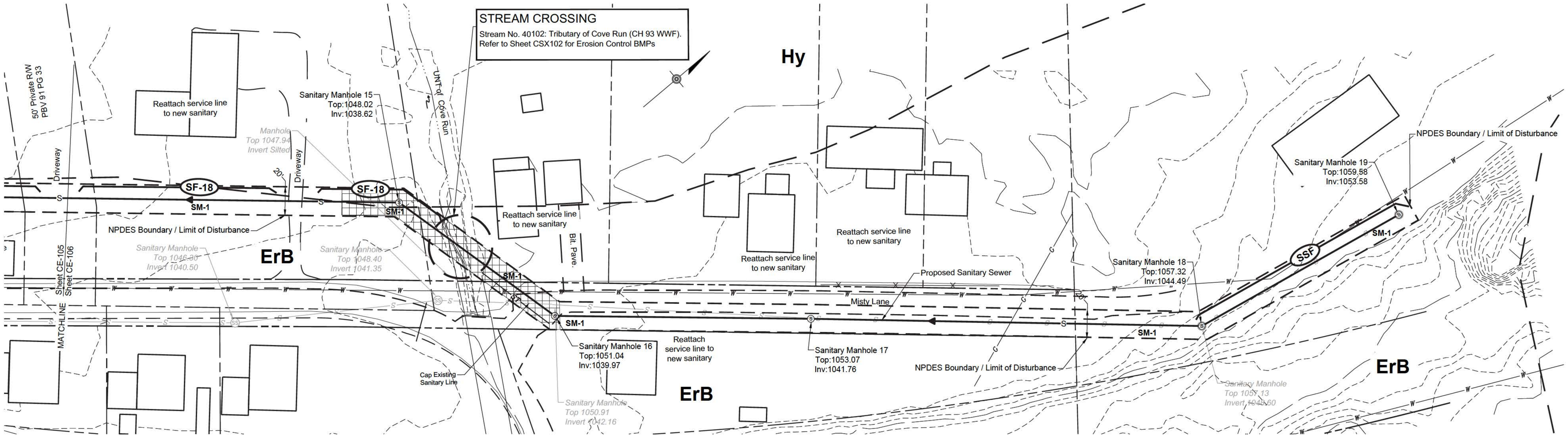
TITLE
EROSION CONTROL PLAN

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	11/15/18	CHECKED JS	11/15/18
DESIGN JE	11/15/18	APPROVED TMJR	11/15/18
SCALE AS NOTED			

SHEET NUMBER
CE105



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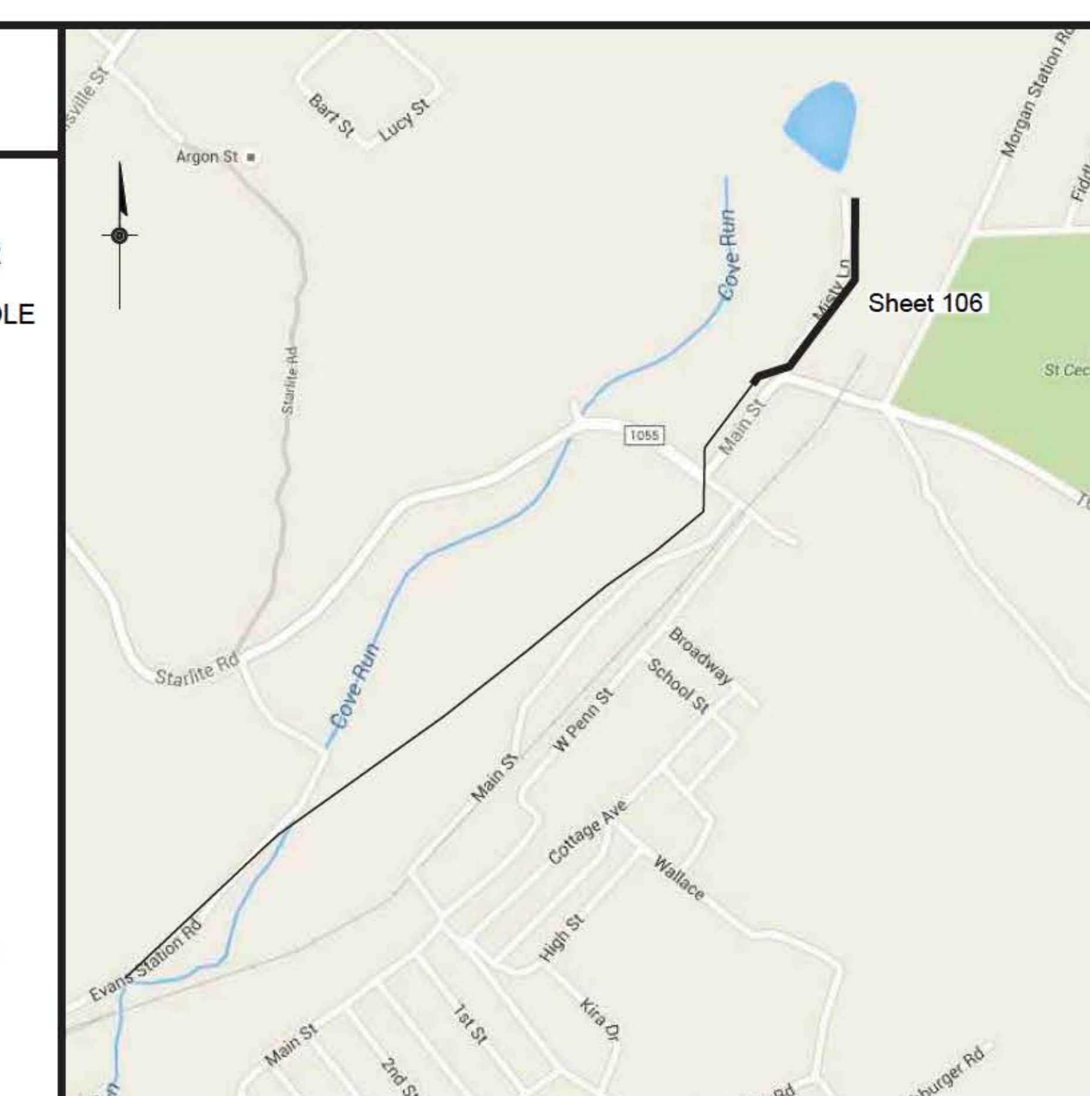

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TITLE
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BOOK NO.	ME 293	JOB NO.	2017-68
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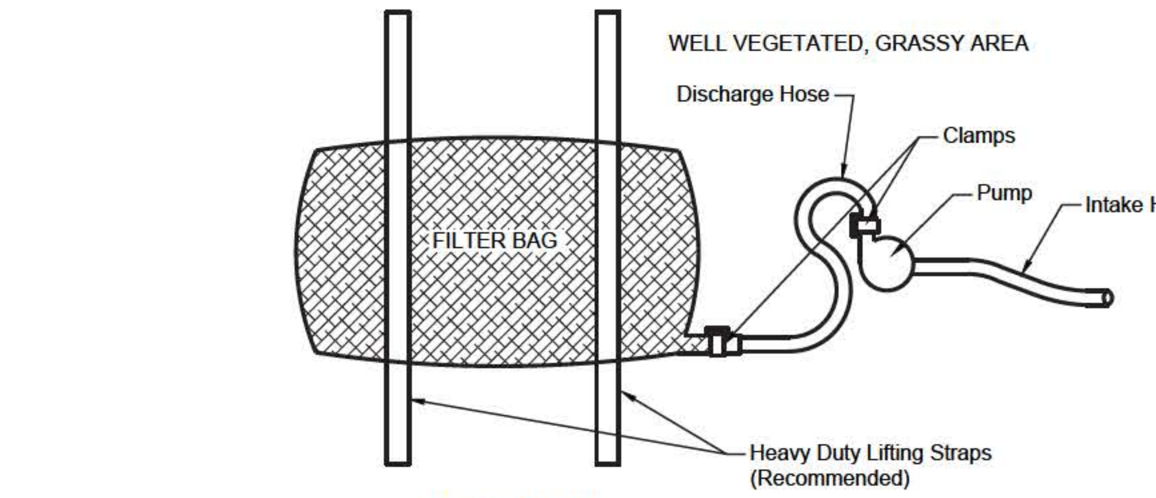
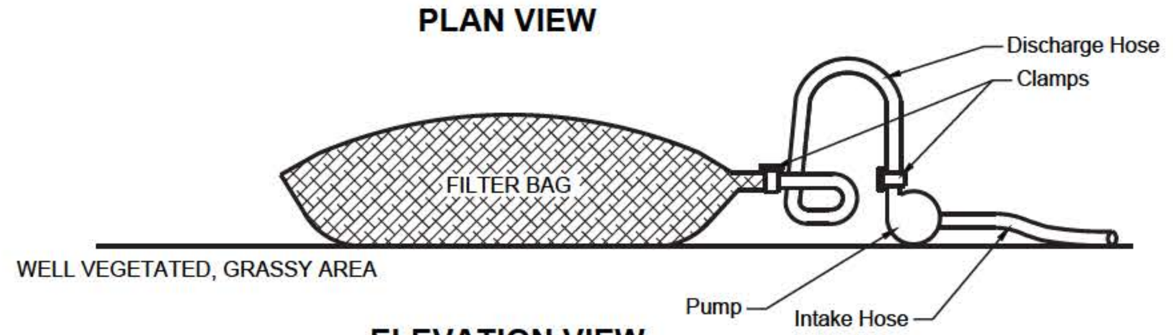
DESIGN	JE 11/15/18	APPROVED	TMJR 11/15/18

SCALE
AS NOTED

SHEET NUMBER
CE106



PLAN VIEW



ELEVATION VIEW

Notes:

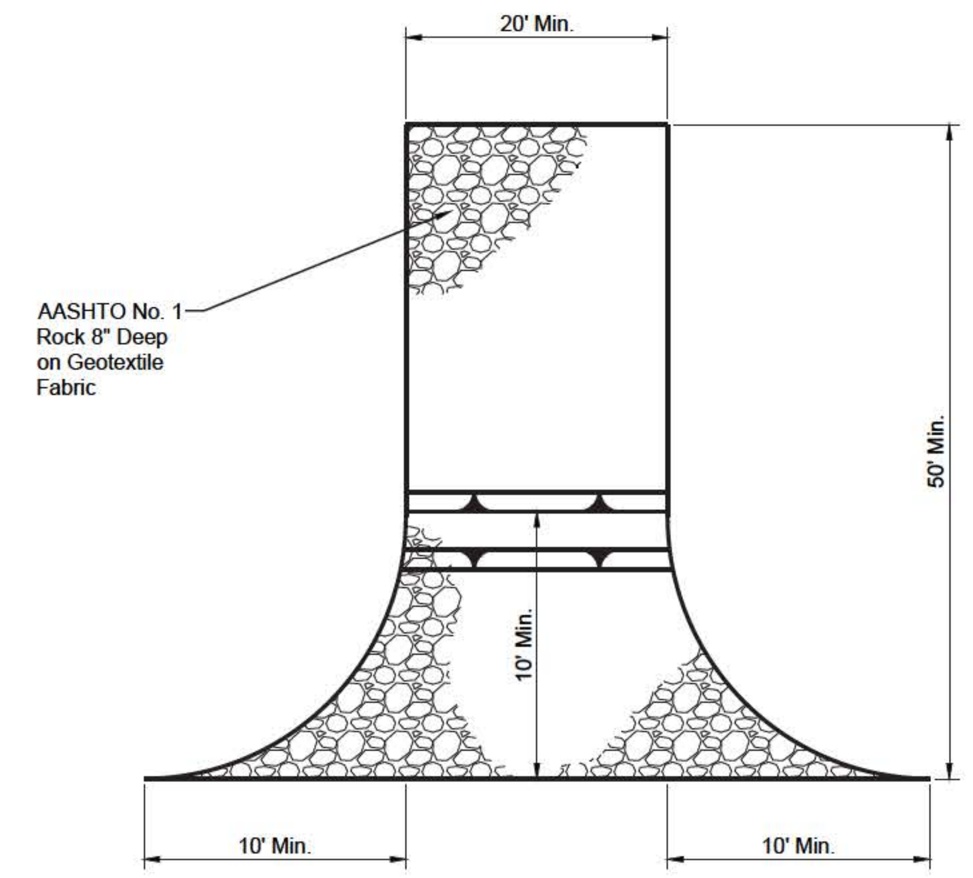
1. Low volume filter bags shall be made from non-woven geotextile material sewn with high strength, double stitched "J" type seams. They shall be capable of trapping particles larger than 150 microns. High volume filter bags shall be made from woven geotextiles that meet the following standards:

PROPERTY	TEST METHOD	MINIMUM STANDARD
Avg. Wide Width Strength	ASTM D-4884	60 lb/in
Grab Tensile	ASTM D-4632	205 lb
Puncture	ASTM D-4833	110 lb
Mullen Burst	ASTM D-3786	350 psi
UV Resistance	ASTM D-4355	70%
AOS % Retained	ASTM D-4751	80 Sieve

2. A suitable means of accessing the bag with machinery required for disposal purposes shall be provided. Filter bags shall be replaced when they become 1/2 full of sediment. Spare bags shall be kept available for replacement of those that have failed or are filled. Bags shall be placed on straps to facilitate removal unless bags come with lifting straps already attached.
3. Bags shall be located in well-vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, a geotextile underlayment and flow path shall be provided. Bags may be placed on filter stone to increase discharge capacity. Bags shall not be placed on slopes greater than 5%. For slopes exceeding 5%, clean rock or other non-erodible and non-polluting material may be placed under the bag to reduce slope steepness.
4. No downslope sediment barrier is required for most installations. Compost berm or compost filter sock shall be installed below bags located in HQ or EV watersheds, within 50 feet of any receiving surface water or where grassy area is not available.
5. The pump discharge hose shall be inserted into the bags in the manner specified by the manufacturer and securely clamped. A piece of PVC pipe is recommended for this purpose.
6. The pumping rate shall be no greater than 750 gpm or 1/2 the maximum specified by the manufacturer, whichever is less. Pump intakes shall be floating and screened.
7. Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

PUMPED WATER FILTER BAG

N.T.S.



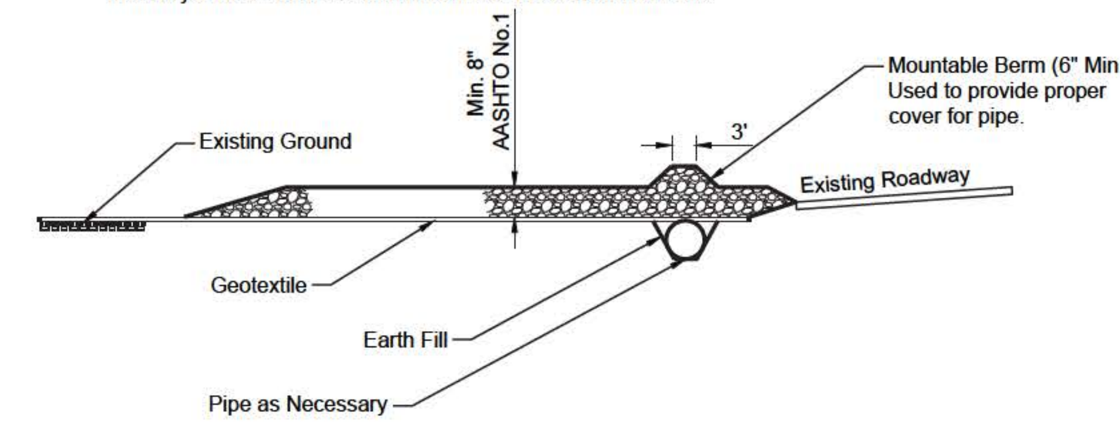
PLAN VIEW

Remove topsoil prior to installation of rock construction entrance. Extend rock over full width of entrance.

Runoff shall be diverted from roadway to a suitable sediment removal BMP prior to entering rock construction entrance.

Mountable berm shall be installed wherever optional culvert pipe is used and proper pipe cover as specified by manufacturer is not otherwise provided. Pipe shall be sized appropriately for size of ditch being crossed.

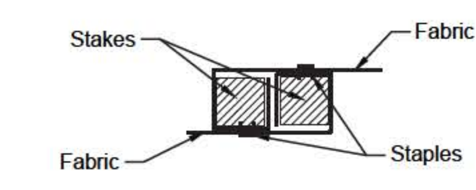
Maintenance:
Rock Construction Entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on site for this purpose. At the end of each construction day, all sediment deposited on paved roadway shall be removed and returned to the construction site.



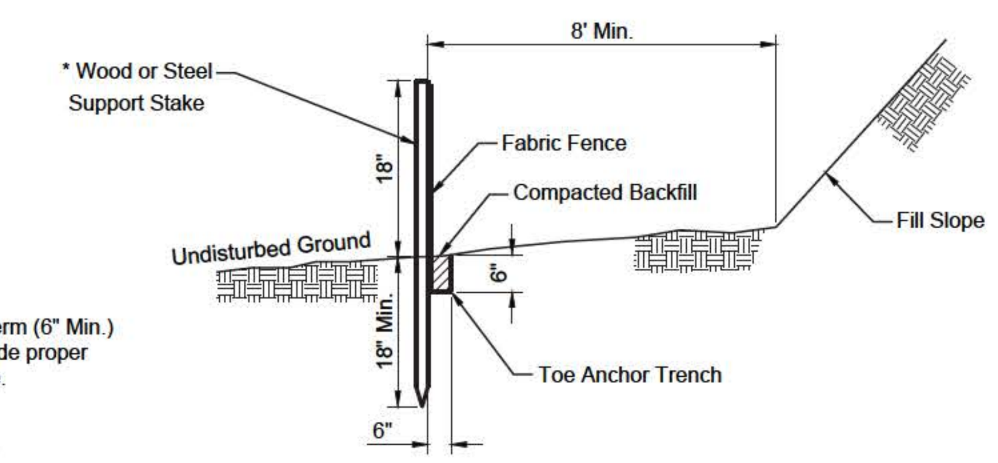
PROFILE

ROCK CONSTRUCTION ENTRANCE

N.T.S.



JOINING FENCE SECTIONS



ELEVATION VIEW

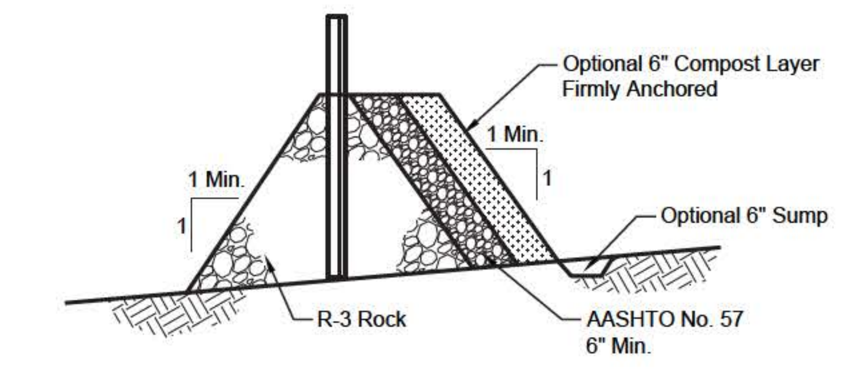
Notes:

1. Stakes spaced at 8' maximum. Use 2" x 2" (±3/8") wood or equivalent steel (U or T) stakes.
2. Fabric shall have the minimum properties as shown in Table 4.3.
3. Fabric width shall be 30" minimum. Stakes shall be hardwood or equivalent steel (U or T) stakes.
4. Silt fence shall be placed at level existing grade. Both ends of the fence shall be extended at least 8 feet up slope at 45 degrees to the main fence alignment.
5. Sediment shall be removed when accumulations reach half the above ground height of the fence.
6. Any section of silt fence which has been undermined or topped shall be immediately replaced with a rock filter outlet (Standard Construction Detail #4-6).
7. Fence shall be removed and properly disposed of when tributary area is permanently stabilized.

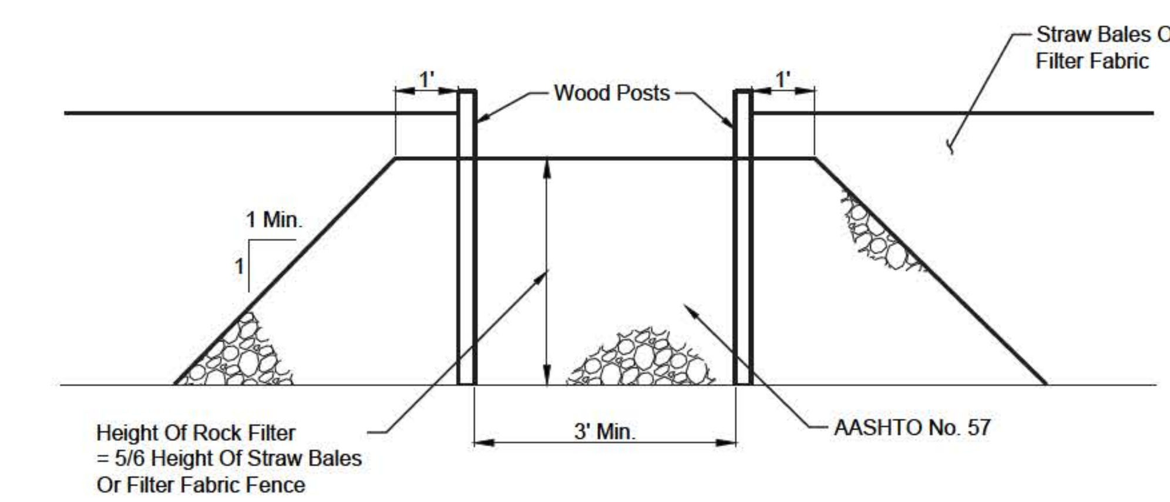
18" SILT FENCE

(TYPE SF)

N.T.S.



OUTLET CROSS-SECTION



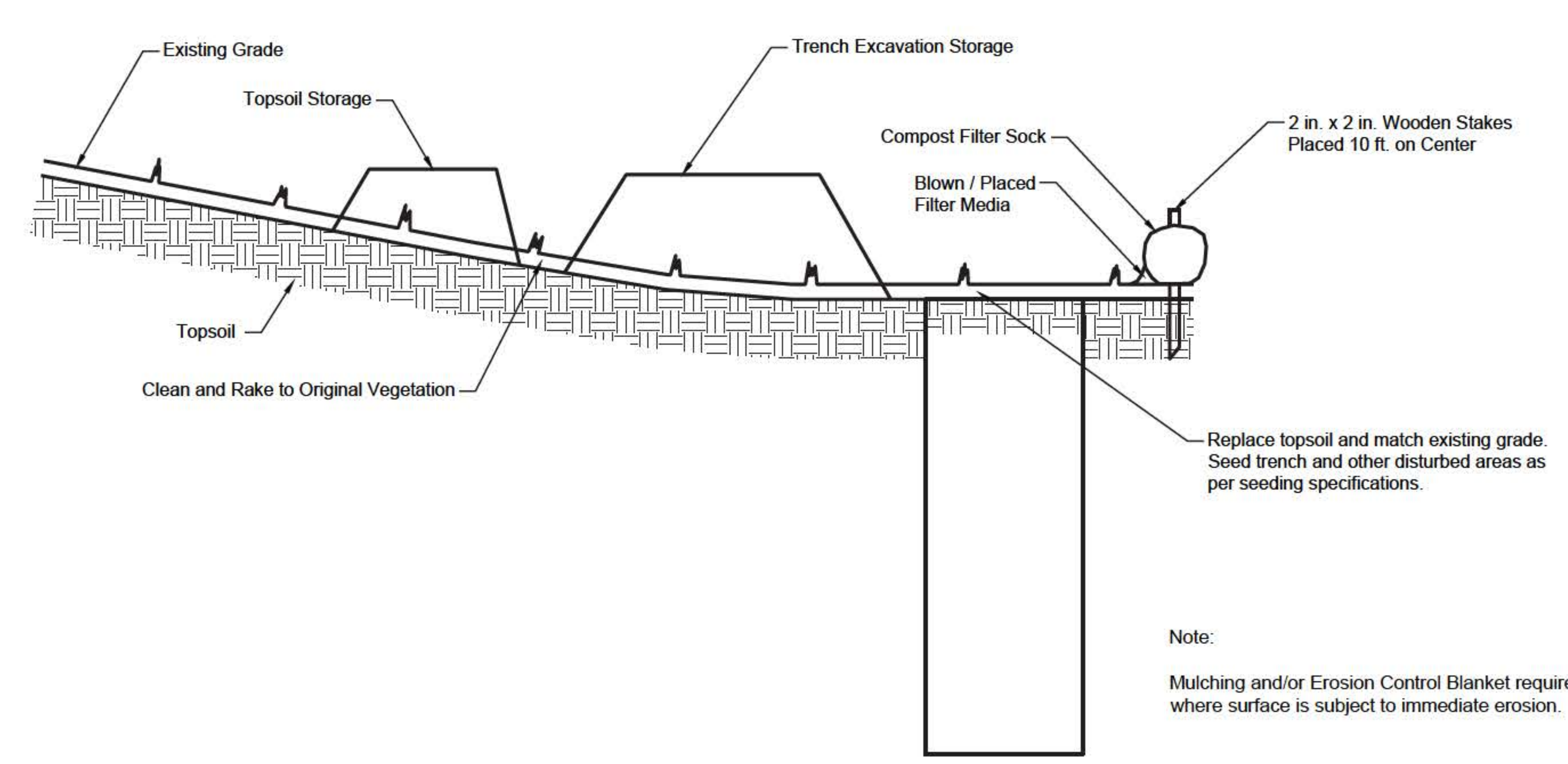
UP-SLOPE FACE

Notes:

1. A rock filter outlet shall be installed where failure of a silt fence or straw bale barrier has occurred due to concentrated flow. Anchored compost layer shall be used on upslope face in HQ and EV watersheds.
2. Sediment shall be removed when accumulations reach 1/3 the height of the outlet.

ROCK FILTER OUTLET

N.T.S.

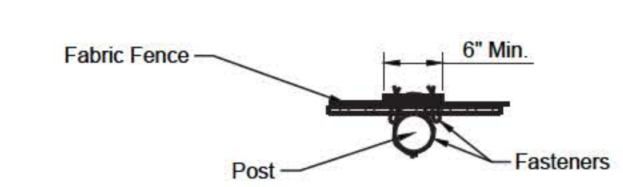


Note:

Mulching and/or Erosion Control Blanket required where surface is subject to immediate erosion.

EROSION CONTROL FOR TRENCHES

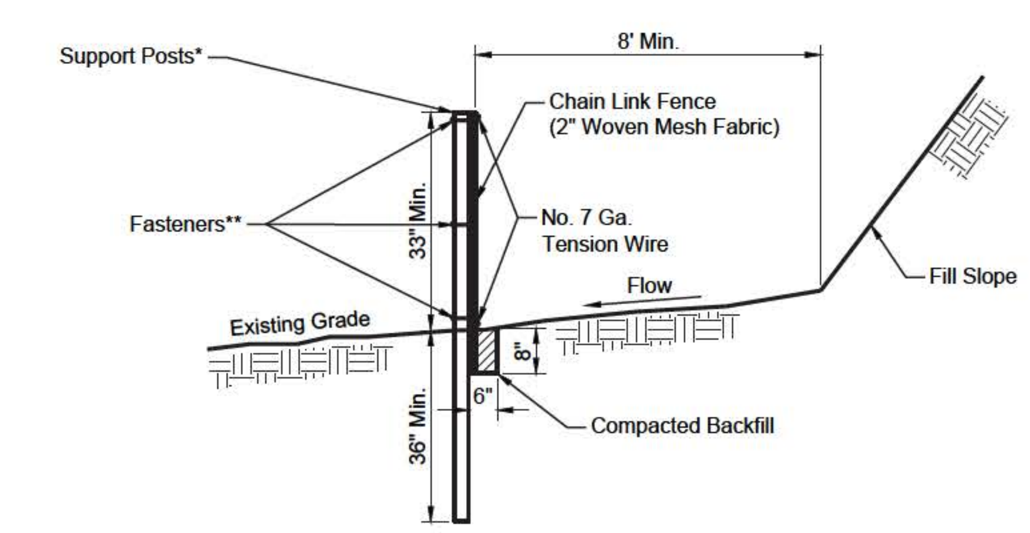
N.T.S.



JOINING FENCE SECTIONS

* Posts Spaced @ 10' Max. Use 2-1/2" Dia. Heavy Duty Galvanized Or Aluminum Posts.

** Chain Link To Post Fasteners spaced @ 14" Max. Use No. 9 Ga. Aluminum Wire Or No. 9 Galvanized Steel Pre-Formed Clips. Chain Link To Tension Wire Fasteners Spaced @ 60" Max. Use No. 13.5 Ga. Galvanized Steel Wire. Fabric To Chain Fasteners Spaced @ 24" Max. C. to C.



Notes:

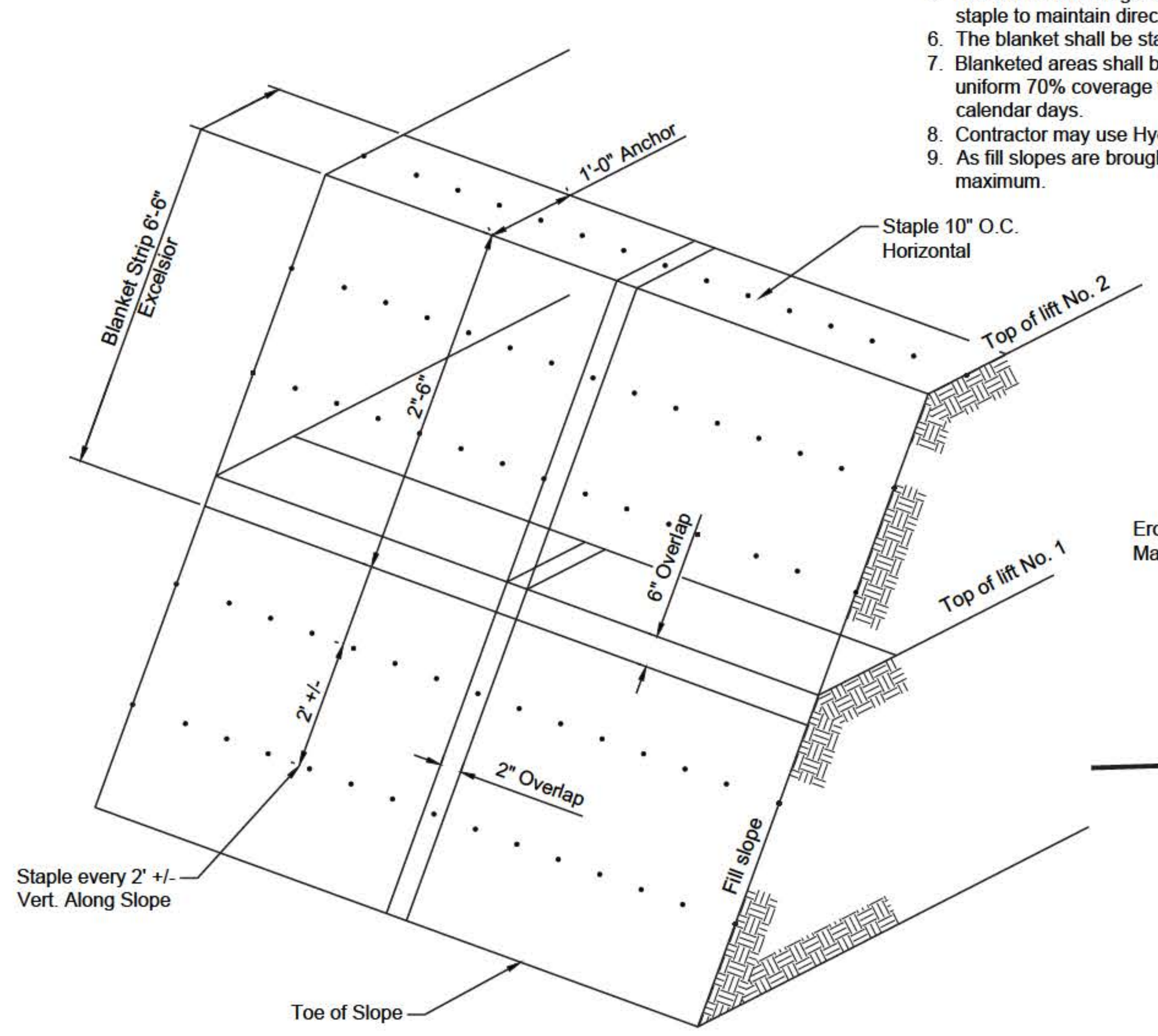
1. Fabric shall have the minimum properties as shown in Table 4.3.
2. Filter fabric width shall be 42" minimum.
3. Posts shall be installed using a posthole drill.
4. Chain link shall be galvanized No. 11.5 Ga. steel wire with 2-1/4" opening, No. 11 Ga. aluminum coated steel wire in accordance with ASTM-A-491, or galvanized No. 9 Ga. steel wire top and bottom with galvanized No. 11 Ga. steel intermediate wires. No.7 gauge tension wire to be installed horizontally through holes at top and bottom of chain-link fence or attached with hog rings at 5' (max.) centers.
5. Silt fence shall be placed at existing level grade. Both ends of the fence shall be extended at least 8 feet upslope at 45 degrees to main barrier alignment (Fig. 4.1).
6. Sediment shall be removed when accumulations reach half the aboveground height of the fence.
7. Fence shall be removed and properly disposed of when tr butary area is permanently stabilized.

SUPER SILT FENCE

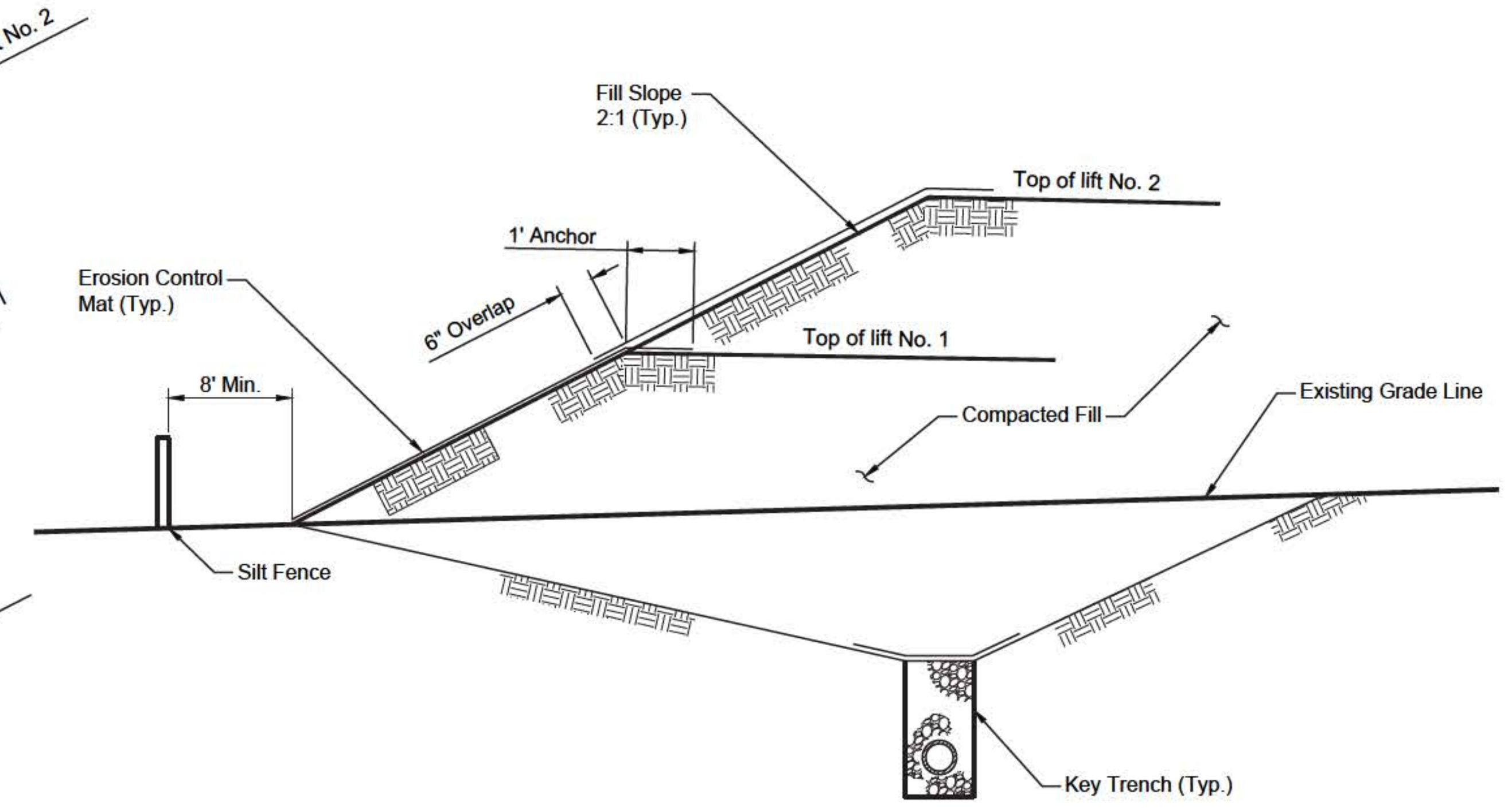
N.T.S.

Notes:

1. Install on slopes 3H:1V or steeper, (all seeded slopes within 50 feet of a surface water - 100 ft of Special Protection waters - regardless of slope), and on all other areas specified in the plan drawings. Cut slopes in competent bedrock and rock fill slopes need not be blanketed.
2. Seed and soil amendments shall be applied according to the rates in the plan drawings prior to installing the blanket.
3. Provide anchor trench at toe of slope in similar fashion as at top of slope.
4. Slope surface shall be free of rocks, clods, sticks, and grass.
5. Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.
6. The blanket shall be stapled in accordance with the manufacturer's recommendations.
7. Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.
8. Contractor may use Hydroseed with a tackifier, on slopes, in lieu of the Erosion Control Blanket.
9. As fill slopes are brought to grade, stabilize by applying erosion control blanket. Install in vertical increments of fifteen feet, maximum.



OBLIQUE VIEW



SECTION VIEW

EROSION CONTROL MAT PLACEMENT ON FILL SLOPES

N.T.S.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

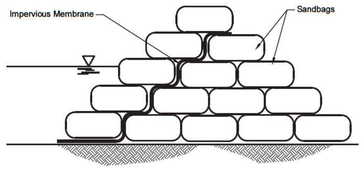
TITLE

EROSION CONTROL DETAILS

BOOK NO.	JOB NO.		
ME 293	2017-68		
DRAWN		CHECKED	
JE	11/15/18	JS	11/15/18
DESIGN		APPROVED	
JE	11/15/18	TMJR	11/15/18

SCALE: AS NOTED

SHEET NUMBER: CE107



2 BAG MIN HEIGHT ABOVE NORMAL BASE FLOW

SANDBAG DIVERSION DAM OR COFFERDAM

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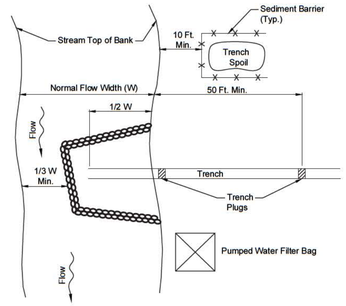
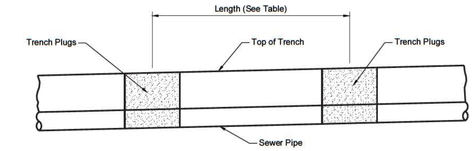


Notes:

1. Grubbing shall not take place within 50 feet of top-of-bank until all materials required to complete crossing are on site and pipe is ready for installation.
2. Trench plugs shall be installed within the trench on both sides of the stream channel (standard construction detail No. 13-4).
3. Water accumulating within the work area shall be pumped to a pumped water filter bag or sediment trap prior to discharging into any surface water.
4. Hazardous or pollutant material storage areas shall be located at least 100 feet back from the top of stream bank.
5. All excess excavated material shall be immediately removed from the stream crossing area.
6. All disturbed areas within 50 feet of top-of-bank shall be blanketed or matted within 24 hours of initial disturbance for minor streams or 48 hours of initial disturbance for major streams unless otherwise authorized.
7. Appropriate stream bank protection shall be provided within the channel.

TYPICAL UTILITY LINE STREAM CROSSING WITH COFFERDAM

N.T.S.

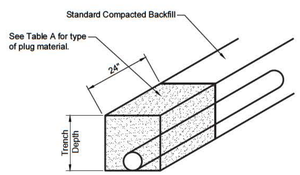


ELEVATION

Notes:
1. Impervious Trench Plugs are required for all stream, river, wetland, or other water body crossings regardless of trench slope.
2. Topsoil may not be used to fill sacks.

Required Spacing and Materials for Trench Plugs		
Trench Slope	Length (feet)	Plug Material
0 - 5	1000	Clay, Bentonite, or Concrete-Filled Sacks
5 - 15	500	Clay, Bentonite, or Concrete-Filled Sacks
15 - 25	300	Clay, Bentonite, or Concrete-Filled Sacks
25 - 35	200	Clay, Bentonite, or Concrete-Filled Sacks
35 - 100	100	Clay, Bentonite, or Concrete-Filled Sacks
Over 100	50	Cement Filled Bags (wetted) or Mortared Stone.

Topsoil may not be used to fill sacks.



SECTION VIEW

TRENCH PLUG

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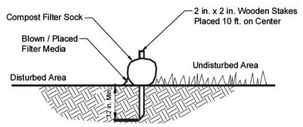
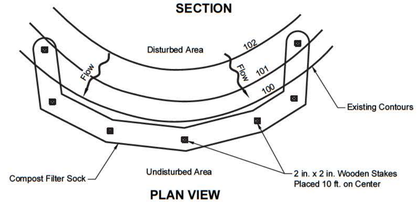


SECTION



PLAN VIEW

Notes:

1. Sock fabric shall meet standards of table 4.1 of the PA DEP Erosion Control Manual. Compost shall meet the standards of table 4.2 of the PA DEP Erosion Control Manual.
2. Compost filter sock shall be placed at existing level grade. Both ends of the barrier shall be extended at least 8 feet up slope at 45 degrees to the main barrier alignment. Maximum slope length above any barrier shall not exceed that specified for the size of the sock and the slope of its tributary area.
3. Traffic shall not be permitted to cross compost filter socks.
4. Accumulated sediment shall be removed when it reaches 1/2 the above ground height of the barrier and disposed in the manner described elsewhere in the plan.
5. Compost filter socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.
6. Biodegradable compost filter socks shall be replaced after 6 months; photodegradable socks after 1 year. polypropylene socks shall be replaced according to manufacturer's recommendations.
7. Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. in the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.
8. Where socks are placed on paved surfaces, concrete blocks should be used immediately downslope of the socks (at the same intervals recommended for the stakes) to help hold the sock in place.

COMPOST FILTER SOCK

N.T.S.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
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REVISIONS

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SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
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SCALE: AS NOTED

SHEET NUMBER: **CE108**

STANDARD E&S PLAN NOTES

1. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
2. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the local conservation district to an on-site preconstruction meeting.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the local conservation district or by the Department prior to implementation.
5. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
6. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S BMPs specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E&S plan.
7. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
8. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan maps(s) in the amount necessary to complete the finish grading of all exposed areas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 2H:1V or flatter.
9. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or the regional office of the Department.
10. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
11. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the Department fully implemented prior to being activated.
12. The contractor is respons ble for ensuring that any material brought on site is clean fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
13. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
14. Vehicles and equipment may neither enter directly nor exit directly from lots (specify lot numbers) onto (specify road names)
15. Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, re-grading, re-seeding, re-mulching and re-netting must be performed immediately. If the E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
16. A log showing dates that E&S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
17. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface water.
18. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
19. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches - 6 to 12 inches on compacted soils - prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outslopes shall have a minimum of 2 inches of topsoil.
20. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes.
21. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
22. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
23. Frozen materials or soft, mucky, or highly compress ble materials shall not be incorporated into fills.
24. Fill shall not be placed on saturated or frozen surfaces.
25. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
26. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
27. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective 'blanketing shall be applied as descr bed in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
28. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
29. E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the local conservation district or the Department.
30. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E&S BMPs.
31. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs shall be stabilized immediately. In order to ensure rapid re-vegetation of disturbed areas, such removal/conversions are to be done only during the germinating season.
32. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
33. Failure to correctly install E&S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to $10,000 per day in civil penalties, up to $10,000 in summary criminal penalties, and up to $25,000 in misdemeanor criminal penalties for each violation
34. Applicants must use environmental due diligence to ensure that the excess fill material associated with this project qualifies as Clean Fill. Clean Fill is defined as uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block, or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. "The term "used asphalt" does not include milled asphalt or asphalt that has been processed from re-use. Environmental Due Diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic database searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing environmental assessments, or audits.
35. Temporary stabilization must be applied to a site when cessation of earth disturbance activities will exceed 4 days.
36. Contractor must prepare topsoil stockpile areas prior to establishment of a stockpile by removing the topsoil and excavating each stockpile area as per the Grading Plan. If unable to grade these areas prior to stockpile establishment, the contractor must ensure that these areas are graded to final grade after stockpiles are removed.

CONTRACTOR'S CONSTRUCTION SEQUENCE

1. At least 7 days prior to starting any earth disturbance activities (including clearing and grubbing), the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S Plan preparer, the PCSM Plan preparer, and the Fayette County Conservation District to an on-site pre-construction meeting.
2. Upon installation or stabilization of all perimeter sediment control BMPs and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the Department or authorized conservation district.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the PA One Call System shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved by the Fayette County Conservation District or by Department prior to implementation. Each step of the sequence shall be completed before proceeding to the next step, except where noted.
5. A cessation of activity for 4 days or longer requires temporary stabilization of the site.
6. All water pumped from work areas is to be treated for sediment removal prior to discharging.
7. The limits of disturbance shall be marked prior to starting any earth disturbance activities and installing perimeter control devices.
8. The contractor shall be respons ble for all erosion controls specified within the project area.
9. The contractor shall coordinate all construction within the public right-of-ways with Penn-DOT and the local municipalities.
10. Install temporary erosion and sedimentation perimeter control devices, including silt fence, and existing inlet protection, for the utility-line segment to be constructed. Place silt fence on the down slope side of the sanitary line trench. Minimal clearing and grubbing should be performed during the installation of the control devices. Install rock construction entrances at all locations where construction traffic will be accessing a paved roadway. Install all perimeter control devices in accordance with the plan and details.
11. Begin sanitary sewer line construction. Place excavated material and topsoil in separate piles on the up-slope side of the trench, as per plans and details.
12. The contractor shall not excavate more than 200 feet of trench at any time. No more than 50 lineal feet of open trench should exist when utility line installation ceases at the end of each workday. Within one day of pipe placement, and trench backfilling, the disturbed area is to be graded to final contours, then seeded and mulched. The contractor shall stabilize the trench and other disturbed areas, as per the plans and details. Erosion control blankets are required on all slopes 3:1 and greater, or where the surface is subject to immediate erosion. All disturbed areas within 50 feet of a water body shall be blanketed or matted within 24 hours of initial disturbance for minor streams or 48 hours of initial disturbance for major streams unless otherwise authorized.
13. Construction wastes such as used asphalt and concrete shall be disposed at a PA-DEP approved landfill. Refer to Appendix - I of the narrative for more information.
14. The contractor shall construct the stream crossings in accordance with the approved stream crossing plan and details.
15. The contractor shall protect the exposed pipe end from debris and sediment. At no time may sediment or debris enter the exposed sanitary line. If sediments or debris do enter the sanitary line, the contractor shall immediately remove such items.
16. Disturbed roadways must have temporary paving installed immediately upon installation of sanitary line. Driveways must be immediately stabilized with crushed stone. Temporary paving may be required at the direction of the Engineer of Resident Inspector.
17. The contractor shall install trench plugs, as required, as per details.
18. After each line segment is installed, the line shall be immediately tested, as per the authority specifications.
19. The contractor shall seed and mulch the disturbed area upon backfilling and grading to final contours.
20. Complete sanitary line installation in accordance with the plans and specifications.
21. Restore all driveways and roadways in accordance with plans and specifications.
22. Replace any damaged or removed landscaping within project boundaries, as per plans and specifications.
23. Upon completion of the sanitary line construction, the contractor shall hydrostatically test the sanitary line, as per the authority specifications.
24. The contractor shall evaluate the entire project area and re-establish any area that has not obtained a minimum uniform 70% perennial vegetative cover per square foot.
25. Upon achieving a minimum uniform 70% perennial vegetative cover per square foot over the entire site, remove all remaining temporary control devices.

CONTRACTOR'S MAINTENANCE PROCEDURES (BEFORE, DURING AND AFTER SITE STABILIZATION)

1. Erosion control measures shall be implemented as outlined in the construction sequence notes.
2. During construction, the contractor shall make certain that all run-off is directed to the sedimentation control measures. Inspect and clean out all sedimentation control measures weekly and after each run-off event.
3. During construction activities, the smallest area possible shall be disturbed to accomplish the work to be executed. Disturbed areas that will not be constructed upon shall be immediately seeded with a perennial ground cover as specified.
4. The contractor shall inspect stormwater control measures on a weekly basis and after measurable storm events (i.e., at least 0.25 inch) Make repairs as necessary within 24 hours of discovery of deficiencies.
5. All sedimentation control measures are to remain until disturbed areas are fully stabilized with a permanent uniform 70% vegetative cover, paved or riprapped where specified and detailed on the plans.
6. All soil stockpiles to remain more than 20 days shall be seeded with a grass cover (see seeding requirements).
7. During earthmoving activities silt barriers shall be securely staked in place and properly maintained until the disturbed area is satisfactorily stabilized with a uniform 70% vegetative cover or other stabilizing surfacing material specified.
8. During earth moving activities place excavated material upslope from construction areas. Stockpiles shall be set parallel to the contour of the land to reduce run-off.
9. Upon completion of earthmoving and construction activities, disturbed areas that are not to be paved shall be covered within 24 hours with topsoil to a depth of six inches. Final grading passes shall be made perpendicular to the direction of stormwater run-off and tracked to help hold soils in place.
10. Stone base shall be placed on roadbeds and driveways within 24 hours of establishing subgrade.
11. Stabilize by seeding, installing protection fabrics, and riprap, all permanent stormwater collection facilities within 24 hours of completion of construction/installation as detailed and specified.
12. Reseed and mulch barren areas not producing a uniform 70% vegetative cover in any given area within 24 hours of discovering deficiencies.
13. The owner will inspect disturbed areas that have been revegetated or stabilized and inform the contractor of any site stabilization and ground cover deficiencies prior to the removal of any erosion control measures.
14. Sediment removed from the erosion and sediment control measures shall be mixed in on the construction site as directed by the engineer and stabilized by seeding and mulching, or disposed at site that has an approved E&S plan. All materials not applicable to be placed as fill will be considered construction demolition debris and must be taken to a PA-DEP approved landfill.
15. Sediment traps installed shall be cleaned out at the required designed sediment collection limit elevation. The limit shall be marked with a clean out elevation stake installed 1/3 distance from the principal spillway within the trap's sediment collection area.
16. Should any additional erosion problems occur during construction, or any questions regarding the maintenance of control measures or facilities arise, contact the local county conservation district office and the engineer.

Best Management Practices Maintenance Schedule

BMP	Inspection Schedule	Required Maintenance
Compost Filter Sock	Inspect weekly and after measurable storm events (i.e., at least 0.25 inch)	Sediment must be removed where accumulations reach 1/2 the above ground height of the sock. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection. Biodegradable socks shall be replaced after 6 months; photodegradable socks after 1 year; polypropylene socks per manufacturer's guidelines.
Rock Construction Entrance	Inspect weekly and after measurable storm events (i.e., at least 0.25 inch)	Sediment deposited on the paved roadways shall be removed and returned to the construction site at the end of each day.
Erosion Control Blankets	Inspect weekly and after measurable storm events (i.e., at least 0.25 inch)	Immediately repair any erosion control blanket that is not functioning properly.
Filter Fabric Fence	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/2 the above ground height of the fence. Any section which has been undermined or topped must be immediately replaced with a rock filter outlet.

Note:
1. Sediment collected by erosion and sediment control BMPs shall be mixed into the soil fill areas. All materials not applicable to be placed as fill will be considered construction demolition debris and must be taken to a PA-DEP approved landfill.
2. A written report documenting each inspection and all BMP repairs and maintenance activities must be kept on site and available for review and inspection by DEP or the Conservation District. Use PADEP form 3800-FM-BCW0271d (12/2019).

UTILITY LINE INSTALLATION PROCEDURES

1. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
2. Limit daily trench excavation to the length of pipe placement, installation and backfilling that can be completed the same day.
3. Trenching shall be done in accordance with layout shown on the site layout plan.
4. Water which accumulates in the open trench will be completely removed by pumping before pipe placement and/or backfilling begins.
5. On the day following pipe placement and trench backfilling, the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measure/facilities will be installed. Seeding and mulching of all utility line installation disturbed areas will be done at the end of each week as specified in the Final Site Preparation for Turfgrass Establishment.
6. Exceptions - In certain cases where trenches cannot be backfilled until the pipe is hydrostatically tested, or anchors and other permanent features are to be installed. In these cases, all of the requirements listed above will remain in effect with the following exceptions:
   a. Daily backfilling of the trench may be delayed for six days. All pressure testing and the complete backfilling of the open trench must be completed by the seventh working day.
   b. If daily backfilling is delayed, the disturbed area will be graded to final contour, appropriate temporary erosion and sediment control measures/facilities will be installed, and the areas seeded and mulched within the next two calendar days.

Measures for Recycling or Disposal of Materials

Description	Definition	Measures
Clean Fill	Uncontaminated, nonwater-soluble, nondecomposable inert solid material. Includes soil, rock, stone, dredged material, used asphalt, and brick, block, or concrete from construction and demolition activities that is separate from other waste and recognizable as such.	All cleaned fill should be hauled to an approved and permitted waste area.
Regulated Fill	Soil, rock, stone, dredged material, used asphalt, historic fill, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such that has been affected by a spill or release of a regulated substance and the concentrations of regulated substances.	All regulated fill shall be hauled to an approved and permitted waste area.
Building Materials	All materials used in the construction process. Including masonry, wood products, silt fences, super silt fences, all chemicals and resins, etc...	Contractor shall recycle all material if possible. If material is not recyclable, the remainder is to be hauled to an approved land fill.
Concrete Wash Water	Water used to clean all concrete machinery after use.	Contractor shall direct all waste water to an appropriate erosion control measure.
Sanitary Wastes	Sanitary material that shall be contained and disposed of on a regular basis.	Contractor shall be responsible for portable facilities on site. The facilities are to be inspected and cleaned as necessary.
Housekeeping	All construction waste material and litter to be picked up.	All waste from job vehicles, equipment, and trailers is to be removed and placed in appropriate waste containers.
Materials Management	Storage and maintaining of construction materials in a neat and organized matter.	Contractor shall store construction materials in an orderly fashion and meet all local and federal regulations.
Litter Control	A waste container to provide a source for disposing trash and construction waste.	Contractor is to provide waste bins on site. All waste is to be removed when necessary and hauled to an approved sanitary land fill.
Temporary Erosion Control	Temporary measures put in place to take the place of vegetation in order to preserve erosion control. Such as silt fences and ditches.	Upon 70% perennial vegetative cover all temporary erosion control measures are to be removed. Contractor shall recycle materials if able. All remaining materials shall be hauled to an approved land fill.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

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JAMES LINDEN STANTON
ENGINEER
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REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	Updated Erosion Control Notes	2-19-21	KK

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CE109

SOIL STOCKPILE AREA TEMPORARY SEED MIXTURE

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Annual Ryegrass (Lolium Multiflorum)	4.00	90%	98%	Anytime

LESS THAN 2:1 SLOPE PERMANENT SEED MIXTURE 1

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Kentucky Bluegrass Blend (3 to 5 varieties)	4.00	80%	98%	4/1 to 5/31 8/16 to 12/30
Perennial Ryegrass (Lolium Perenne)	2.00	90%	98%	4/1 to 5/31 8/16 to 12/30
Creeping Red Fescue	2.00	85%	98%	4/1 to 5/31 8/16 to 12/30

SLOPES 2:1 AND GREATER PERMANENT SEED MIXTURE 2

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Birdsfoot Trefoil (Lotus Cornicalatus)	0.20	90%	96%	4/1 to 5/31
Tall Fescue (Festuca Arundinacea)	1.00	90%	97%	4/1 to 5/31 8/16 to 10/15

Notes:
For planting use other than best seeding dates, use typical grass-lined channels seeding mixture.
Use Permanent Seed Mixture 2 (with temporary stabilizer fabric) in place of failed seed mixtures. If application does not catch within a three week period, utilize 2.7 lbs/1,000 square feet of Birdsfoot Trefoil for maximum stabilization.

TYPICAL GRASS-LINED CHANNELS PERMANENT SEED MIXTURE S1 (SM-S1)

(From PSU Agronomy Guide Tables 109 and 110 for roadsides and swales in shady areas and small flow grass-lined channels and basin areas)*

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Spring Oats (Avena Sativa) or Winter Rye	1.30	85%	98%	Early September to early October plus Spring
Tall Fescue (Festuca Arundinacea)	1.40	90%	97%	4/1 to 5/31 8/16 to 10/15
Fine Fescue	1.00	80%	95%	4/1 to 5/31 8/16 to 10/15

*For planting season other than that which is noted for the best seeding dates, use high volume channels seed mixture.

HIGH VOLUME CHANNELS PERMANENT SEED MIXTURE S2 (SM-S2)

For high volume channels where temporary or permanent stabilizer fabric is specified

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Birdsfoot Trefoil (Lotus Cornicalatus)	3.33	90%	96%	Anytime
Tall Fescue (Festuca Arundinatea)	3.10	90%	97%	Anytime
Crimson Clover	0.60	80%	95%	Anytime

Final Site Preparation For
Turfgrass Establishment

General Steps in Turfgrass Establishment
1Secure a soil test
2.Rough grade
3.Lime if needed
4.Apply basic fertilizer
5.Apply soil physical amendments if needed
6.Till above materials into 4 to 6 inch soil depth
7.Finish grade
8.Apply starter fertilizer and work into top inch of soil
9.Apply seed
10. Rake or drag to cover seed lightly
11. Roll lightly
12. Mulch

1.Soil Testing

A. Soil test to determine lime and fertilizer requirements is required to provide the best guide for proper establishment. Laboratory results of the test shall show the pH and lime requirements of the soil and the amounts of phosphorus, potassium and organic matter present in the soil. Soil shall maintain a pH of 6.0 to 7.0.Adjust soils to maintain the ideal pH prior to seeding.

2.Rough Grading

A. Remove all debris, including large stones, left by construction work.
B. Till soil and bring area to rough grade prior to liming or fertilization.
C. Where topsoil is to be replaced or brought in, first rough grade the area to the contour of the finished grade to facilitate uniform distribution of topsoil.

3.Agricultural Lime
(Permanent Seeding: Apply at a min. rate of 6 tons per acre, or per soils test, and adjust pH Level to 6.5)
(Temporary Seeding: Apply at a min. rate of 1 tons per acre, or per soils test, and adjust pH Level to 6.5)

A. Proper liming is essential to derive maximum benefits from fertilizer applications. Dolomitic lime shall be used in all situations with undesirable pH levels. If the soil analysis shows deficiencies in magnesium and calcium, a high-magnesium lime or high-calcium lime shall be used.
B. When the lime requirement has been determined, broadcast and work into a 4 to 6 inch soil depth enough ground limestone to meet fully the requirement shown by the test. Limestone shall be fine-sized whereby 95% passes through a 20-mesh screen, 60% passes through a 60-mesh screen, and 50% passes through a 100-mesh screen.
C. Where lime requirement exceeds 200 pounds per 1,000 square feet, apply one half the total requirement, till, apply the remaining one half, and retill.

4.Fertilization
(Permanent Seeding Application Rate: 10-10-20 at 1,000 lbs per acre, or per soils test)
(Temporary Seeding Application Rate: 10-10-10 at 500 lbs per acre, or per soils test)

A.Basic Fertilization
Broadcast the required amount of recommended fertilizer from the soils report and work into the soil to a 4 to 6 inch depth as determined by the soil test. If the report form does not address a basic fertilization rate, use 10-10-20 fertilizer at a rate of 25 pounds per 1,000 square feet.
B.Starter Fertilization
Immediately before an August, September, or October seeding, broadcast and rake into a soil depth of 1 inch, 25 pounds of a 10-5-5 fertilizer or 140 pounds of a 10-20-20 analysis commercial fertilizer per 1000 square feet. For a February, March, April, May, June, July, or November seeding, use a fertilizer having an approximate 2-1-1 ratio and containing 35% or more of the total nitrogen as water insoluble nitrogen. Use no starter nitrogen with clover, trefoil, and crownvetch families. Broadcast and work into the top inch of soil 40 pounds of a 10-5-5 or 33 pounds of a 12-6-6 or the equivalent per 1,000 square feet. Do not use a starter fertilizer which uses urea and/or diammonium phosphate as ingredients.

5.Soil Amendments

A. Where a soil test indicates a low organic matter content of the soil, work the recommended amounts of organic matter from the soils report form into the soil to a 2 to 4 inch depth before applying the starter fertilizer.
B. Reed sedge peat, moss peat, or a combination of the two materials is recommended as a source of organic matter. Well-rotted sawdust or well-rotted manure may be used as a source of organic matter although these decompose quite rapidly and maintain desirable soil physical conditions for a shorter period of time than do reed sedge or moss peat.

6.Finish grading

Rake area to finish grade just prior to seeding.
Light rolling will indicate any low spot or other irregularities of the area.

7.Seeding (by mechanical or hand broadcast)

A. Late summer to early fall is the best time for seeding permanent turfgrass. See seed mixtures for best seeding times.
B.Sow recommended seed mixtures as noted.
C. Divide total seed quantity in two equal lots, sowing one lot in one direction and the second lot at right angles to the first with a mechanical seeder or spreader (hand broadcasting).
D. Rake lightly or drag seeded areas to cover seed no deeper than 1/4 inch.
E.Roll lightly to firm soil around seed.

8.Mulching (Apply at a min. rate of 3 tons per acre)

A. Mulch seeded area with clean straw or marsh hay. Clean straw shall be either wheat or oat straw, free of viable seed, and well-cured to less than 20% moisture content by weight. Hay shall be Timothy hay, mixed clover or other acceptable native or forage grasses accepted by the engineer as equivalent. Light mulches (some soil showing through mulch) may be left on area to decompose. Heavy mulches (complete soil coverage) should be removed from the area within a few days after seed germination.

B. Anchor mulch with emulsified asphalt, as per manufacturer's recommendations, at a rate of 31 gallons for 1000 square yards.

C. Properly maintain mulched areas until the entire project has been completed. Promptly reapply mulch (and seed) materials which become dislodged or lost due to wind, rain, or other causes.

Notes:

1. The contractor shall be required to provide to McMillen Engineering proof of soil testing by a professional testing laboratory and rates of lime and fertilizer required prior to application.
2. The contractor shall be required to provide to McMillen Engineering the seed tags of seed to be used to determine if the seed mixtures are compatible to the mixtures specified prior to application.
3. See E&S control plans for control measure locations and for specific stabilizer requirements for problem areas and channels.

Turfgrass Establishment Methods (Hydroseeding)

The contractor shall have the option of applying the required amounts of lime and starter fertilizers at time of seeding if the method of hydroseeding is used in lieu of the site preparations described in Sections 3, 4-B, and 7 of the final site preparation for turfgrass establishment. The required amounts of basic soil amendments, if needed, and basic fertilizers shall be mixed into the topsoil at time of placement.

Topsoil Collection Procedures for Testing

Topsoil stockpile areas to be used for in-place final cover soil will need to be tested to determine the pH, amount of organic matter, and basic fertilizer application rates required to establish an acceptable groundcover.

Soil samples will be needed for testing. The following procedure shall be implemented in gathering the soil and preparing it for analysis at a laboratory:

1. To get reliable soils test results, take representative soil samples.
2. Soil shall be collected from at least 10 spots for every acre of area to be tested.
3. Soil samples should not be taken any closer than 50 feet to another sampling spot, if possible.
4. Soil samples shall be taken to a depth of 6 or 7 inches with a soil sampling tube or any other acceptable soils collection device. The topsoil stockpiles should also be probed and sampled at the core.
5. All soil samples collected from a particular sampling area shall be mixed together thoroughly in a clean, non-metallic bucket and allowed to dry.
6. A pint of this mixed dry soil shall be placed in a sturdy carton or plastic bag, labeled, and shipped to a private lab for analysis.
7. Each sample shall be documented and its place or origin recorded.
8. Additional information pertaining to the history of the soil analyzed shall also be provided.

Soil sample kits may be obtained from the Penn State Cooperative Extension Service or arranged through an independent testing lab.

Prior to spreading final soil cover, stockpiles shall be identified for use. Soil stockpile shall be tested at varying depths for consistency. A surface test, five foot depth test, shall be performed on the stockpile. If the soil stockpile is deeper, additional testing shall be done when the amount of soil removed reaches two feet below the previous lowest testing strata. All tests shall be verified for location and depth of test. A soil test log shall be kept on site.

Soil Classification and Types

	Symbol	Soil type	Slope	Limitations	Meets USDA Hydric Criteria	Hydrologic Soil Group
ErB		Ernest silt loam	3 to 8%	1. Cutbanks Cave 2. Easily Erodible 3. Depth to Saturated zone 4. Hydric/Hydric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Wetness	No	D
FpB		Fairpoint very channery silt loam	0 to 8%	1. Cutbanks Cave 2. Corrosive to Steel 3. Easily Erodible 4. Flooding 5. Depth to Saturated Zone 6. Piping 7. Ponding 8.Frost Action 9. Poor Source of Topsoil 10. Slow Percolation 11.Low Strength/Landslide Prone 12. Hydric/Hydric Inclusions	No	C
Hy		Holly silt loam	0 to 2%	1. Cutbanks Cave 2. Corrosive to Concrete/Steel 3. Flooding 4. Depth to Saturated Zone 5. Hydric/Hydric Inclusions 6. Low Strength/Landslide Prone 7. Slow Percolation 8. Piping 9. Poor Source of Topsoil 10. Frost Action 11. Ponding 12. Wetness	Yes	B/D

On Site Pollution

Remedy	Description
Excavation and Hauling	Allows contaminated soil to be taken off site and disposed at an approved hazardous waste facility.
Isolation of Contaminants	This is done through appropriate capping and/or engineering controls. Capping can include a soil in-situ or an impervious surface such as a pavement or building. Caps are generally constructed of clean sediment, sand, or gravel, but can also include geotextiles, liners, or the addition of material such as organic carbon, to attenuate the flux of contaminants in to the overlying water. Thickness of the cap will typically depend on the exposure and risk determinations of the regulated substance, which would rely partly on the proposed use of the site.
Vapor Barriers	For occupied buildings, vapor intrusion may also become an issue, which is the movement of contaminant vapors, typically located in subsurface soil or ground water, into a building. Contaminant sources can be from man-made sources, such as chemical leaks or spills, or can be naturally occurring, such as radon gas. If vapor intrusion is an issue, then occupied buildings will require vapor barriers.
Blending of Soil	This option is most commonly used for agricultural lands that were contaminated with pesticides or other chemicals. Blending of soil typically involves stripping the approximately 6 inches of topsoil, where many contaminants are often captured, and blending these stripped soils with the cleaner underlying soils to bring the site within an acceptable health standard or to achieve background standard.

Remedy	Description
Excavation and Hauling	Allows contaminated soil to be taken off site and disposed at an approved hazardous waste facility.
Monitored Natural Attenuation	This remedy typically uses known, ongoing, naturally occurring processes to contain, destroy, or otherwise reduce the bioavailability or toxicity of contaminants in soil. Although burial by clean sediment is often the dominant process relied upon for natural recovery, multiple physical, biological, and chemical mechanisms frequently act together to reduce risk.
Pump and Treat	This is for groundwater contamination requiring active treatment for areas of higher chemical concentration. This is most common for plumes of non-aqueous phase liquids (NAPL) or other chemical contaminants that can be separated from water, such as petroleum-based substances.

Note:
All soil types are suscept ble to pollution.

Mulch Application Rates

Mulch Type	Application Rate (Min.) Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	Notes
Straw	3 tons	140 lb.	1,240 b.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4 - 6 tons	185 - 275 lb.	1,650 - 2,500 b.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415 lb.	See limitations above

TABLE 11.1
CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS

DEPTH (in)	PER 1,000 SQUARE FEET	PER ACRE
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1074

Notes:

1. Graded areas should be scarified or otherwise loosened to a depth of 3 to 5 inches to permit bonding of the topsoil to the surface areas and to provided a roughened surface to prevent topsoil from sliding down slope.
2. Topsoil should be uniformly distributed across the disturbed area to a depth of 4 to 8 inches minimum - 2 inches on fill outslopes. Spreading should be done in such a manner that sodding or seeding can proceed with a minimum of additional preparation or tillage. Irregularities in the surface resulting from topsoil placement should be corrected in order to prevent formation of depressions unless such depressions are part of the PCSM plan.
3. Topsoil should not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. Compacted soils should be scarified 5 to 12 inches along contour wherever possible prior to seeding.

Soil Limitations and Solutions

Limitation	Solution
Cutbanks Cave	Appropriate precautions must be taken to safeguard workers during all trenching and excavation operations.
Corrosive to Concrete/Steel	In general the use of protective coatings such as bituminous and epoxy can be applied for prevention. For below ground concrete and steel pipes type two cement and cathodic protection methods are applicable alternative options
Drought	The proper amount of irrigation should be used in accordance with the soil type and location.
Easily Erodible	For easily erodible soils minimize the area of disturbance, avoid disturbance on steep slopes, and inspect and maintain E&S BMP's.
Flooding	The proper amount of drainage should be used in accordance with the soil type and location.
Depth to Saturated Zone/Seasonal High Water table	Perform work during periods of low water table if water is encountered during trenching, a pumped water filter bag shall be used for dewatering.
Hydric/Hydric Inclusions	If soil meets USDA hydric criteria, obtain a wetland delineation report and avoid earthwork within designated wetland areas. If unavailable, obtain proper permit from DEP.
Low Strength/Landslide Prone	Avoid creation and saturation of steep slopes to prevent low strength or landslide prone situations, also do not use for road fill
Slow Percolation	Soil infiltration testing should be conducted if stormwater infiltration BMP's are to be constructed.
Piping	Install anti-seep collars on basin discharge pipes. Install pipe anchors on storm sewers and sanitary sewer lines that are located on steep slopes.
Poor Source of Topsoil	Utilize topsoils from other areas that are considered fair or good for restoration. Conduct soil tests to determine proper application of soil amendments to improve soil quality.
Frost Action	Ensure that foundation level is beyond the depth of expected maximum frost penetration . If applicable remove frost susceptible soil and replace it with course granular material that provides a barrier to unsaturated flow.
Shrink-Swell	For prevention the removal of susceptible shrink-swell soils done prior to construction. If this isn't possible the use of impermeable vertical barriers can be provided to control a moisture equilibrium.
Potential Sinkhole	If possible avoid locations with open or active sinkholes. If not the use of both grouting and densification are effective techniques for prevention.
Ponding	The use of trenches and channels can redirect water from the ponding area.
Wetness	The proper amount of drainage should be used in accordance with the soil type and location.
On Site Pollution	Solutions for on site pollution include numerous remedies such as excavation and hauling, blending of soils, isolation of contaminants, pump and treat, monitored natural attenuation, and vapor barriers.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
.	.	.	.

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SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL NOTES

BOOK NO.	JOB NO.		
ME 293	2017-68		
DRAWN		CHECKED	
JE	11/15/18	JS	11/15/18
DESIGN		APPROVED	
JE	11/15/18	TMJR	11/15/18

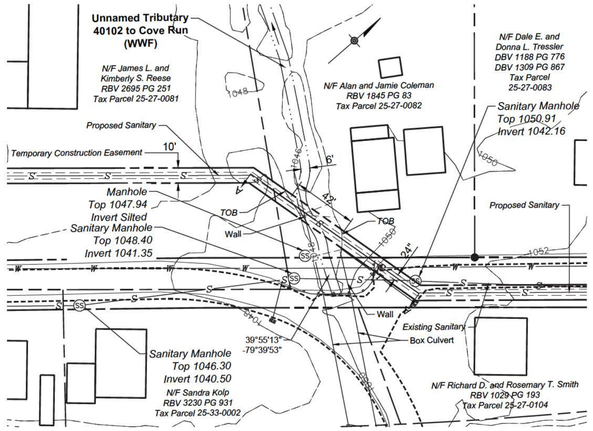
SCALE: AS NOTED

SHEET NUMBER
CE110

SITE PLAN
UTILITY LINE STREAM CROSSING 1
Unnamed Tributrary 40102 to Cove Run

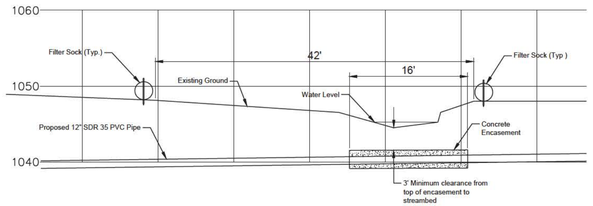
PROJECT NARRATIVE

This project is to replace the existing 8" sanitary line under Tributary Number 40102 to Cove run outside of the PennDOT Right of Way of S.R. 1005 Starlite Road at the intersection of S.R. 1005 (Morgan Station Road) and Misty Lane. Morgan Station Road crosses a 16 foot concrete box culvert that carries Tributary 40102 to Cove Run (Stream Code 40086). The confluence of this tributary with Cove Run is approximately 350 feet northwest of the proposed stream crossing. Cove run flows into Redstone Creek at Uniontown and Redstone Creek flows into the Monongahela River just north of Brownsville. The utility crossing will be on the west side of the culvert. The bed of the waterway is six feet wide and the distance from top of bank to top of bank is fourty-two feet. The proposed trench is twenty-four inches in width. This stream is designated WWF (Warm Water Fishes).



Method
Trench

Total Impact
Length: 42 L.F.
Area: 84 Sq. Ft.



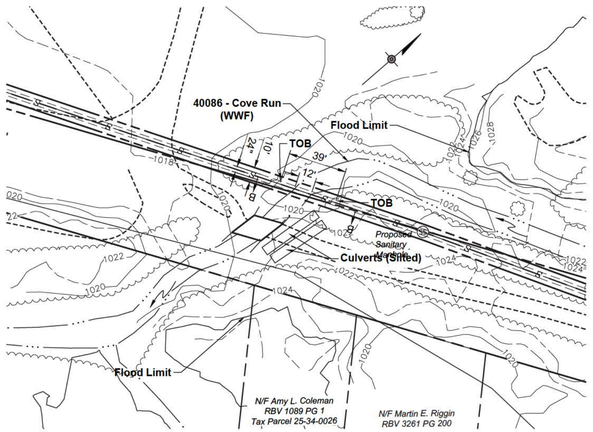
CROSS SECTION A-A
Vertical Scale 1" = 10'
Horizontal Scale 1" = 10'

0' 10' 20' 30'

SITE PLAN
UTILITY LINE STREAM CROSSING 2
40086 - Cove Run

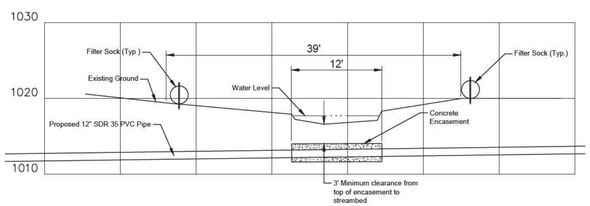
PROJECT NARRATIVE

This project is to replace the existing 8" sanitary line under Cove Run (40086) adjacent to the abandoned Pennsylvania Railroad crossing of Cove Run near the old Evans Station Road south of Lemont Furnace, PA.
Cove run flows into Redstone Creek at Uniontown and Redstone Creek flows into the Monongahela River just north of Brownsville. The utility crossing will be on the north side of the culvert of the railbed crossing. The bed of the waterway is seven feet wide and the distance from top of bank to top of bank is fourty-two feet. The proposed trench is twenty-four inches in width. This stream is designated WWF (Warm Water Fishes).



Method
Open Trench

Total Impact
Length: 39 L.F.
Area: 78 Sq. Ft.



CROSS SECTION B-B
Vertical Scale 1" = 10'
Horizontal Scale 1" = 10'

0' 10' 20' 30'

Notes:

1. Declaration is made to original purchaser of the plan. It is not transferable to additional institutions or subsequent owners.
2. Surveyor has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
3. This drawing is based upon tax mapping, Penn DOT mapping, LiDAR imaging and deeds of record. This Plan is not based upon an actual field survey and does not constitute a survey of any kind for the property shown hereon.
4. The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.

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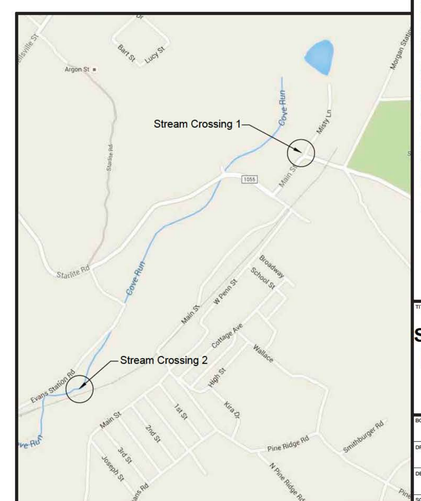
PA. Act 287 (1974) Requires 3 Working Days Notice



INDEX KEY
SCALE: 1"=800'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
STREAM CROSSING PLAN AND CROSS SECTION

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
JE	11/15/18	JS	11/15/18
DESIGN		APPROVED	
JE	11/15/18	TMJR	11/15/18
SCALE			
AS NOTED			

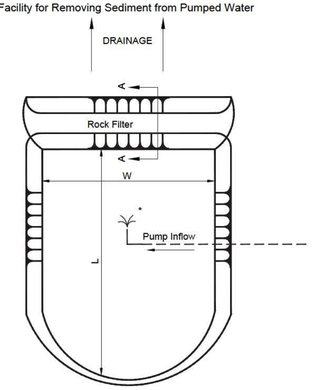
SHEET NUMBER
CSX101

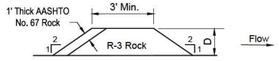
FILE: C:\2017\2017-68\Misty Lane\2017-68-CSX101-CSX103.dwg

Recommended Facility for Removing Sediment from Pumped Water

Note:

Impoundment may be created by excavation (as shown) or by construction of rock embankments.



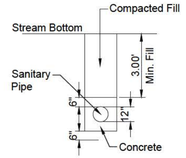


TYPICAL SECTION A-A

* Pump discharge will not cause erosion or scour at outlet. An anchored vertical discharge is recommended.

L = Length
W = Avg. Width
D = Depth

Where = L x W x D = 100 cf / 100 gpm Inflow



TRENCH DETAIL

Notes:

1. See Sheet 4 for specific procedures regarding erosion controls, bank stabilization and similar specifications.
2. Minimum of 3 feet of cover over utility line or encasement except in rock where 1 foot of cover shall be provided. Maintain 1 foot minimum below water line

STREAM CROSSING
CONTRACTOR'S CONSTRUCTION SEQUENCE

1. Construct temporary erosion and sedimentation perimeter control devices including the rock construction entrance, existing stream and bank stabilization protection, the temporary rock filter, the compost filter socks, the sediment traps, and silt fencing for the utility construction. Install all perimeter control devices in accordance with the plan and details.
2. Trench excavation for utility line crossings should be undertaken from the top of banks whenever possible.
3. All excavated channel materials that will be subsequently used as backfill will be placed in a temporary stockpile located outside of the channel. These storage areas must be encircled with a barrier or sediment removal structure to prevent sediment laden runoff from reentering the channel. All excavated materials that will not be used on the site must be immediately hauled to a disposal site located outside of the floodplain.
4. Temporary access roads, crossings where repeated traffic is planned, and any other form of temporary fill or ballast located within the channel, will be constructed with clean rock fill. For major causeways, fill materials will be stabilized at all locations subject to wash by stream/river flows.
5. Seepage into excavation trenches underneath or adjoining small stream diversions will be pumped to a facility for removal of sediment. This facility must be located outside of the channel. Sediment Trap Detail illustrates the Department's recommended facility for removal of sediments from pumped water.
6. Disturbed bank areas should be stabilized immediately upon completion of the crossing.
7. All work, including stabilization, should be planned for periods of low stream/river flows and scheduled for completion in sufficient time to allow for the establishment of an erosion resistant vegetative cover on disturbed areas before the start of the dormant season.
8. Evaluate the entire site and re-establish any area that has not obtained a minimum uniform perennial 70% vegetative cover per square foot.
9. Upon achieving a minimum uniform perennial 70% vegetative cover per square foot over the entire disturbed site, remove all remaining temporary control devices.

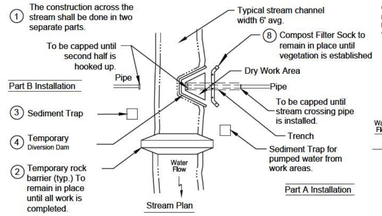
STREAM CROSSING
GENERAL INSTALLATION NOTES

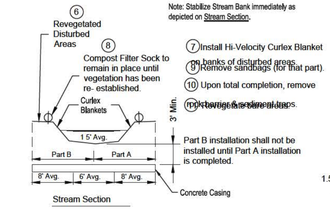
1. The maximum size utility line is 12" diameter pipe with 20" steel casing.
2. All utility lines under stream beds shall be located such that there will be a minimum of three (3) feet of cover between the top of the utility line or encasement and the lowest point in the natural contour of the streambed, unless the utility line is in rock, where a minimum cover of one (1) foot shall be provided.
3. Trenches excavated for the installation of utility lines shall be the minimum width necessary. As soon as the utility line is installed and tested to ascertain no leakage, appropriate new or previously excavated backfill material shall be placed in the trench and the area restored to its original condition and elevation and stabilized. Backfill material stored in connection with the installation must be properly retained out of the floodway so as to prevent its discharge, washings or runoff from entering the waterway prior to its placement as backfill.
4. Adequate measures shall be used to prevent sedimentation from the trench from entering the stream.
5. The backfilling of the trench in which the pipe will be laid shall be done so as to eliminate the formation of a permanent ridge in the streambed.
6. During construction activities, all public and private property including existing vegetation, landscape features and monuments within, along and adjacent to the work area, shall be protected and preserved to the maximum degree possible. This shall include, but not be limited to, precautions taken to minimize damage, erosion, injury or destruction; prevent pollution; provide protection of all trees and other woody plants; special care being taken to protect the natural vegetation and surroundings to include all natural drainage ways, ponds, lakes, swamps, woods and fields, and storage of materials in such manner to prevent leaching which would be injurious to soils and to plants. Precautions should be taken to prevent damage to pipes, conduits and other underground structures.
7. Archaeological artifacts discovered during the performance of work authorized under this general permit must be adequately protected and their discovery promptly reported to the Director, Bureau of Historic Preservation, Historical and Museum Commission, P.O. Box 1025, Harrisburg, Pa.17120.
8. Owners shall investigate for drinking water intakes or reservoirs for public and private water supplies within five (5) miles downstream of the crossing and written notice shall be given at least ten (10) days prior to construction to operators of any such intakes or reservoirs. Owners must notify public and private water supply operators immediately and no longer than one (1) hour after an occurrence at the crossing site which results in the release of suspended solids and turbidity to the stream.
9. Mats, pads, or other similar devices shall be used where crossings of wetland areas by construction equipment cannot be avoided. Original grades through wetlands must be restored after trenching and backfilling. Any excess fill material must be removed from the wetland and not spread on-site. Mounding of fill material to allow for settlement in the trench will be permitted in accordance with best construction methods.
10. Deposition of dredged or excavated materials and all earthwork operations will be carried out in such a way as to minimize erosion of the material and preclude its entering into any wetland adjacent to the utility line crossing.
11. Utility line crossings of streams should be accomplished so that the line is at a right angle to the stream where possible, unless the crossing is installed on an existing bridge.
12. Whenever possible, in accordance with best construction methods utility line crossings are to be made "in the dry" by installing sandbag and plastic dams and piping stream flow through the affected areas.

STREAM CROSSING
CONTRACTOR'S MAINTENANCE PROCEDURES
(BEFORE, DURING AND AFTER SITE STABILIZATION)

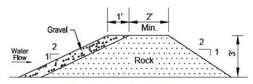
1. Erosion control measures shall be implemented as outlined in the construction sequence notes.
2. During construction, the contractor shall make certain that all run-off is directed to the sedimentation control measures. Inspect and clean out all sedimentation control measures after every rainfall/storm water run-off occurrence/storm event.
3. During construction activities, the smallest area possible shall be disturbed to accomplish the work to be executed. Disturbed areas that will not be constructed upon shall be immediately seeded with a perennial ground cover as specified.
4. The contractor shall inspect stormwater control measures on a daily basis and make repairs as necessary within 24 hours of discovery of deficiencies.
5. All sedimentation control measures are to remain until disturbed areas are fully stabilized with a permanent minimum uniform perennial 70% vegetative cover per square foot, paved or riprapped where specified and detailed on the plans.
6. All soil stockpiles to remain more than 20 days shall be seeded with a grass cover (see seeding requirements).
7. During earthmoving activities silt barriers shall be securely staked in place and properly maintained until the disturbed area is satisfactorily stabilized with a minimum uniform perennial 70% vegetative cover per square foot or other stabilizing surfacing material specified.
8. During earth moving activities place excavated material upslope from construction areas. Stockpiles shall be set parallel to the contour of the land to reduce run-off.
9. Upon completion of earthmoving and construction activities, disturbed areas that are not to be paved shall be covered within 24 hours with topsoil to a depth of six inches. Final grading passes shall be made perpendicular to the direction of stormwater run-off and tracked to help hold soils in place.
10. Stone base shall be placed on roadbeds and driveways within 24 hours of establishing subgrade.
11. Stabilize by seeding, installing protection fabrics, and riprap, all permanent stormwater collection facilities within 24 hours of completion of construction/installation as detailed and specified.
12. Reseed and mulch barren areas not producing a minimum uniform perennial 70% vegetative cover per square foot cover in any given area within 24 hours of discovering deficiencies.
13. The owner will inspect disturbed areas that have been revegetated or stabilized and inform the contractor of any site stabilization and ground cover deficiencies prior to the removal of any erosion control measures.
14. Sediment removed from the erosion and sediment control measures shall be mixed in on the construction site as directed by the engineer and stabilized by seeding and mulching, or disposed at site that has an approved E&S plan. All materials not applicable to be placed as fill will be considered construction demolition debris and must be taken to a PA-DEP approved landfill.
15. Sediment traps installed shall be cleaned out at the required designed sediment collection limit elevation. The limit shall be marked with a clean out elevation stake installed 1/3 distance from the principal spillway within the trap's sediment collection area.
16. Should any additional erosion problems occur during construction, or any questions regarding the maintenance of control measures or facilities arise, contact the local county conservation district office and the engineer.

Stream Crossing Details

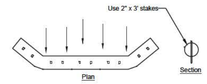




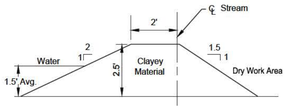
Gravel - Coarse Aggregate Gradation 3A.
Rock - 1. 35% Total weight to be pieces heavier than 350 lbs. 2. Average weight of pieces 180-220 lbs. 3. 10% total weight to be pieces 35 lbs. or less.



Rock Barrier Section Detail



Compost Filter Sock Barrier Detail



Revegetation Measures

All disturbed areas preceding construction activities shall be seeded as follows:

Limestone Type MO - 3 ton / acre.
Fertilizer 5-10-10 - 500 lbs / acre
Seeding - Reed Canarygrass - 25 lbs. / acre Redtop - 5 lbs. / acre
Birdsfoot Trefoil w/inoculant - 7 lbs / acre
Mulch - Clean straw - 115 lbs / 1000 S.F. Anchoring Material - Asphalt Emulsion - 150 gal/acre

Limestone and fertilizer can be applied at the same time. Seeding above shall only be applied in the Spring or Fall. Temporary seeding shall be applied at those times when the above cannot be applied. Temporary seeding consist of Ryegrass at 48 lbs. / acre, all other quantities listed above shall remain the same.

Notes:

1. Stream crossing operations shall not commence until the permit is issued from the PA DEP.
2. Work to be done at any stream crossing shall not exceed two consecutive days.
3. Trenches shall be dug with a backhoe from the stream bank.
4. Rock barrier shall be placed down stream of work area prior to beginning any work.
5. Filter Socks shall be placed after trench of that part has been backfilled. Place Curlex blankets between filter sock and stream bottom in disturbed areas as per manufacturers specifications.
6. Temporary Diversion Dam shall be installed prior to trench excavation into the stream bed; to be removed after the trench of that area is backfilled. Sheet Pile can be used to replace the Temporary Diversion Dam.
7. All disturbed areas shall have a minimum uniform 70% perennial vegetative cover per square foot before filter socks are removed.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENG NEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
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SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

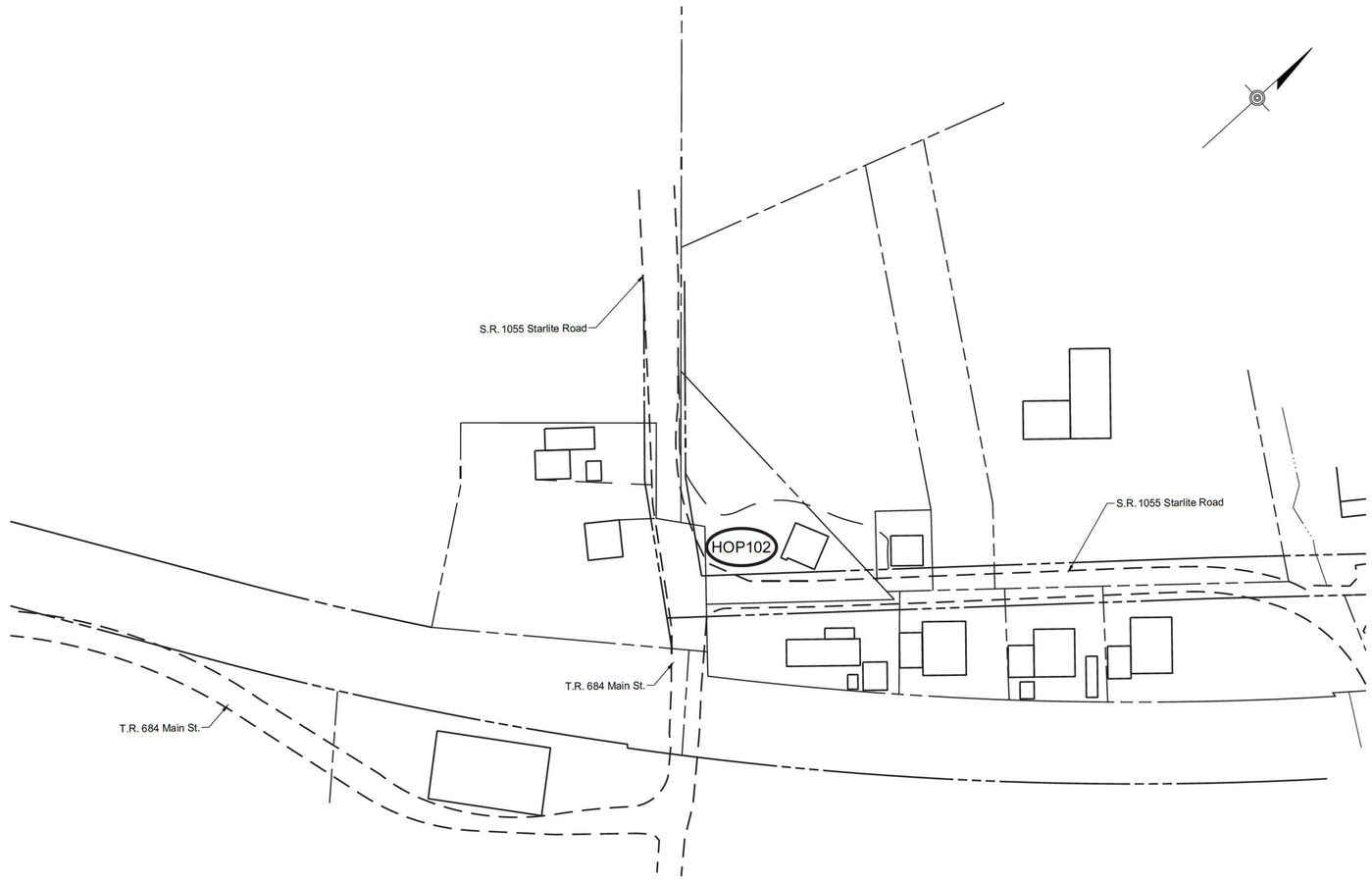
TITLE
STREAM CROSSING DETAILS AND NOTES

BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN	JE	11/15/18	
DESIGN	JE	11/15/18	
CHECKED	JS	11/15/18	
APPROVED	TMJR	11/15/18	

SCALE
AS NOTED

SHEET NUMBER
CSX102



Legend

HOP102 Sheet Number

INDEX PLAN
SCALE: 1" = 60'

60' 30' 0' 60' 120'

Bar Scale

PENNSYLVANIA ONE CALL SYSTEM, INC.

Call Us Before You Dig

1-800-242-1776

PA Act 287 (1974) Requires 3 Working Days Notice

NOTE:
The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 157208

REVISIONS

NO.	DESCRIPTION	DATE	BY

FILE: C:\2017\2017-68\Drawings\Layout\2017-68 HOP.dwg

SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
HIGHWAY OCCUPANCY PERMIT INDEX PLAN

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
MV	2-19-18	JS	3-27-18
DESIGN		APPROVED	
JE	2-19-18	TMJR	3-28-18

SCALE: AS NOTED

SHEET NUMBER
HOP101

TABULATION OF OVERALL LENGTH - S.R. 1055
SEGMENT 0320 OFFSET 1690 TO OFFSET 1750 - 60 FT.

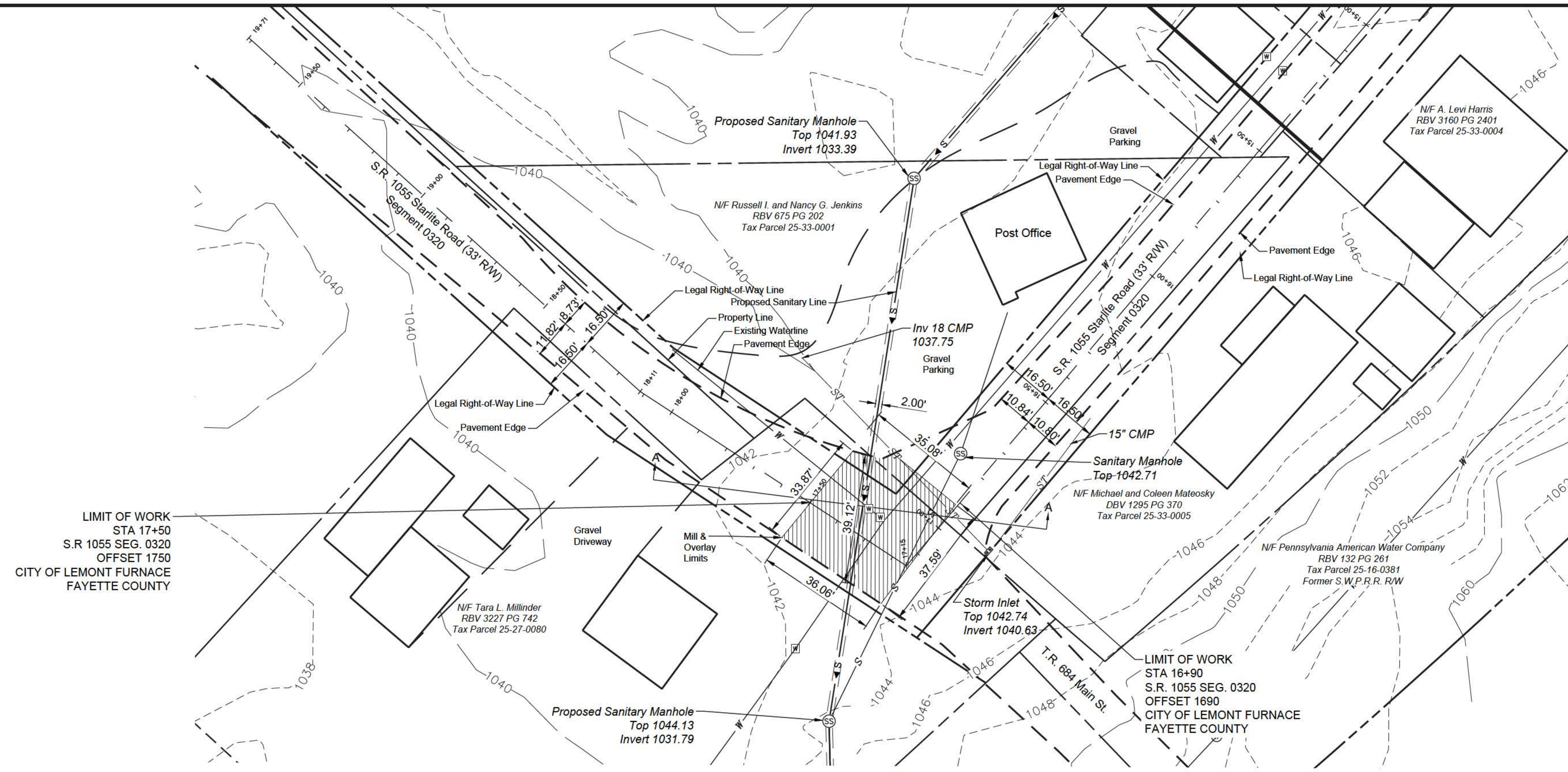
RECORD OF EXISTING ROAD TYPES
County: 26
Route: S.R. 1055
Seg/Off Begin: 0320/0000
Seg/Off End: 0320/1750
Layer Width: 21 (ft.)
SURFACE TREATMENT - SEAL COAT / DEPTH: .25 (in.) / Year: 2010
BITUMINOUS WEARING COURSE ID-2 / DEPTH: 1 (in.) / Year: 2001
LEVEL BITUMINOUS WEARING COURSE ID-2 / DEPTH:1 (in.) / Year: 2001
SCRATCH BITUMINOUS WEAR COURSE FB-1 / DEPTH: 1" / Year: 1982
BITUMINOUS WEAR COURSE ID-2 / DEPTH: 2.25 (in.) / Year: 1982
REINFORCED CEMENT CONCRETE PAVEMENT / DEPTH: 6 (in.) / Year: 1982
2A SUBBASE / DEPTH: 5 (in.) / Year: 1982

SCOPE OF WORK
This is a sanitary line installation project to install a sanitary sewer line under S.R. 1055 Starlite Road at the intersection of T.R. 684 Main Street in Lemont Furnace, North Union Township. Installation is to be by open cut due to the proliferation of existing utilities in the area. The new sanitary sewer line is to be installed perpendicular to the tangent of the curve.

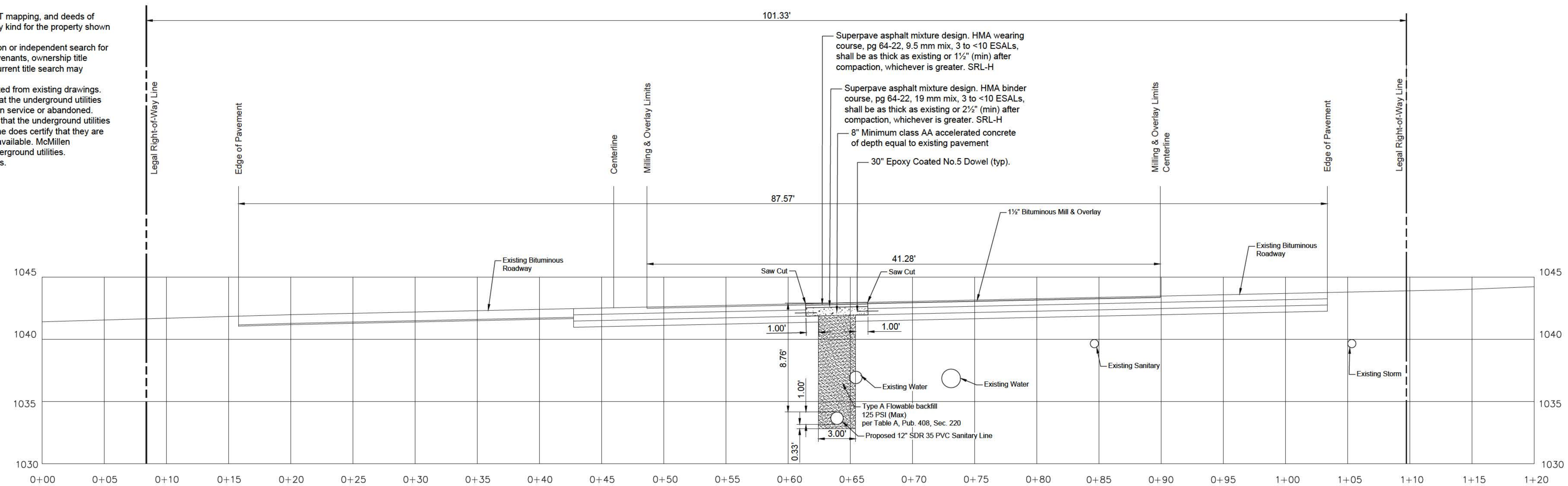
MAINTENANCE AND PROTECTION OF TRAFFIC
This project shall require the closure of the northern southbound lane of S.R. 1055 (Starlite Rd.) for a distance necessary to accommodate the installation of a 12" SDR 35 PVC sanitary line, and then the closure of the southern eastbound lane of S.R. 1055 (Starlite Rd.) for a distance necessary to accommodate the installation of a 12" SDR 35 PVC sanitary line. Preliminary maintenance and protection of traffic accommodations to be considered within the construction area. Traffic control shall be in accordance with the guidelines specified in PennDOT Publication 213.

PAVEMENT MARKINGS
1. Apply pavement markings at the width indicated.
2. Use waterborne paint for all longitudinal lines. On final bituminous wearing course or concrete surface, apply two applications of paint. Apply the second application after the first is dry, within 24 hours.
3. Apply all pavement markings in accordance with the manufacturer's recommendations.
4. The contractor shall reapply any pavement marking that is damaged beyond the start/stop of work due to construction activity at no additional cost to the department.
5. Stopline shall be replaced if disturbed or damaged during construction.

GENERAL NOTES
1. The legal right-of-way for S.R. 1055 (STARLITE ROAD) is 33 feet in width as provided by PennDOT 12-0. See plan for details.
2. This is a utility installation project.
3. There are no navigable streams on this project.
4. Do not interfere with the operation of any fire hydrant, fire box or police call box.
5. The horizontal alignment is based on pre-construction plans as surveyed by McMillen Engineering, Inc.
6. Areas filled with other than flowable backfill shall be backfilled with maximum 4" lifts, compacted to 100% and shall be tested and verified by a qualified third party.
7. Trenches that settle shall be replaced at the utility owners expense.
8. Road centerline stations refer to segment offsets in feet.
9. Declaration is made to original purchaser of the plan. It is not transferable to additional institutions or subsequent owners.
10. This drawing is based upon tax mapping, Penn DOT mapping, and deeds of record. This plan does not constitute a survey of any kind for the property shown hereon.
11. McMillen Engineering, Inc. has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
12. The underground utilities, if shown, have been located from existing drawings. McMillen Engineering, Inc. makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. McMillen Engineering, Inc. further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. McMillen Engineering, Inc. has not physically located the underground utilities.
13. A ten foot travel lane must be maintained at all times.



Plan
Scale 1" = 25'
0' 25' 50' 75'



SECTION A-A
S.R. 1055
SEG 0320 OFFSET 1732
SCALE 1" = 5'
0' 5' 10' 15'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 157208

REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	PADOT comments	5/9/18	RH

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SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
HIGHWAY OCCUPANCY PERMIT PLAN AND SECTION

BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN		CHECKED	
MV	2-19-18	JS	3-27-18
DESIGN		APPROVED	
JE	2-19-18	TMJR	3-28-18

SCALE
AS NOTED

SHEET NUMBER
HOP102

TRAFFIC CONTROL NOTES

1. All distances may be adjusted slightly to fit field conditions.
2. All signs shall be 36" x 36" for conventional roadways and 48" x 48" for expressways and freeways unless otherwise noted.
3. Traffic Control Plans may deviate from the typical applications shown in this publication to allow for conditions and requirements of a particular site or jurisdiction.
4. The three categories for work duration of temporary traffic control are:
   a. Short-Term Stationary Operation - Work that occupies a location up to 24 hours.
   b. Long-Term Stationary Operation - Work that occupies a location more than 24 hours.
   c. Mobile Operation - Work that moves intermittently or continuously.
5. The INCIDENT AHEAD (W25-101), SURVEY CREW (W21-6), MOWING NEXT (_) MILES (W21-14) and BRIDGE INSPECTION AHEAD (W2I-II) signs may be used as an alternate to the ROAD WORK AHEAD sign (W20- 1) or ROAD WORK NEXT (_) MILES (G20- 1) where appropriate.
6. The needs and control of all road users through the work zone (including motorists, bicyclists, pedestrians and persons with disabilities in accordance with the Americans With Disabilities Act of 1990) shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.
7. Sign sheeting shall be of an approved type and listed in Publication 35 (Bulletin 15). Sheeting for freeways and expressways shall be fluorescent orange.
8. All warning sign colors shall have orange background and black border and legends unless otherwise specified.
9. All workers including flaggers shall wear a high-visibility fluorescent orange or yellow-green apparel with retroreflective material that meets the latest ANSI/ISEA publication entitled American National Standard for High-Visibility Safety Apparel and Headwear for Class 2 risk exposure anytime day or night. Class 3 high-visibility apparel should be considered for additional flagger visibility at night. During inclement weather, high-visibility fluorescent rain gear may be used. If FHWA amends or modifies their regulation, the amendment will take effect on the date specified by FHWA.
   Worker - A person on foot whose duties place him or her within the right-of-way of a street or highway, such as highway construction and maintenance forces, survey crews, utility crews, responders to incidents within the street or highway right-of-way, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a street or highway.
   Emergency and incident responders and law enforcement personnel within the TTC zone may wear High-Visibility Public Safety Vests that meets the performance requirements of the ANSI/SEA 207-2006 (see Section 1A. 11), or equivalent revisions, and labeled as ANSI 207-2006, in Lieu of ANSI/ISEA 107-2004 apparel.
10. All flaggers at minimum shall have training as per the most current version of Publication 408, Section 901.3 Flagger Training.
11. For guiderail deflection distances refer to PUB 13M (DM-2) Design Manual 2 in Chapter 12, Table 12.3 (English) Guiderail and Median Barrier Systems page 12-10 and for temporary barrier see Appendix B.
12. A second shadow vehicle with a truck mounted attenuator shall be used when directed by the Assistant District Executive for Maintenance for bridge inspection teams while on limited access highway bridges.
13. Orange flags or flashing warning lights may be used in conjunction with signs.
14. Traffic Cones shall only be used during short term operations.
15. Definitions:
   a. Urban Street - A type of street normally characterized by relatively low speeds, wide ranges of traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian traffic, and more businesses and houses.
   b. Expressway - A divided arterial highway for through traffic with partial control of access and generally with grade separations at major intersections.
   c. Freeway - A limited access highway to which the only means of ingress and egress is by interchange ramps.
   d. Buffer Space - A space clear of equipment, vehicles, workers or materials as shown on figures as distance E.
   e. Roll Ahead Space - Provide a 100' to 250' space between the shadow vehicle and the work space in a closed lane. This space shall be clear of equipment, vehicles, materials or workers.
   f. Shadow vehicle - A vehicle positioned in the activity area in the advance of a work vehicle to provide advance information to approaching drivers or protection for the workers or work vehicle.
16. Equipment, vehicle and material storage.
   a. Except as indicated in paragraph (2), at the end of the workday, and whenever practical during the workday, based on actual site conditions, equipment, vehicles and material shall be stored a minimum of 30 feet from the edge of the nearest open travel lane or they shall be adequately stored behind a longitudinal including guiderail) barrier, or more than 2 feet behind the curb. Design Manual 2, Chapter 12, Table 12.3 presents minimum unobstructed distances that shall be maintained behind various guiderail systems and refer to Appendix B for temporary barrier deflection distances.
   b. (2) If site conditions prevent equipment, vehicles and material from being stored as indicated in paragraph (1), or if these items are placed for use or operation on or near the highway surface within the work zone, then barricades, drums or other protective devices shall be placed around the equipment, vehicles and material storage site, to warn and protect the traveling public consistent with this publication.
   c. (3) Workers are not permitted to park their vehicles within the highway right-of-way in a manner that compromises the safety of workers, pedestrians or the traveling public.
17. Neither work activity nor storage of equipment, vehicles, or material should occur within a buffer space.
18. Guidelines for installation and removal of traffic control setups.
   a. Required advance warning signs should be installed first so that protection is provided when channelizing devices are installed near the work area. If work zone signing is necessary for both directions of travel, sign installation should begin with the advance warning sign located furthermost from the work area and on the side of the roadway opposite the work area, sign installation should proceed down the roadway toward the work area. After the necessary signs are erected on the side of the roadway opposite the work area, sign installation may begin for the other direction of travel, beginning with the sign furthermost from the work area. In the process of installing the work zone signing, existing signs with conflicting messages shall be completely covered, removed or modified.
   b. If the work area is such that flagging operations are necessary, the flaggers may begin flagging operations after the advance warning signs are in place. Otherwise, the installation of channelizing devices at the work area can begin after the placement of the advance warning signs. These devices should also be installed in the direction of travel.
   c. If available, a shadow vehicle may be placed between approaching traffic and the workers who are installing channelizing devices around the work area. After channelizing devices are installed, the vehicle may be removed or moved inside the work area and work may begin.
   d. After work is completed, the work zone traffic control scheme may be dismantled. The channelizing devices which surround the work site should be removed first, in reverse order as it was installed (opposite the flow of traffic), followed by flaggers which may have been used. The work area signing may then be removed and normal traffic patterns restored.
19. As a general rule, signs shall be located on the right-hand side of the roadway. On divided highways and one-way highways where it is physically possible, signs should also be placed on the left-hand side of the roadway. (See PATA Sign Layout Figure)
20. Please refer to Publication 408, Section 901.3 (j) for traffic control requirements adjacent to pavement edge or shoulder drop-offs during construction.
21. Portable Sign Stands should not be used for a duration of more than 3 days.
22. A three cone advance setup may be used to alert oncoming traffic of a flagger during a flagging operation. This three cone advance setup, when used, is in addition to the traffic control setup being used at the time. The three cone advance setup is located in the center of the roadway. The three cone advance setup should be located at a distance from 150 feet in advance of the flagger or a distance no greater than the W20-7A sign. Each cone in the 3-cone setup shall be spaced between 10 to 50 feet apart.
23. When used with a truck-mounted attenuator (TMA), the shadow vehicle must be loaded to the weight recommended by the manufacturer of the TMA.
24. Shadow vehicles for mowing operations are optional.
25. Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:
   a. Ability to receive and communicate specific instructions clearly, firmly, and courteously.
   b. Ability to move and maneuver quickly In order to avoid danger from errant vehicles, this means a flagger shall not be in a sitting position and no vehicles around the flagger station.
   c. Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations.
26. Except in emergency situations, each flagger station shall be illuminated at night with an overhead lighting source having 30,000 to 40,000 lumens minimum of light output for an area of not less than 7,500 square feet. The lighting source shall have a minimum color temperature of 3,000 degrees and a maximum of 4,000 degrees. Position the light so the flaggers can be seen and not cause excessive glare to motorists traveling through the work zone.
27. A red flag shall only be used in an emergency when a Stop/Slow Paddle is not available or at intersections where a single flagger is used within the intersection. Additional flaggers shall be used to help control traffic movements at all times. When flagging at a signalized intersection, the signal should be placed in flash mode. If necessary, provide additional flaggers to properly control all movements of the intersection. In locations where multiple signalized intersections are located in close proximity, multiple intersections may be placed in flash mode to control the flow through the work zone. Additional flaggers shall be used to control the traffic movements through each intersection.
28. See MUTCD chapter 6 and Publication 212 for additional guidelines and requirements.
29. Provisions and guidelines governing temporary traffic control for emergency work and incident management are given in Title 67 Pa. Code Chapter 212, Official Traffic Control Devices, §212.414 and in Chapter 6I in the MUTCD.
30. Consider using temporary longitudinal barrier to protect workers in all freeway and multi-lane work zones if the speed limit is 45 mph or greater, workers are present within one lane width of an active travel lane and a lane or shoulder is closed 24 hours per day for more than 2 weeks.
31. On roadways where the normal posted speed is greater than 50 mph and has more than one lane of traffic in the same direction approaching the work zone, install additional signing when traffic queues go beyond the advance signing. As needed, install additional signing such as but not limited to Road Work, xxxx Lane Closed, Work Zone Speed Limit and/or portable changeable message boards.

CONSTRUCTION NOTES

IN PAVED AREA:

1. 2a coarse aggregate backfill is required as per the district geotechnical engineer and under section 459.8(g)(2) and section 703.2 of Publication 408.
2. Shoulders to be restored in accordance with appropriate section of Publication 408 and roadway construction standards RC-25.
3. All trench and pit openings in the roadway or shoulder to be vibratory compacted in 8" maximum lifts such that the Publication 408 section 206.3(b) placement and compaction is satisfied by the following:
   a. Adjacent compactor passes do not leave a groove or dent in the 2a in the adjacent pass in the same lift.
   b. Compaction effort is at least 100% of the required dry weight density as determined according to PTM No. 106, Method B.

IN R/W BUT OUTSIDE OF PAVEMENT OR SHOULDER:

1. All disturbed areas outside of pavement or shoulder but in PennDOT right-of-way shall be restored to a condition at least equal to that which existed prior to the start of work and to 95% of the Dry Weight Density according to PTM No. 106, Method B. All trench and pit openings to be vibratory tamped in 8" maximum lifts.
2. The explicit restriction on the use of excavator-mounted hydraulic plate compactors has been removed. The maximum backfill layer thickness will remain at 4 to 8 inches at this time.
3. Note that an authorized inspector must be present for trench backfill work conducted in accordance with Section 601.3(f) & (q). The inspection form CS-6, must be submitted to the department representative promptly after installation. Permittee must provide an authorized inspector for all trench backfill within Department legal right-of-way in accordance with Section 601 in Publication 408.
4. On roadways where the normal posted speed is greater than 50 mph and has more than one lane of traffic in the same direction approaching the work zone, install additional signing when traffic queues go beyond the advance signing. As needed, install additional signing such as but not limited to Road Work, xxxx Lane Closed, Work Zone Speed Limit and/or portable changeable message boards.

GENERAL TRAFFIC NOTES

This work consists of the maintenance of traffic and the protection of the traveling public approaching the construction area and within the limits of construction and on approved detours.

Furnish, erect, place and maintain traffic control signs and devices and maintain traffic during hours of construction and at all other times in accordance with the methods indicated on these drawings, and,

1.) The special provisions of the contract.
2.) PDT Publication No. 212, Official Traffic Control Devices.
3.) PDT Publication No. 213, Temporary Traffic Control Guidelines.
4.) PDT Publication No. 35, Approved Construction Materials (Bulletin 15).
5.) PDT Publication No. 408/2016, Specifications.
6.) Manual on Uniform Traffic Control Devices (MUTCD).
7.) PDT Publication No. 236, Handbook of Approved Signs, November 19, 2013 Change 1 Edition.
8.) PDT Publication No. 111, Traffic Control - Pavement Markings and Signing Standards TC-8600 and TC-8700.

Immediately upon completion of the work remove and retain the devices unless otherwise specified in the special provisions. PENNDOT will remove any traffic control devices erected by department forces.

The contractor is responsible for contacting the Pennsylvania One Call System, Inc. at 1-800-242-1776 at least 3 full working days before digging. PA One Call shall be contacted before any sign post anchor is driven into the ground for temporary and permanent signing.

All traffic control devices shall be in place and inspected by the project inspector daily prior to the start of work.

Notify the District Traffic Engineer in writing two weeks prior to making any traffic pattern changes and when project is complete.

No roadway is permitted to have a lane closure or road closure starting November 01, and ending April 01, without an approved revised traffic control plan addressing winter operations.

Inspector-In-Charge shall report all traffic incidents to the district Traffic Engineer by copy of the traffic accident report from the Pennsylvania State Police.

All signs not in use shall be either covered or removed from sight. The contractor is to reinstall all signs that were removed for the construction project. Do not place any adhesive on the face of the sign.

All existing signage with conflicting messages shall be covered or removed and reinstalled when the project is complete.

All signs and devices are to be new at the beginning of the project and are to be maintained to PENNDOT's satisfaction throughout the project duration.

The contractor is responsible for maintenance and protection of pedestrians within the work area, principally adjacent to excavation areas.

All signs shall be reflectorized with material that meets PENNDOT specifications for sheet reflective material, Type III or Type VII fluorescent.

All channelizing devices must have reflective sheeting on both sides a minimum of 150 square inches for short term operations and 270 square inches for long term operations.

The reflective material for channelizing devices shall be a material that meets PENNDOT current specifications for sheet reflective material, barricade rails and vertical panels which will require Type III or Type VII.

This traffic control plan does not relieve the contractor of his responsibility as specified in Section 901.3 of Publication No. 408.

Adjust all distances slightly to fit field conditions.

Do not park, stop or store any equipment which is not being used for the current work operation, adjacent to an active travel lane. Store all equipment outside of the work area in a clear zone suitably protected staging area.

The traffic control devices shown do not necessarily depict the actual number of devices required.

Mount all signs on Type III barricades (see PUB 213 PATA sign layout and TC-8716 & TC-8717) unless otherwise shown or directed.

Erect all post mounted signs in accordance with TC-8716 & TC-8717.

Any special signs are to be fabricated in accordance with TC Standards 8700 series.

Attach Type C Lights to all drums or channeling devices used to protect open excavations adjacent to roadway.

Attach Type C Light on every third device in the longitudinal and every device in taper.

Provide new reflective sheeting for all signs and devices, i.e. supports, sign blanks, drums, vertical panels, etc. Shall be clean and free from all defects.

The contractor is responsible for maintaining access to all businesses and dwellings during all phases of construction.

Provide adequate number of Type III barricades and channeling devices at road closure locations to completely close the roadway.

Contractor shall notify local emergency authorities (E.G. Police, Fire, Medical), affected post office(s), businesses, school district(s).

Contractor is to notify the Assistant Construction Engineer he shall notify the Apras Coordinator at least fourteen days, prior to any significant traffic impacts (E.G. lateral width restrictions less than 12 feet.).

Control traffic in work areas in accordance with Pub. 213 for stationary short term operation if not addressed in the traffic control plan (TCP).

Flag persons are to be in radio communications at all times during working hours.

For short term operations - and for ingress, egress of construction deliveries and employees; use short term flagging operations and during hours of darkness, all signs shall be reflectorized or illuminated, and each advance warning sign shall have a Type B light mounted on top.

All short term operation lead in signs should be mounted on portable sign stands only as stated in Bulletin 15.

All changes to this traffic control plan must be approved, signed and dated by the traffic unit.

When removing guiderail, the guiderail section shall be reinstalled before the adjacent lane is reopened.

GENERAL NOTES

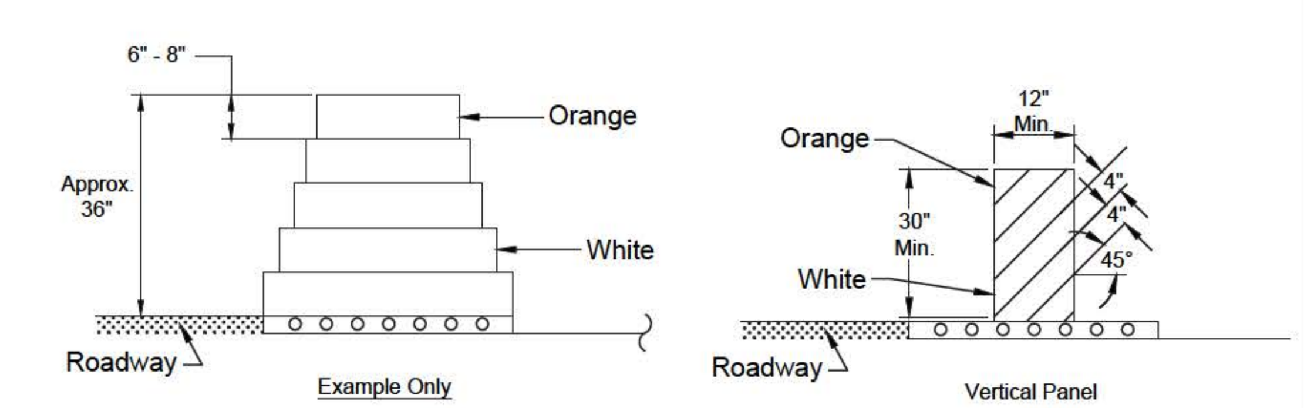
1. The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.
2. The underground utilities shown have been located from field survey information and existing drawings. The Surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The Surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The Surveyor has not physically located the underground utilities.
3. Project Agent shall ensure the installing contractor is alert for the unearthing of potential Archaeological Artifacts.
4. Upon the discovery of items with potential Archaeological value, the installing contractors supervisor shall notify the Project Agent.
5. The Project Agent shall notify PaDEP at (412) 442-4000 and PHMC at (717) 783-8497 by Phone and registered mail upon discovery of potential Archaeological Artifacts. PHMC shall proceed with an expedited review process. No work will be undertaken during this fifteen day, maximum, time period. Further work shall commence in accordance with the orders of PHMC.
6. Work on this project shall be performed by PennDot approved Companies only. All work and materials must comply with PennDot specifications.
7. Road centerline stations refer to segment offsets in feet.
8. This drawing is based upon tax mapping, and deeds of record. This Plan is not based upon an actual field survey and does not constitute a survey of any kind for the property shown hereon.
9. Utility Companies shall register with Pennsylvania One Call System, Inc. for all new Utility lines.
10. Areas backfilled with other than flowable backfill shall backfilled with maximum 4 inch lifts, compacted to 100% and shall be tested and verified by a qualified third party. Trenches that settle shall be replaced at the utility owners expense.
11. Contractor shall assure that in areas filled with material other than flowable back-fill that adjacent compactor passes do not leave a groove or dent in the 2A in the adjacent pass in the same lift.
12. Contractor shall assure that compaction effort is at least 100% of the required dry weight density as determined according to PTM No. 106, method B.
13. At the end of each work day all trenches must be backfilled and brought to grade with temporary pavement.
14. Historical research not withstanding, if road materials or construction is found to be different than that indicated, the contractor shall restore to match existing type, materials, thickness, etc, IAW applicable PennDot Standards.
15. An authorized inspector must be present for trench backfill work conducted in accordance with Section 601.3(f) & (q). The inspection form CS-6, must be submitted to the Department Representative promptly after installation. Permittee must provide an authorized inspector for all trench backfill within department legal right-of-way in accordance to Section 601 in Publication 408. The contractor performing the trench backfilling work is to print their name, title, signature, and date the bottom of the second page of form CS-6. The inspectors signature and date is just above the contractors portion also on this second page of form CS-6. Both the contractor and the inspector must sign form. The explicit restriction on the use of excavator-mounted hydraulic plate compactors has been removed. The maximum backfill layer thickness will remain at 4 to 8 inches at this time if excavator-mounted plate compactors are used as per Strike Off letter 481-13-03 dated: November 22, 2013. Authorized inspector must complete form CS-6(11-13) [must note on form: the permittee name and highway occupancy permit number] as indicated on the form and turn in completed forms to the district office for permit records.
16. Trenches in R/W but outside of pavement or shoulder: All disturbed areas outside of pavement or shoulder but in PennDot right-of-way shall be restored to a condition at least equal to that which existed prior to the start of work and to 95% of the dry weight density according to PTM no. 106, method B. All trench and pit openings to be vibratory tamped in 8" maximum lifts.
17. 2A coarse aggregate backfill is required as per the district geotechnical engineer and under section 459.8 (G)(2) and section 703.2 of publication 408.
18. Shoulders to be restored in accordance with appropriate section of publication 408 and roadway construction standards RC-25. All trench and pit openings in the roadway or shoulder to be vibratory compacted in 8" maximum lifts such that the publication 408 section 206.3 (b) placement and compaction is satisfied by the following.
19. Adjacent compactor passes do not leave a groove or dent in the 2A in the adjacent pass in the same lift.
20. Compaction effort is at least 100% of the required dry weight density as determined according to PTM No. 106, method B.
21. No openings for the purpose of placing utility facilities or other structures under the improved area by drilling, boring, driving or tunneling may be made closer than 3 feet to the edge of the shoulder, unless the permit authorizes a lesser clearance. (67 Pa. Code, Chapter 459.8 (a)(2)).
22. No parallel opening may be made for more than 200 linear feet at one time, unless authorized by the permit, unless authorized by the permit. (67 Pa. Code, Chapter 459.8 (c)(4)).
23. An opening shall be backfilled by the permittee in accordance with the Departments standard specifications and details. (67 Pa. Code, Chapter 459.8(g)).
24. All open pits and excavations must be backfilled with suitable material at the end of each work day.

SIGNING NOTES:

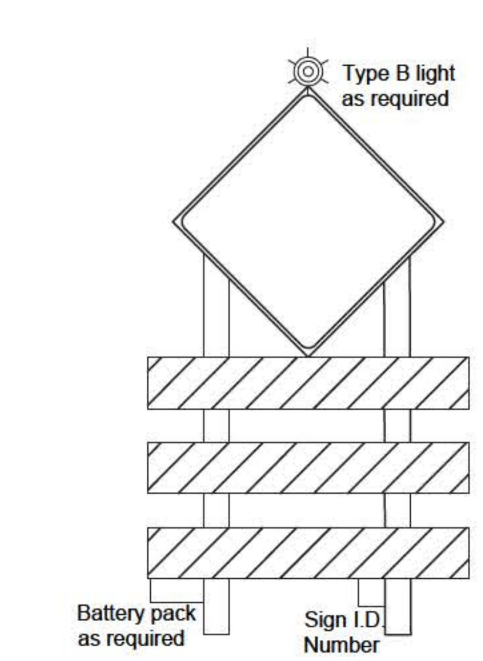
1. Install signs, pavement markings, and delineation in accordance with the most current version of PennDOT Publication 111M Traffic Control, TC-8600 and TC-8700 series including Change 1, 2, and 3, PennDOT Publication 46, the Federal Highway Administration Manual on Uniform Traffic Control (2009 Edition), PennDOT Publication 212, Official Traffic Control Devices, or as directed by the PennDOT District 12-0 representative.
2. Details other than those indicated are on the following standard drawings:
   a. TC-8600 13 Sheets June 13, 2013
   b. TC-8602 4 Sheets June 13, 2013
   c. TC-8702B 9 Sheets June 13, 2013
   d. TC-8702C 2 Sheets June 13, 2013
   e. TC-8702E 5 Sheets June 13, 2013
3. Any legal or private sign that is to be removed for construction that is within the project limits but is not included in the project sign tabulations shall be reinstalled at or nearest its original location. If sign is determined unnecessary, it shall be returned to its owner.
4. Any sign that is to remain or be reinstalled, that becomes damaged in any way during construction or during removal, storage, or reinstallation, shall be replaced in kind with a new sign at no additional cost to the Department.
5. Place all Signs entirely within the legal Right-of-Way.
6. For fabrication of all standard signs, refer to Pennsylvania Department of Transportation Publication 236.
7. All Type B post mounted signs are to be installed using square channel posts and anchors of the appropriate size. Anchors shall not extend more than 1 inch above the ground line.
8. Do not remove existing signs until the new signs are installed. If existing signs conflict with construction, install temporary signs as directed by a PennDOT District 12-0 representative. Do not remove the temporary signs until the new signs are installed.
9. Apply an installation date permanently to the back side of each sign installed within the projects limit of work.
10. Contractor shall call PA One Call System, inc at 1-800-242-1776 prior to digging for all signs.
11. Apply pavement markings at the width indicated.
12. Use waterborne paint for all longitudinal lines. On final bituminous wearing course or concrete surface, apply two applications of paint. apply the second application after the first is dry, within 24 hours.
13. For all transverse applications, use epoxy (on concrete) and hot thermoplastic (on asphalt).
14. Apply all pavement markings in accordance with the manufacturer's recommendations.
15. The contractor shall reapply any pavement marking that is damaged beyond the start/stop of work due to construction activity at no additional cost to the department.
16. Install guide rail delineators as per TC-8604, or as directed by PA Dept. of Trans.
17. Install Raised Pavement Markers in accordance with the PennDOT Publication 111M Traffic Control.

WINTER OPERATION NOTES

1. The contractor shall contact the county maintenance office one day prior to starting work. Approval must be given by the county maintenance manager or the assistant county maintenance manager for the area in question before work can begin.
2. All traffic control devices (including signs) shall be removed from the legal right-of-way at the end of each work shift.
3. All long term stationary work zone signs shall be post mounted from November 01 to April 01.
4. No grates are permitted in travel lanes for drainage and water.
5. All open excavations shall be brought up to the existing grade with acceptable aggregate (or temporary cold mix, where applicable) and maintained to provide a smooth pavement surface, suitable for driving, until permanent restoration can be matched with pavement structure approved by the county inspector.
6. No steel plates within the state right-of-way are permitted.
7. There is no guarantee implied that county maintenance will allow work to take place. Work will be weather dependent.
8. If the contractor is using the travel lanes during the winter shutdown, they must keep the travel lanes clear from mud and snow during working hours. Freeze and thaw snow shall drain away from travel lanes into the drainage system.
9. If weather changes, all devices must be removed immediately for winter operations.
10. If weather changes, all lanes shall be cleared and material put down on the road surface before lanes are open to traffic.



TYPICAL CLOSURE PROTECTION
VARIABLE LENGTH
N.T.S.



TYPE III BARRICADE FOR ADVANCE WORK SIGNS

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 157208

REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	PADOT comments	5/9/18	RH

SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY PENNSYLVANIA

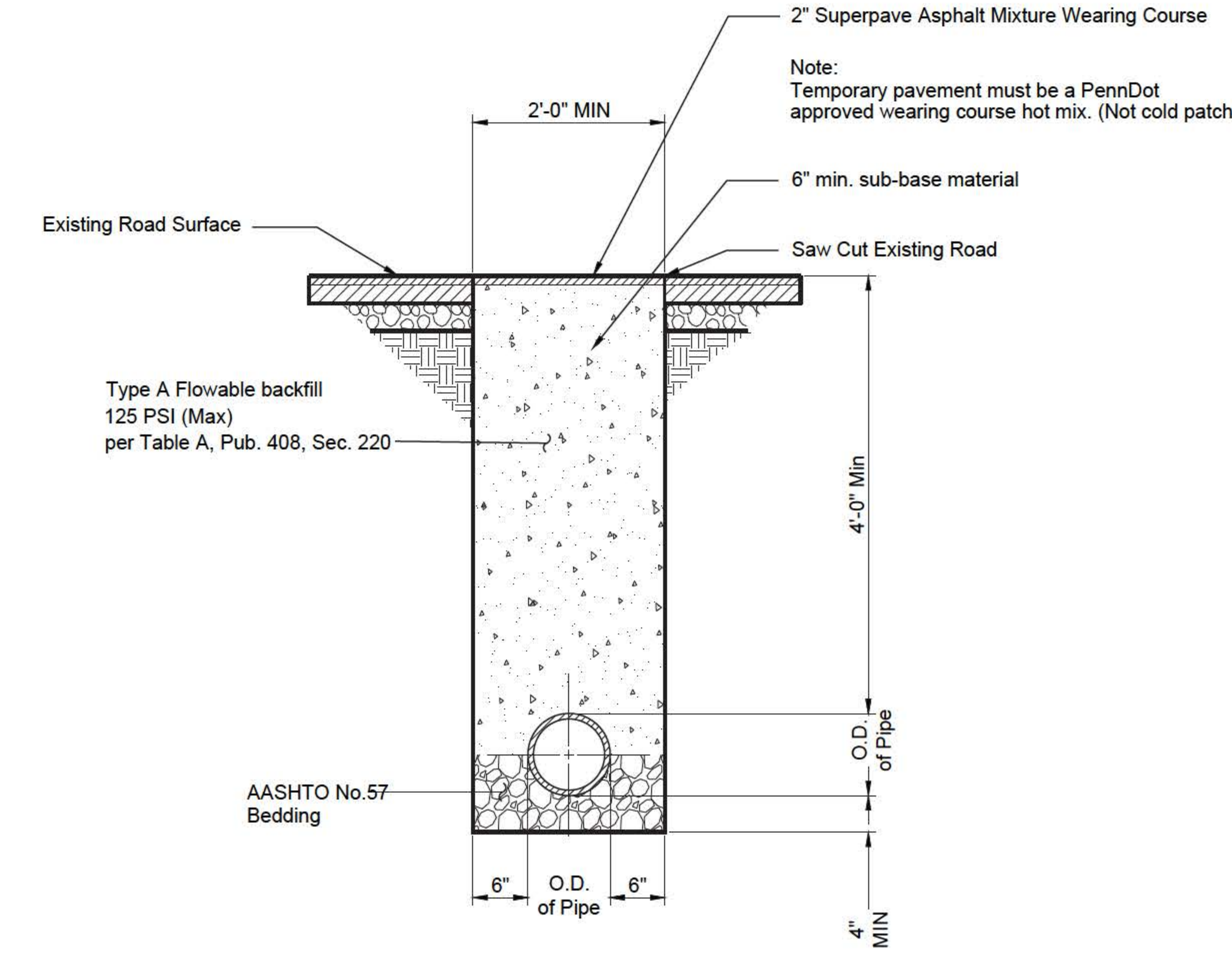
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

TITLE
TRAFFIC AND CONSTRUCTION NOTES

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
MV	2-19-18	JS	3-27-18
DESIGN		APPROVED	
JE	2-19-18	TMJR	3-28-18

SCALE
AS NOTED

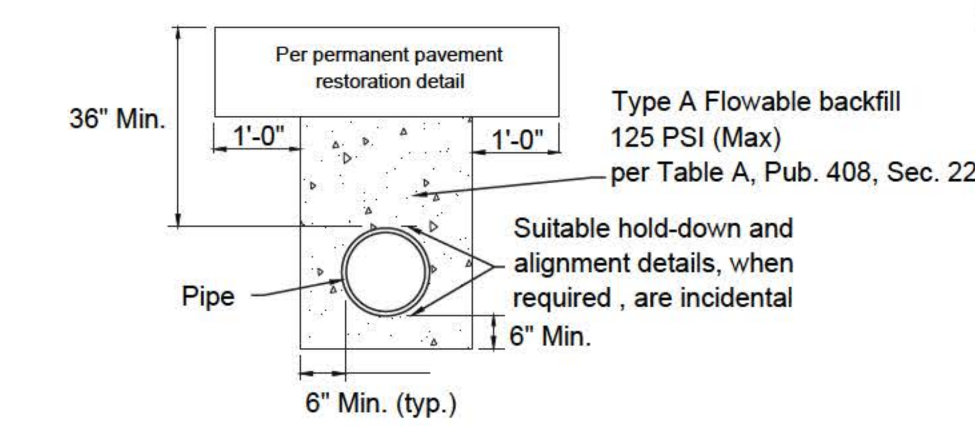
SHEET NUMBER
HOP103



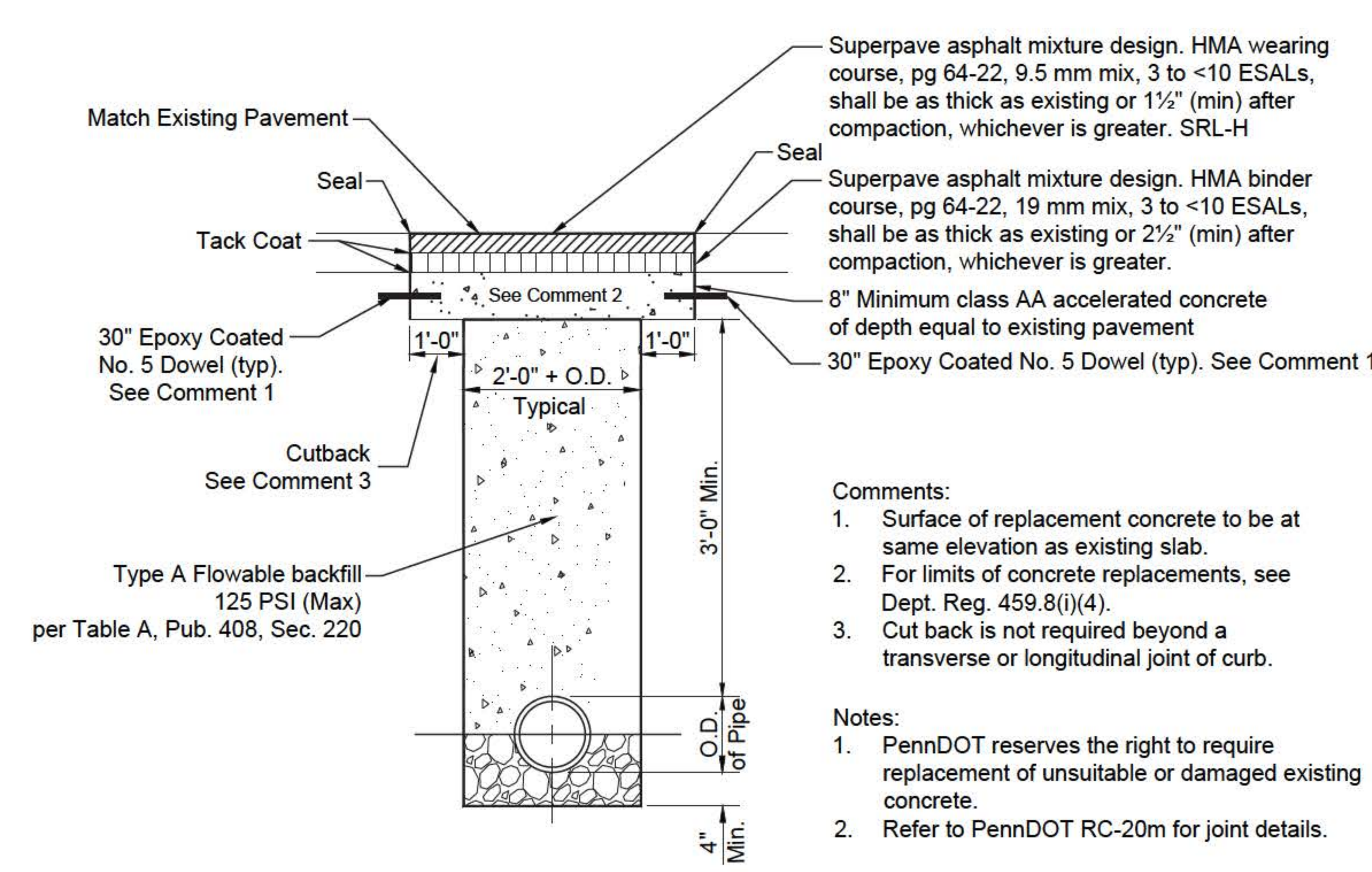
TEMPORARY RESTORATION
N.T.S.

Notes:

1. Provide materials and workmanship in accordance with the requirements of publication 408, sections 601 and 220.
2. Flowable backfill will envelope the last section of pipe or end section. construct dike of flowable backfill material as specified in special provision or provide formwork to contain flowable backfill.
3. Payment for the backfill envelope (aggregate, bedding and backfill or flowable backfill material) and suitable material up to 12" above the pipe is incidental to the pipe.
4. The flowable backfill detail replaces steps 6a, 6b, 6c and 6d on sheet 4 (rc-30m when flowable backfill is specified).



FLOWABLE BACKFILL DETAIL
N.T.S.



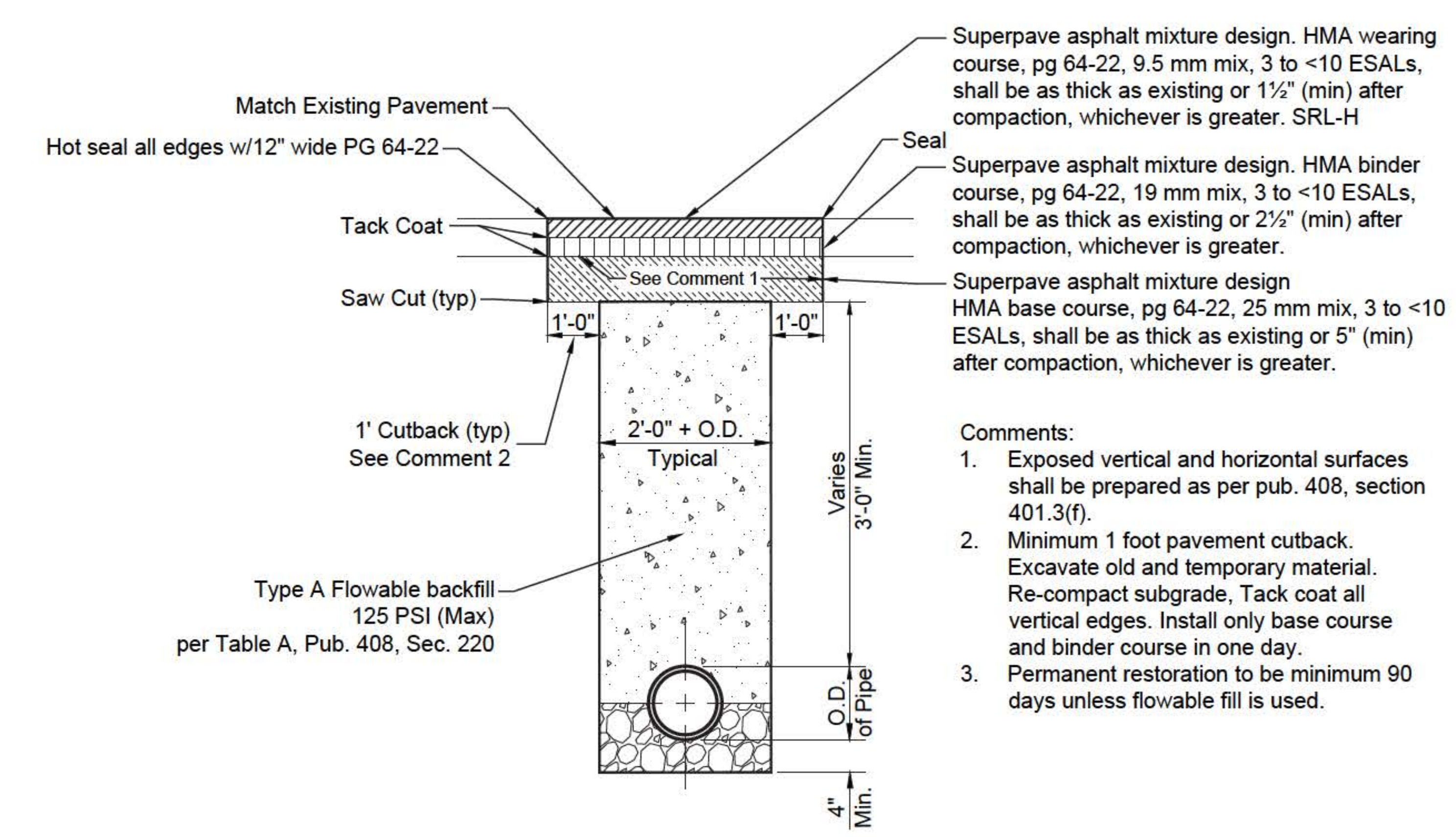
Comments:

1. Surface of replacement concrete to be at same elevation as existing slab.
2. For limits of concrete replacements, see Dept. Reg. 459.8(i)(4).
3. Cut back is not required beyond a transverse or longitudinal joint of curb.

Notes:

1. PennDOT reserves the right to require replacement of unsuitable or damaged existing concrete.
2. Refer to PennDOT RC-20m for joint details.

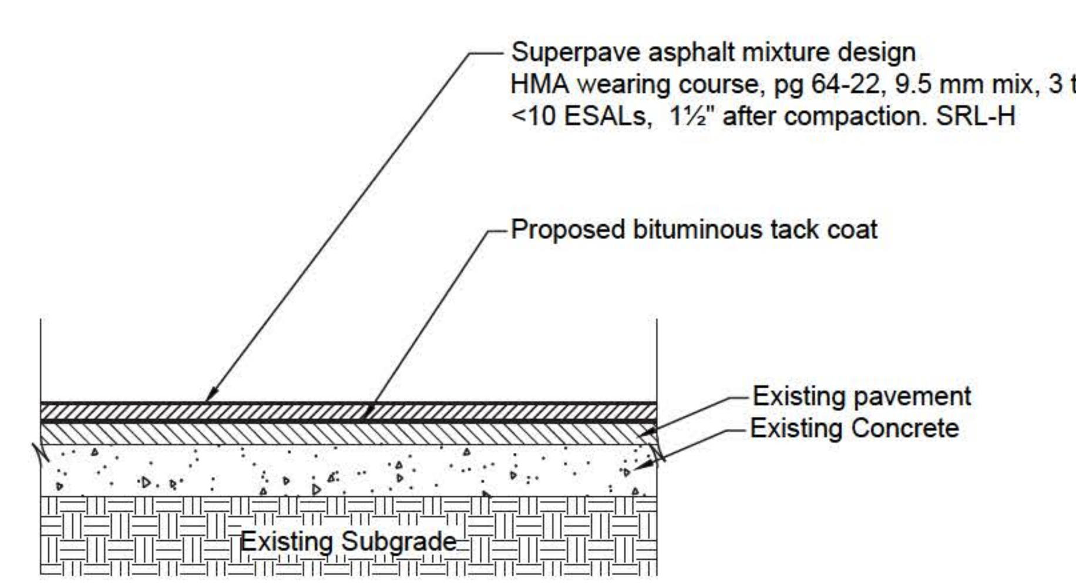
RIGID PAVEMENT RESTORATION
(Bituminous Overlay)
N.T.S.



Comments:

1. Exposed vertical and horizontal surfaces shall be prepared as per pub. 408, section 401.3(f).
2. Minimum 1 foot pavement cutback. Excavate old and temporary material. Re-compact subgrade, Tack coat all vertical edges. Install only base course and binder course in one day.
3. Permanent restoration to be minimum 90 days unless flowable fill is used.

FLEXIBLE PAVEMENT RESTORATION
N.T.S.



PAVEMENT OVERLAY
N.T.S.

Note:
Contractor shall mill existing pavement to a depth of 1 ½" and install proposed pavement as shown in the detail.

Note:
Highway restoration is near a boundary of different surface and subsurface types. Contractor shall determine the appropriate surface restoration detail to match existing conditions.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JAMES LINDEN STANTON PE-057459

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 157208

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
MISTY LANE SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

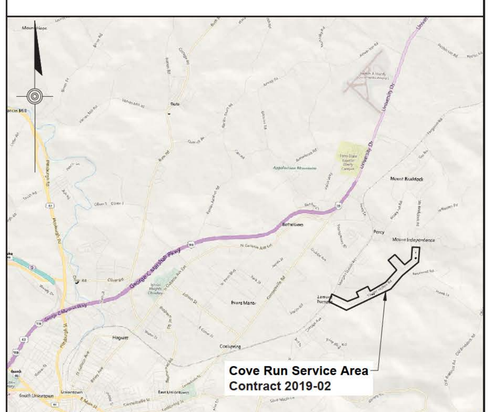
TITLE
CONSTRUCTION DETAILS

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
MV	2-19-18	JS	3-27-18
DESIGN		APPROVED	
JE	2-19-18	TMJR	3-28-18

SCALE
AS NOTED

SHEET NUMBER
HOP104

INDEX OF DRAWINGS



LOCATION MAP

BING® MAPS SCALE: 1" = 5,000'

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02

PREPARED FOR

NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY

120 COMMONWEALTH DRIVE, SUITE 101
LEMONT FURNACE, PA 15456

OCTOBER 2018

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

PREPARED BY

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

UTILITY COMPANIES

1. Gas
   - Enbridge (Texas Eastern)
     Contact Person: Calvin Winfrey
     Phone Number: (724) 208-4204
   - Laurel Mountain Midstream
     Contact Person: Service Center
     Phone Number: (724) 626-4300
2. Sewage
   North Union Township Municipal Services Authority
   Contact Person: Garrett Mechling
   Phone Number: (724) 438-6330
3. Water
   Pennsylvania American Water
   Contact Person: Clayton Wene
   Phone Number: (724) 437-0102 (x0118)
4. Electric
   West Penn Power
   Contact Person: Ryan Davis
   Phone Number: (724) 425-2671

LEGEND

T	Existing Telephone (Overhead)
UT	Existing Telephone (Underground)
W	Existing Water Line
S	Existing Sanitary
FM	Existing Sanitary Force Main
G	Existing Gas Line
E	Existing Electric (Overhead)
UE	Existing Electric (Underground)
ST	Existing Stormwater
C	Existing Cable
UC	Existing Cable (Underground)
T	Proposed Telephone
W	Proposed Water Line
S	Proposed Sanitary Sewer
FM	Proposed Force Main
G	Proposed Gas Line
E	Proposed Electric
	Proposed Stormwater
C	Proposed Cable
E/T/C	Proposed Electric, Cable, Telephone (Underground)
	Traffic Signal Pole
	Existing Inlet
	Water Valve
	Water Line Marker
	Water Meter
	Gas Valve
	Gas Line Marker
	Gas Meter
	Utility Pole
	Guy Wire
	Sign
	Light Pole
	Existing Fire Hydrant
	Existing Sanitary Manhole
	Existing Stormwater Manhole
	Utility Manhole
	Transformer Pad
	Electrical Box
	Existing Yard Drain
	Handicap Parking Stall
	Proposed Inlet
	Proposed Yard Drain
	Proposed Sanitary Grinder Pump
	Proposed Sanitary Manhole
	Proposed Cleanout
	Proposed Combination Air Valve
	Proposed Fire Hydrant
	Fence Line
Top	Top of Inlet
Invert	Invert Elevation
T.C.	Top of Curb
B.C.	Bottom of Curb
T.W.	Top of Wall
B.W.	Bottom of Wall
R	Radius
	Tree
	Shrub
	Curb
	Mailbox
X 1192.85	Spot Elevation
BM 1	Benchmark (#1)
	Pedestal
	Concrete
	Pavement
	Concrete Parking Block

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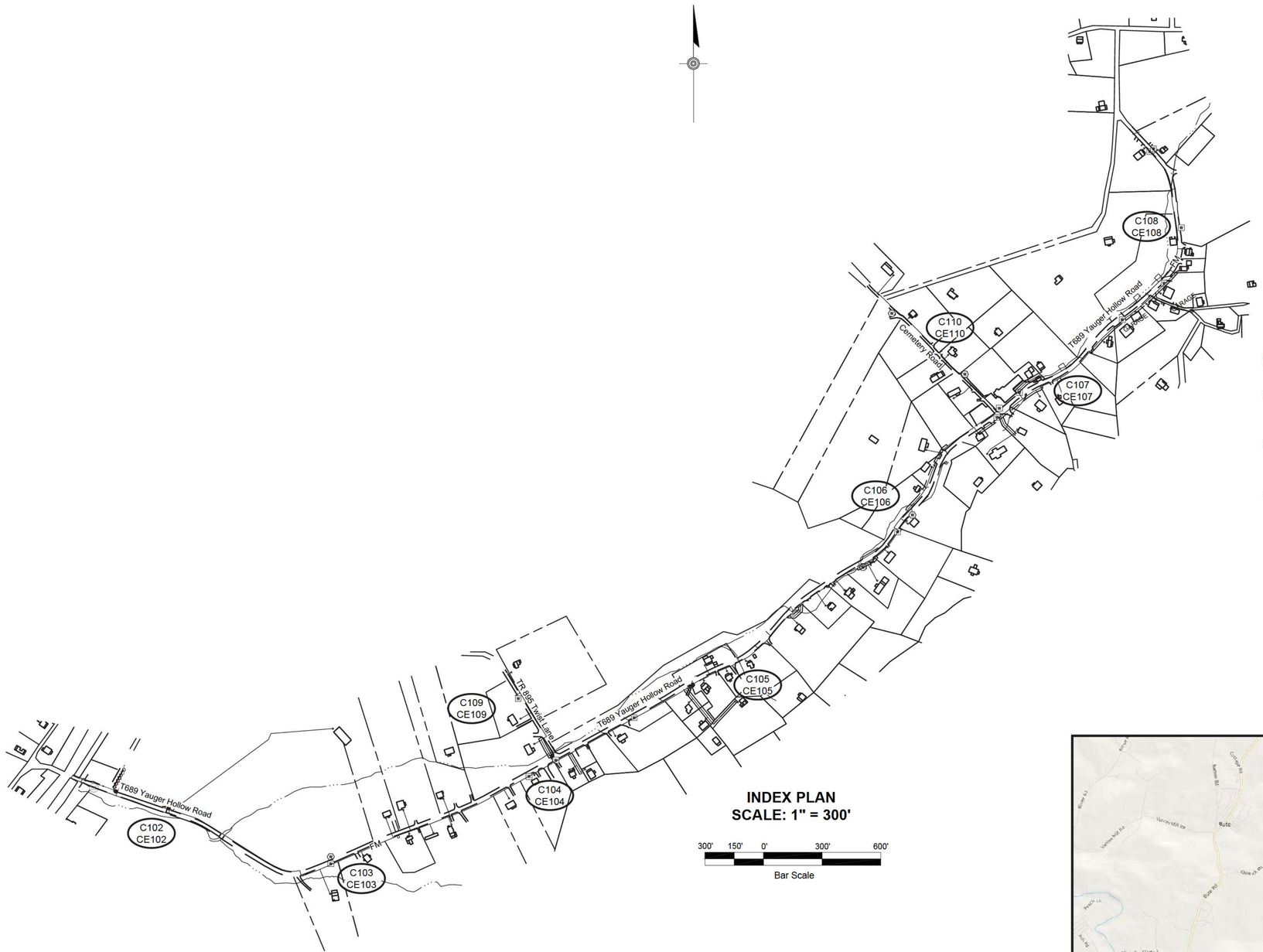


INDEX PLAN
SCALE: 1" = 300'

300' 150' 0' 300' 600'
Bar Scale

Notes:

1. Declaration is made to original purchaser of the plan. It is not transferable to additional institutions or subsequent owners.
2. This drawing is based upon tax mapping, Penn DOT mapping, LiDAR imaging and deeds of record. This Plan is not based upon an actual field survey and does not constitute a survey of any kind for the property shown hereon.
3. McMillen Engineering, Inc. has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
4. The underground utilities, if shown, have been located from existing drawings. McMillen Engineering, Inc. makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. McMillen Engineering, Inc. further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. McMillen Engineering, Inc. has not physically located the underground utilities.

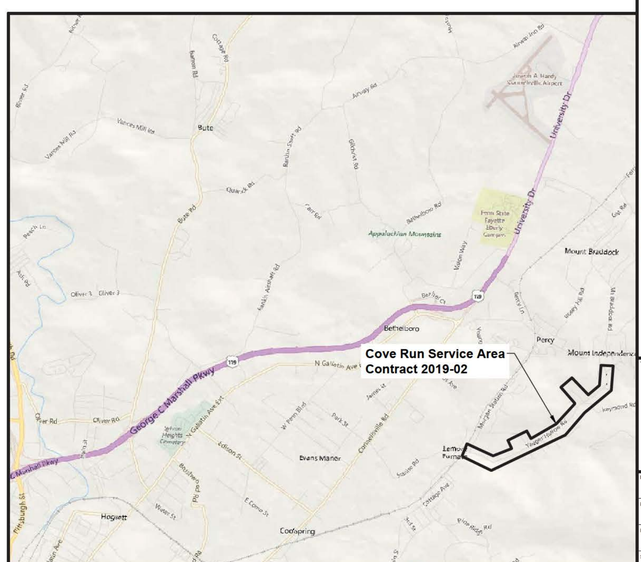
Legend

C101 / CE101 — Sheet Number

PENNSYLVANIA ONE CALL SYSTEM, INC.

Call Us Before You Dig!
1-800-242-1776
PA. Act 287 (1974) Requires 3 Working Days Notice
Design Serial Number: 20172830925

NOTE:
The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.



PROJECT AREA MAP
SCALE: 1" = 3,000'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
INDEX PLAN

BOOK NO.	JOB NO.		
ME 293	2017-68		
DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18
SCALE			
AS NOTED			

SHEET NUMBER
C101

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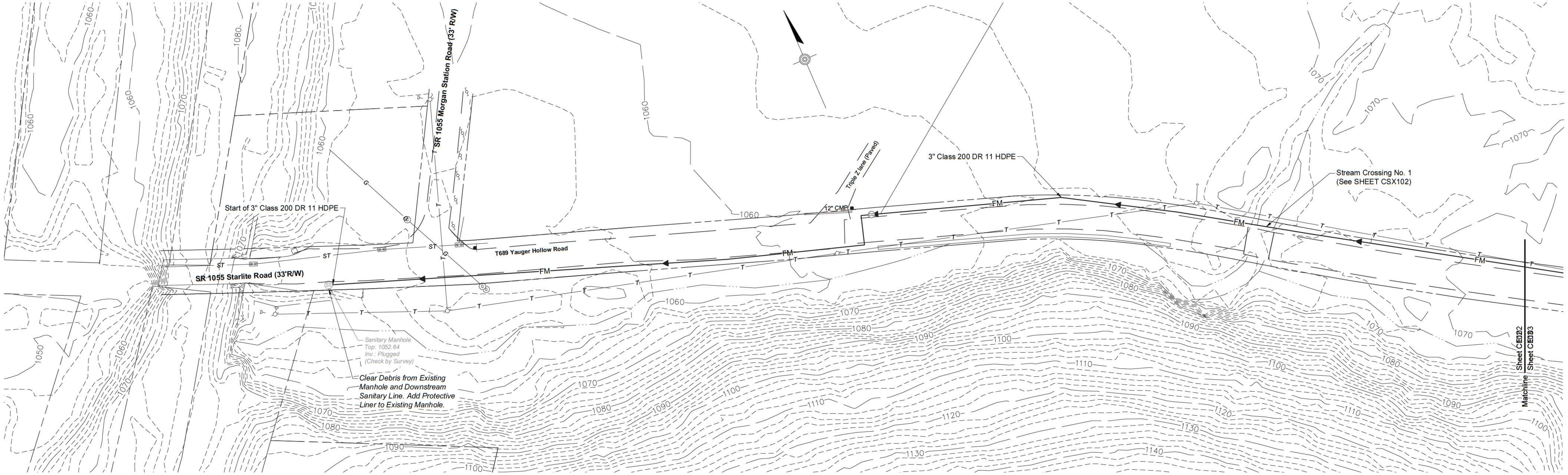
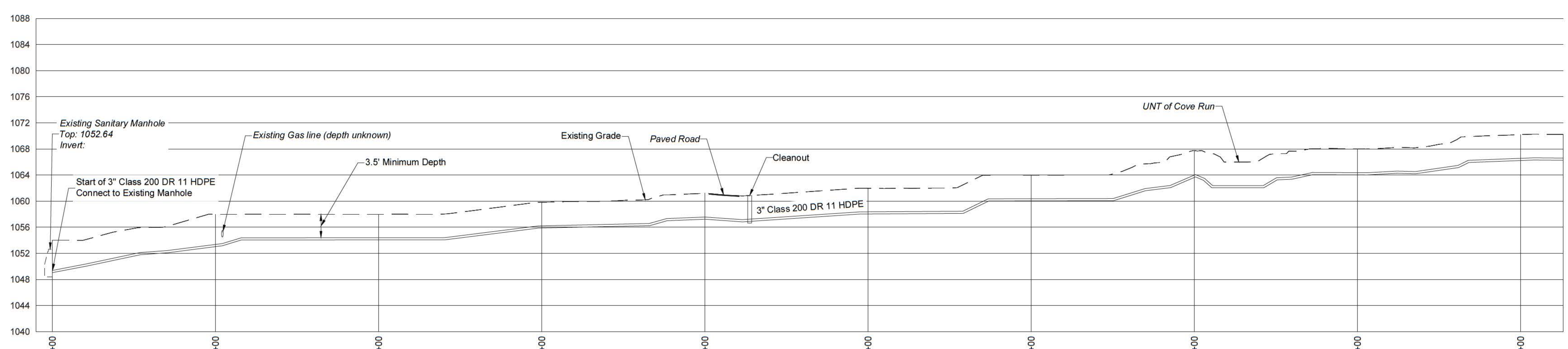


PLAN VIEW
SCALE: 1" = 40'

40' 20' 0' 40' 80'
Bar Scale



PROFILE
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

NOTE:
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REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

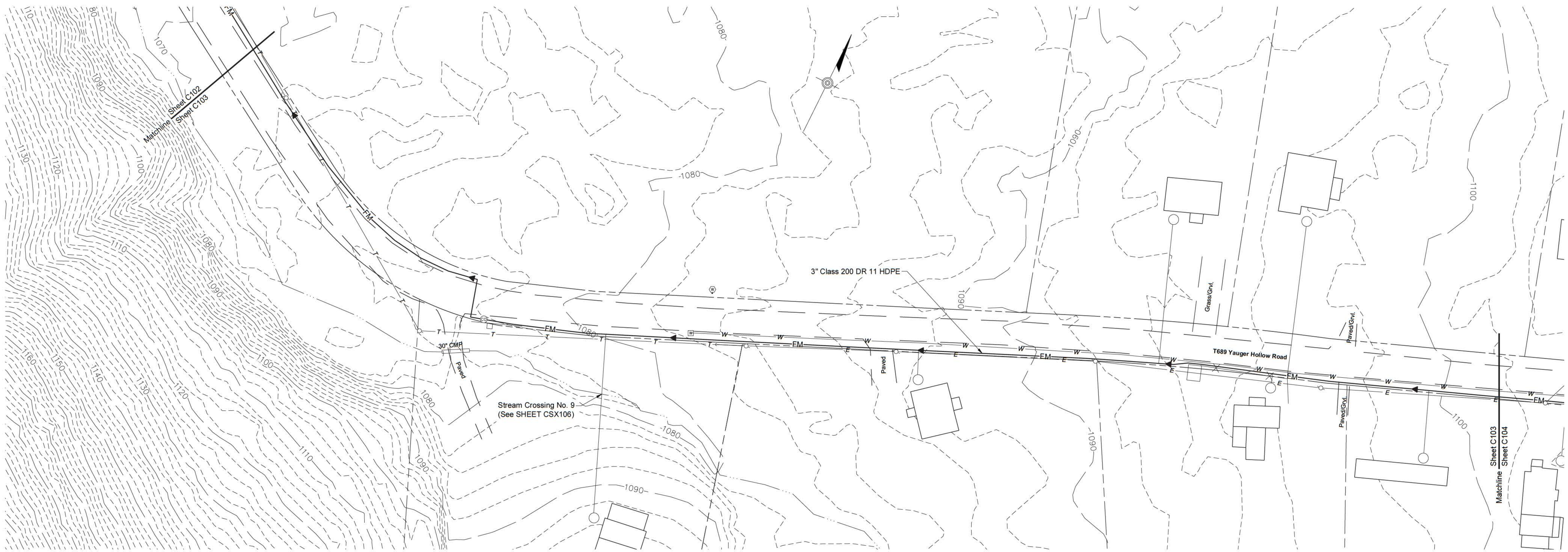
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
CONSTRUCTION PLAN AND PROFILE

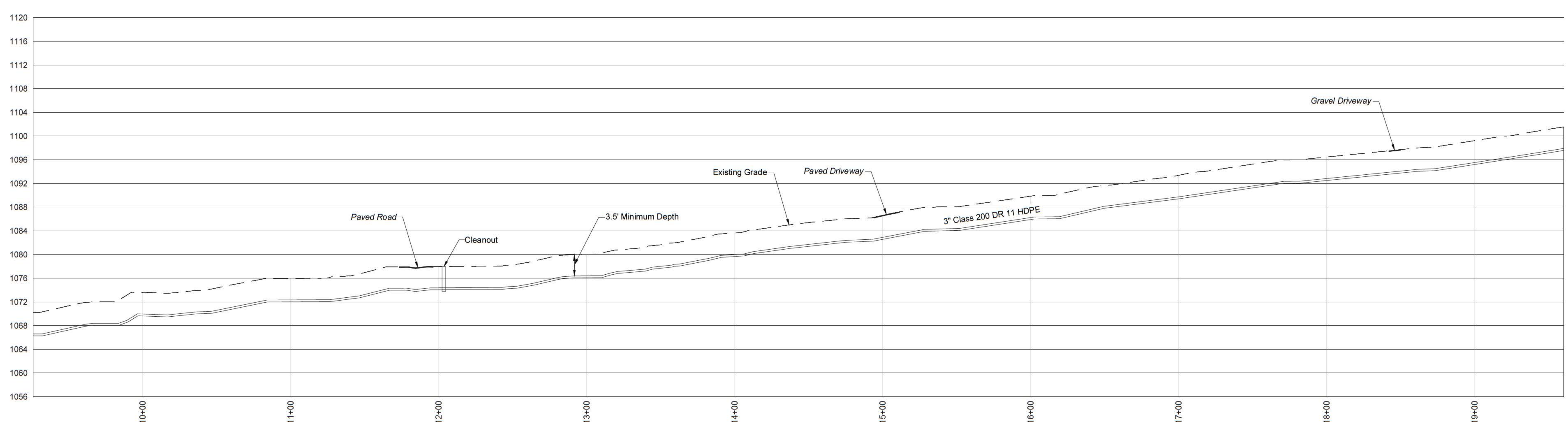
BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18

SCALE
AS NOTED

SHEET NUMBER
C102



PLAN VIEW
SCALE: 1" = 40'



PROFILE
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES LINDEN STANTON — PE-057499

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
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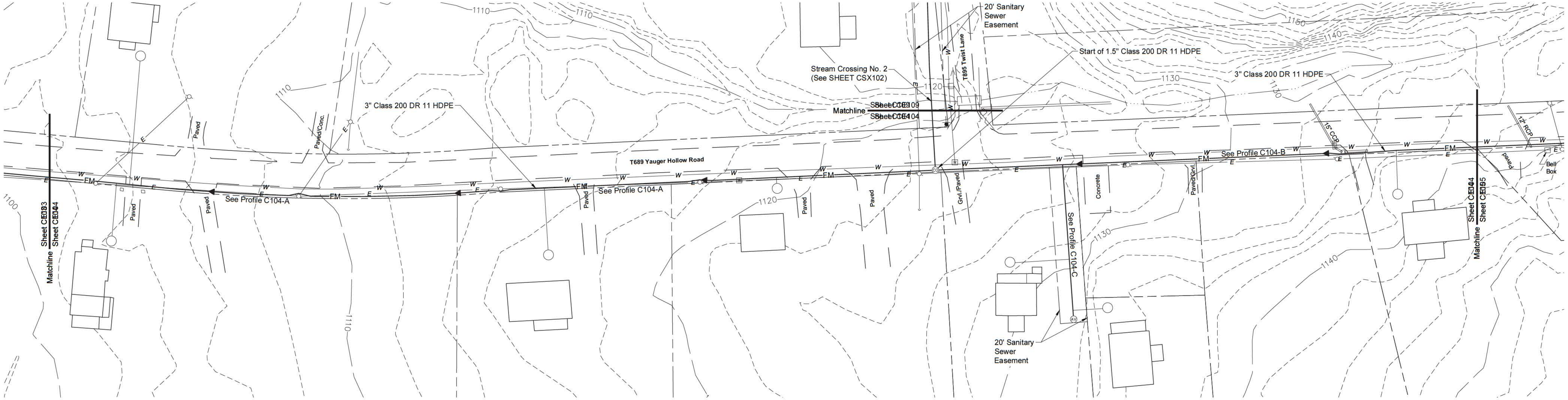
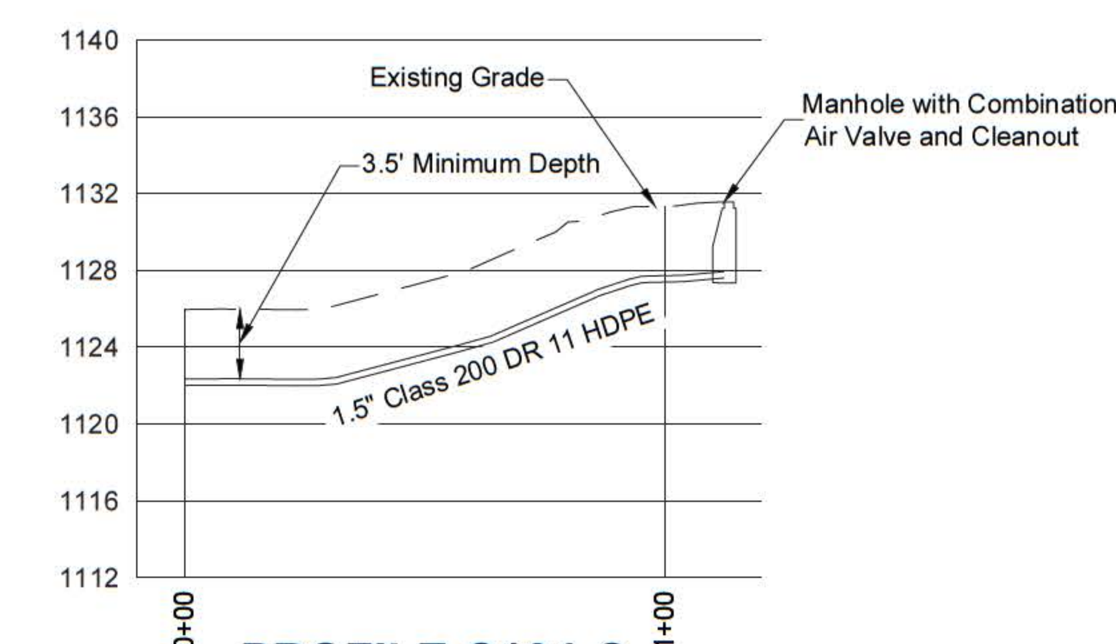
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
CONSTRUCTION PLAN AND PROFILE

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18
SCALE AS NOTED			
SHEET NUMBER C103			

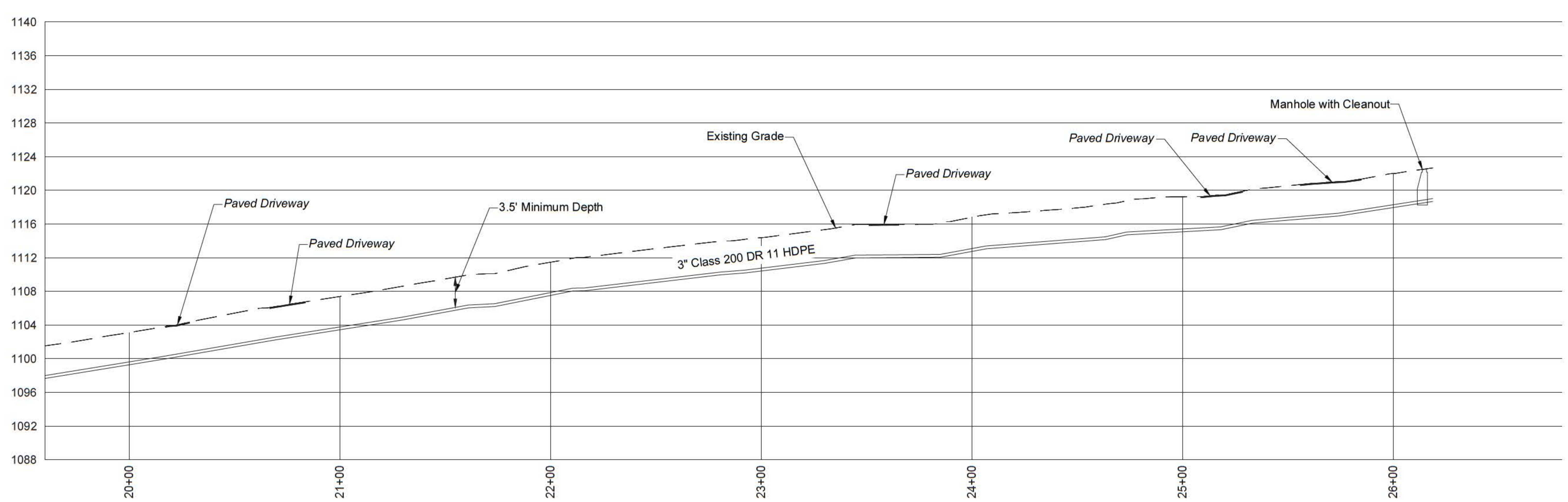


PLAN VIEW
SCALE: 1" = 40'

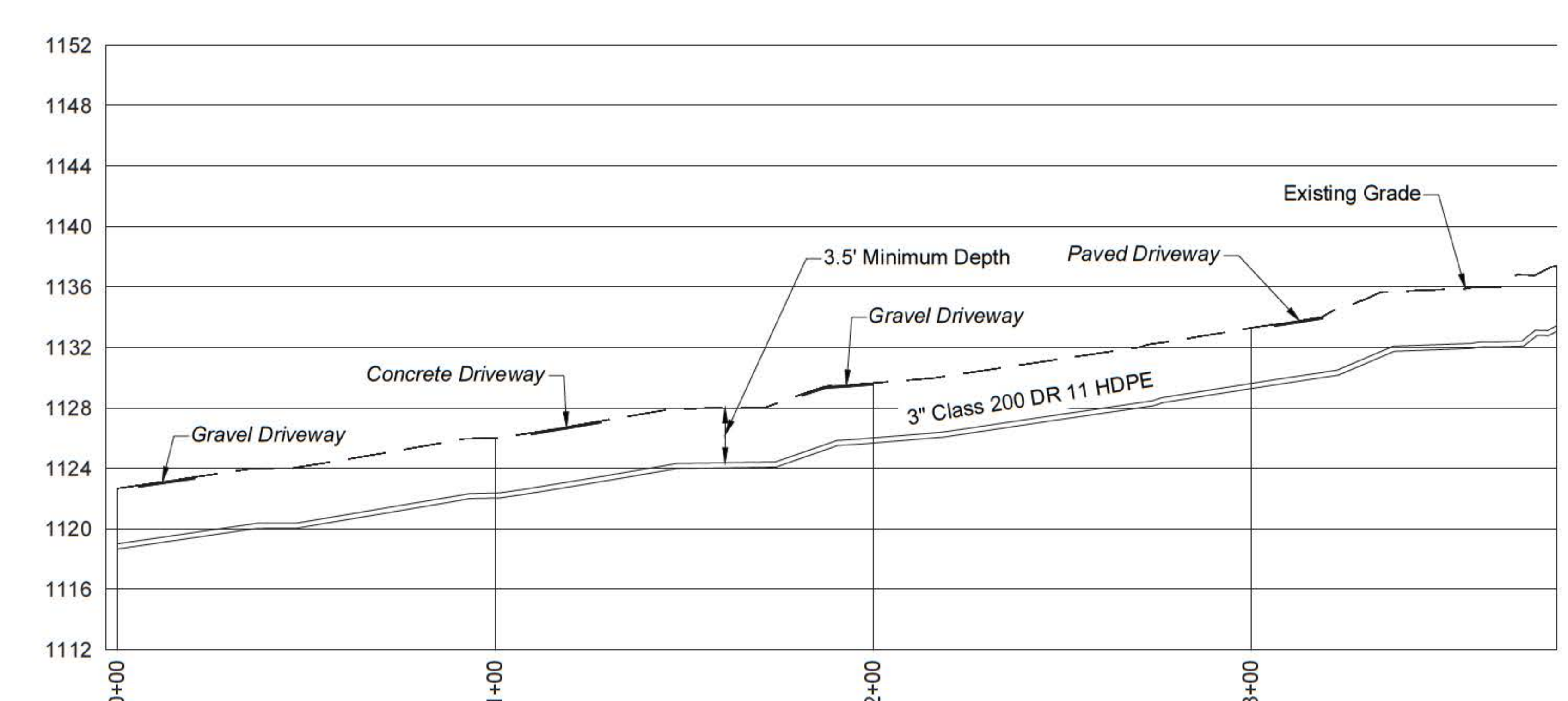


PROFILE C104-C
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

40' 20' 0' 40' 80'
Bar Scale



PROFILE C104-A
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)



PROFILE C104-B
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

NOTE:
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REVISIONS

NO.	DESCRIPTION	DATE	BY

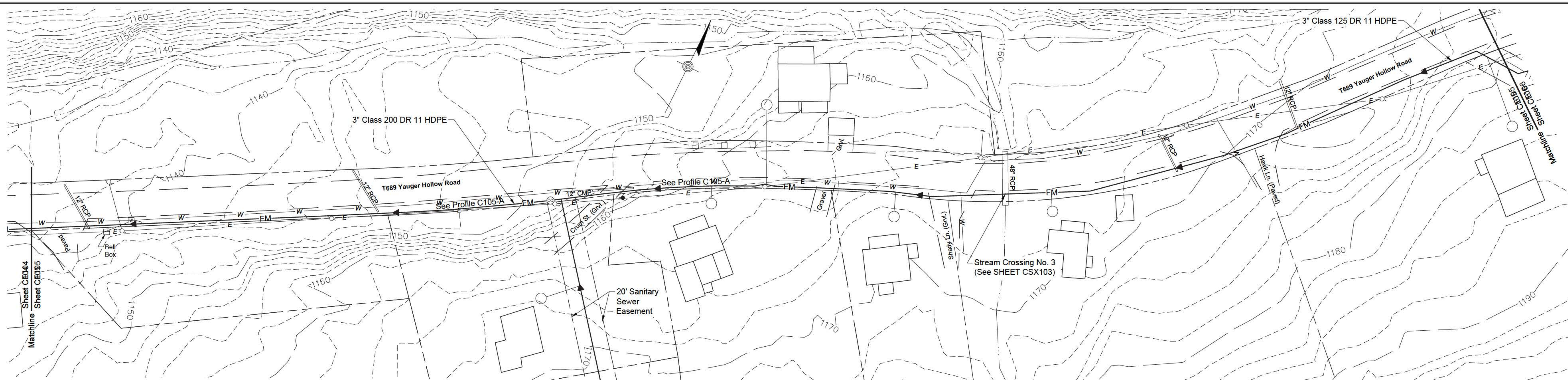
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
CONSTRUCTION PLAN AND PROFILE

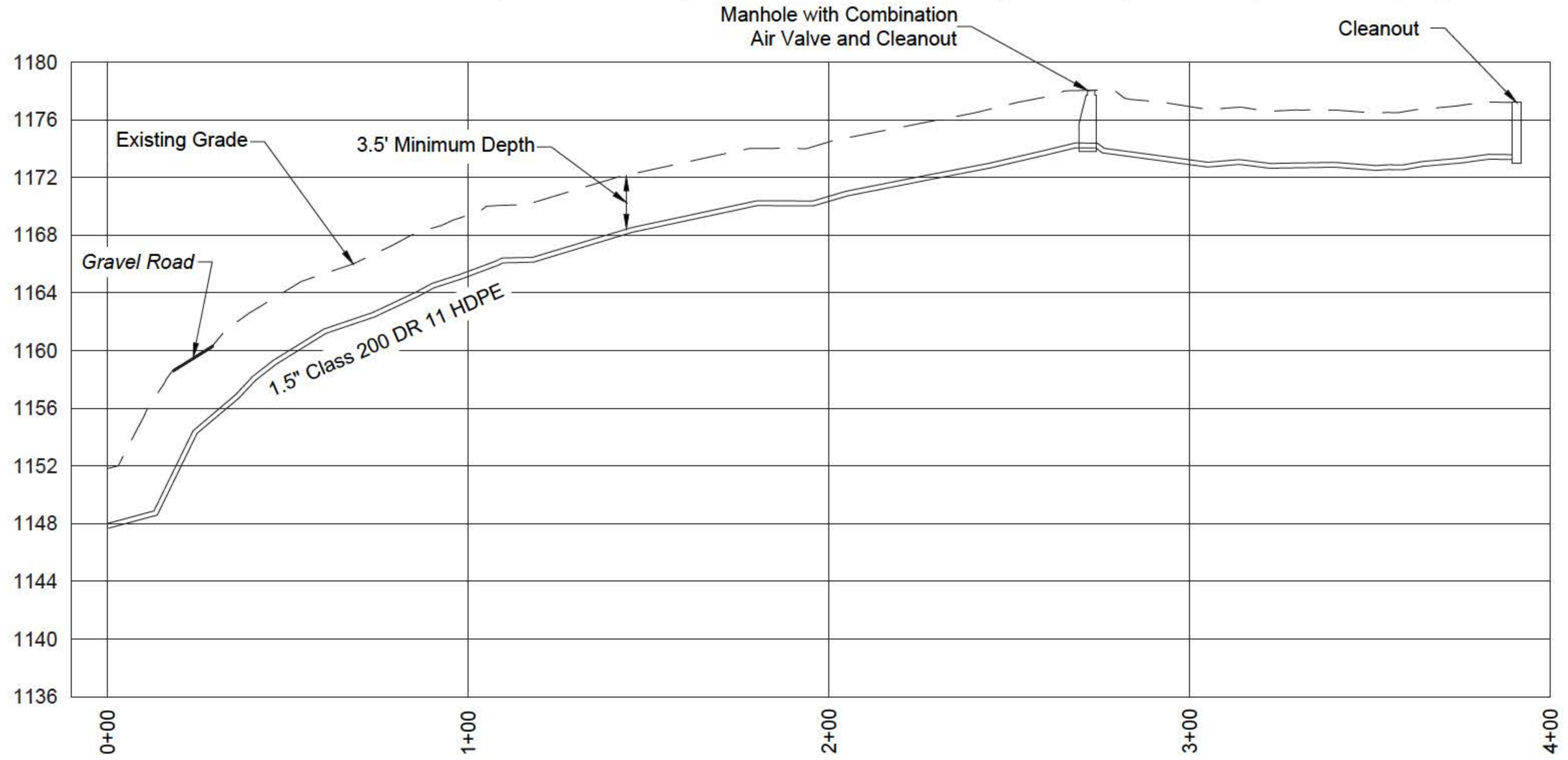
BOOK NO. ME 293	JOB NO. 2017-68		
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18

SCALE: AS NOTED

SHEET NUMBER
C104

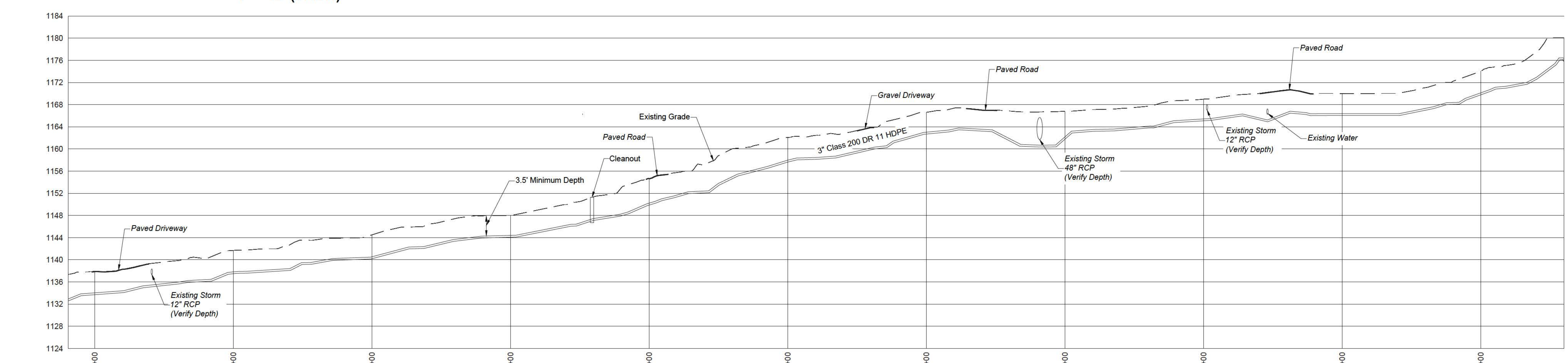


PLAN VIEW
SCALE: 1" = 40'



PROFILE C105-B
SCALE: 1" = 40' (HORZ.)

1" = 10' (VERT.)



PROFILE C105-A
SCALE: 1" = 40' (HORZ.)

1" = 10' (VERT.)

NOTE:
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REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	Profile C105-B adjustment	10/31/19	JE

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
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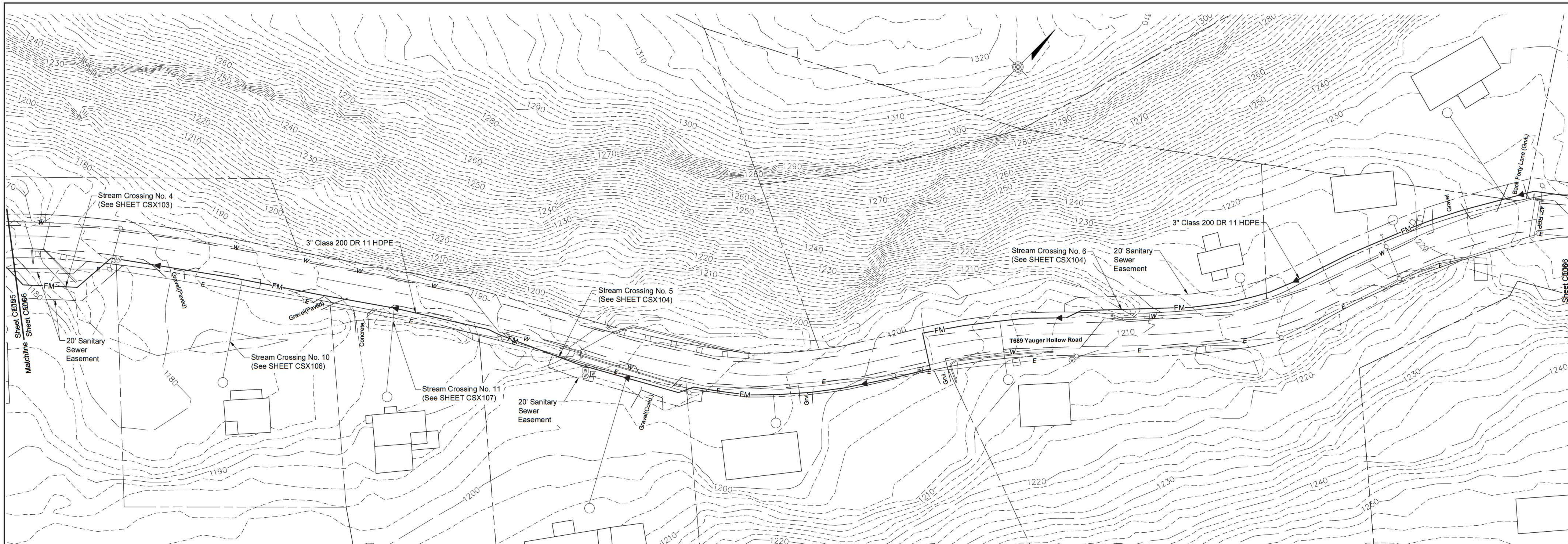
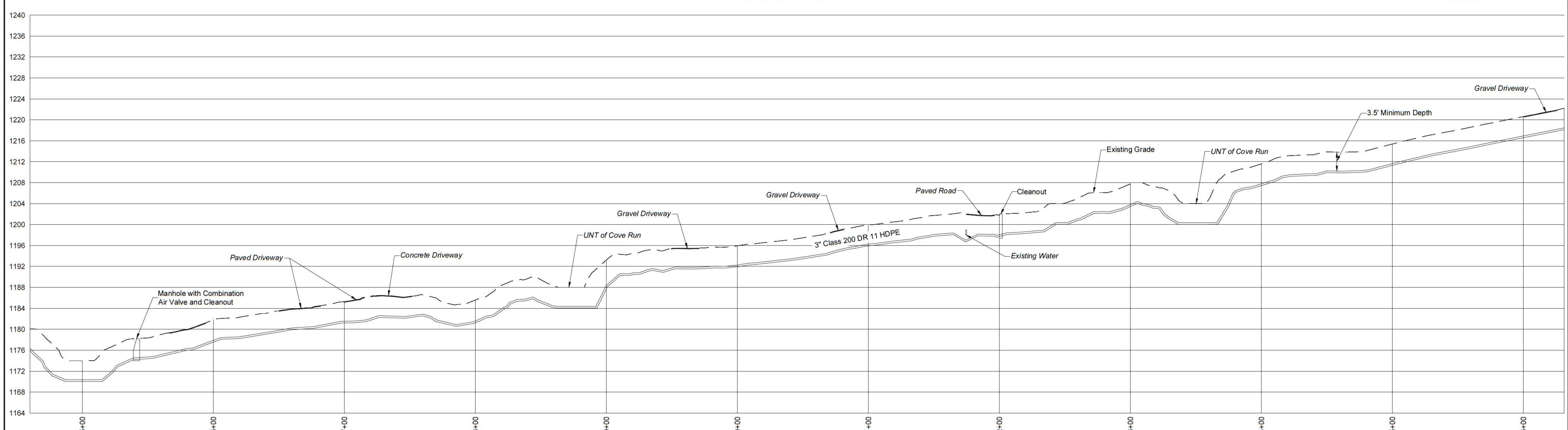
BOOK NO.	ME 293	JOB NO.	2017-68
DRAWN	JE 10/19/18	CHECKED	JS 10/19/18
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18
SCALE	AS NOTED		
SHEET NUMBER	C105		



PLAN VIEW
SCALE: 1" = 40'



PROFILE
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

NOTE:
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CONTRACT 2019-02
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NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

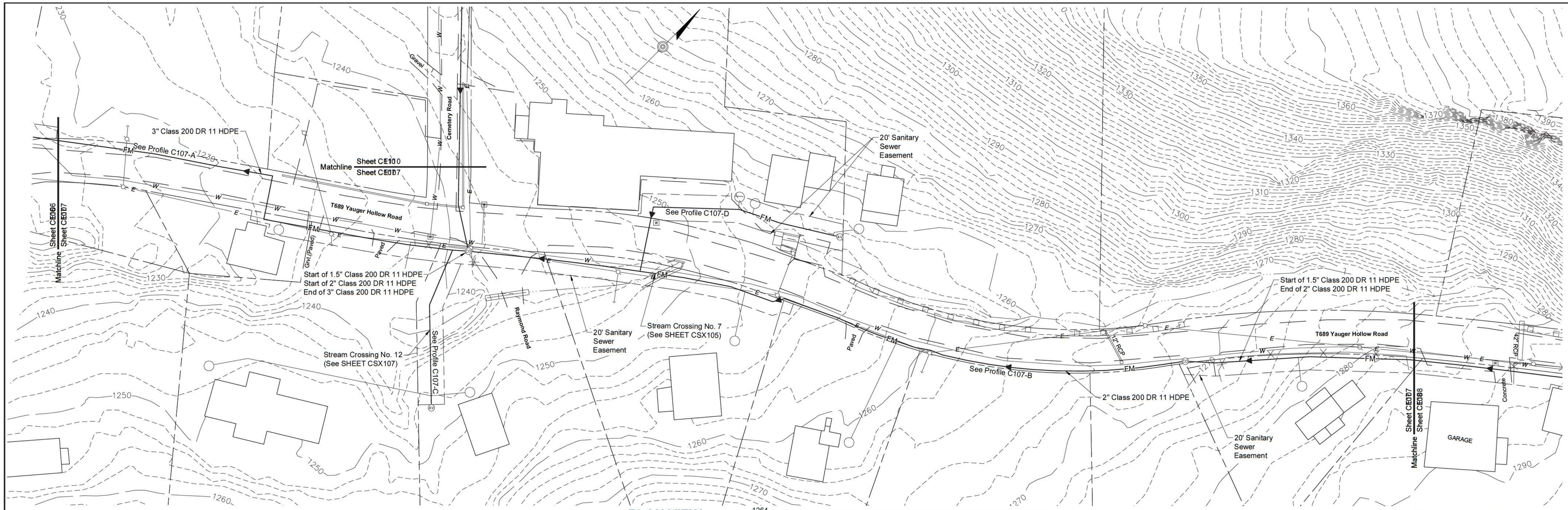
TITLE
CONSTRUCTION PLAN AND PROFILE

BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

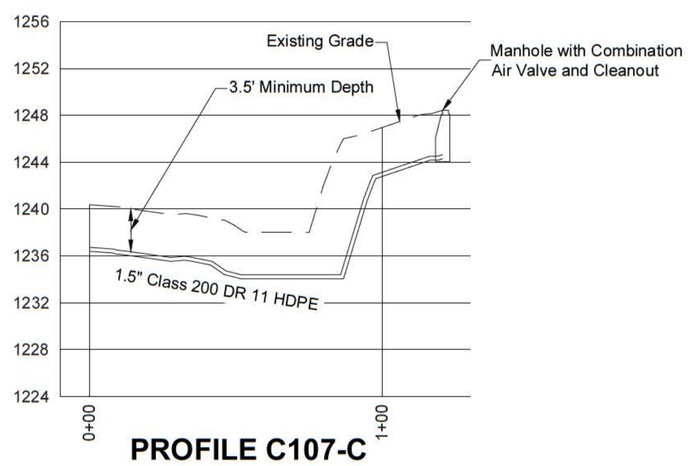
SCALE
AS NOTED

SHEET NUMBER
C106

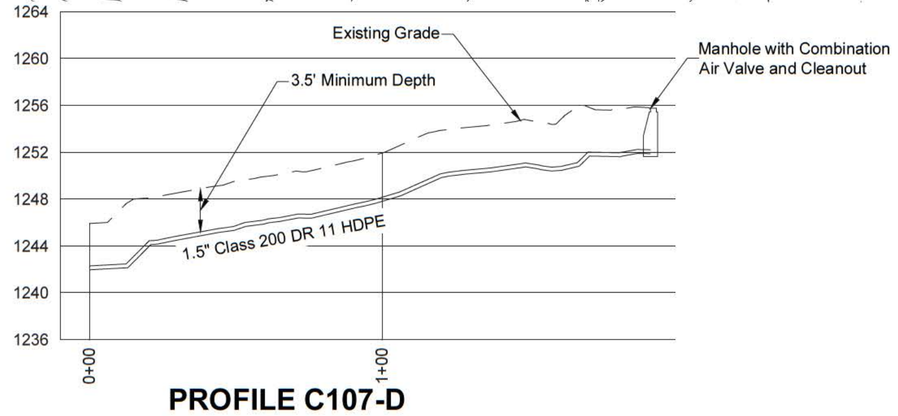


PLAN VIEW
SCALE: 1" = 40'

Bar Scale: 40' 20' 0' 40' 80'



PROFILE C107-C
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)



PROFILE C107-D
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

NOTE:
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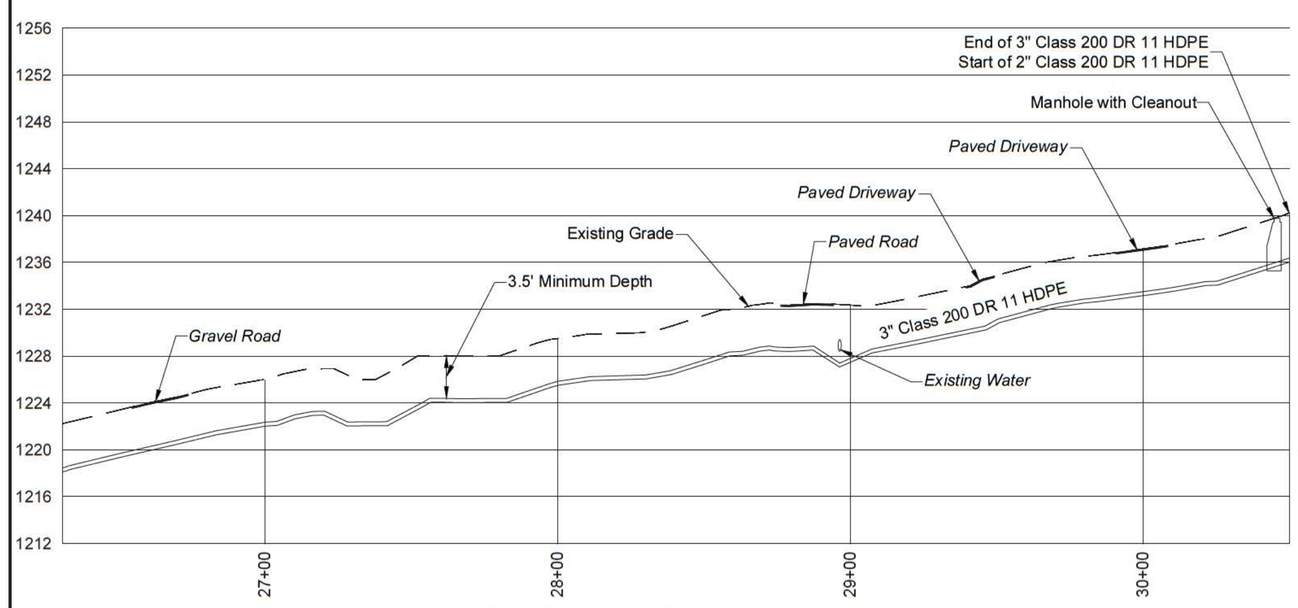
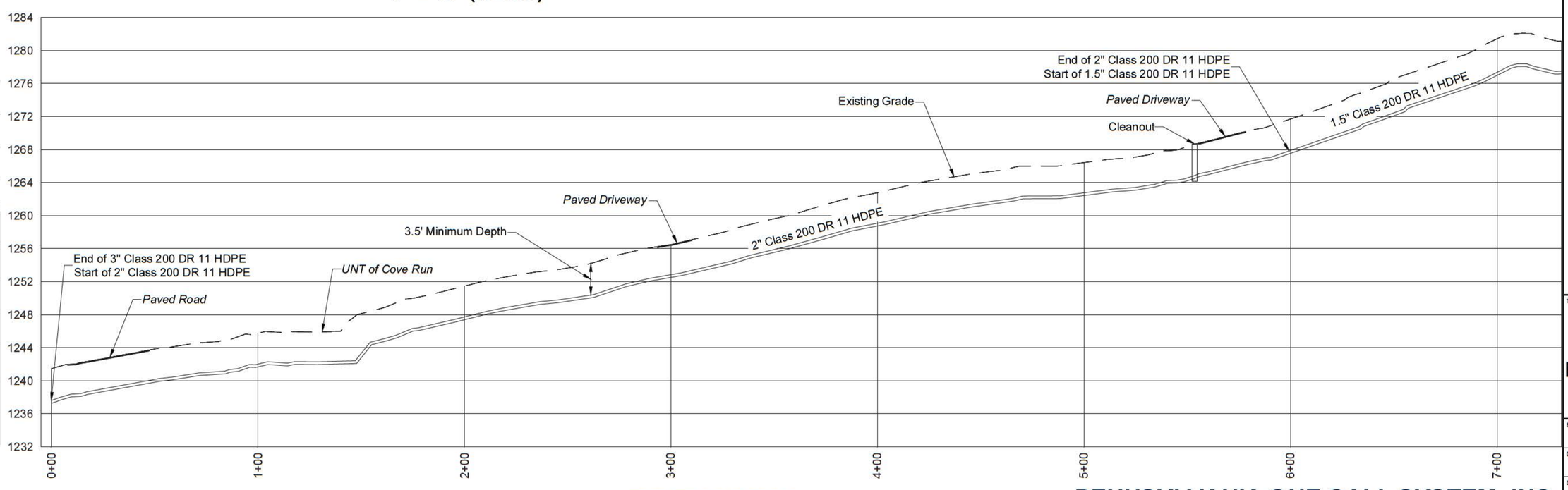


PROFILE C107-A
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)



PROFILE C107-B
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

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NO.	DESCRIPTION	DATE	BY

FILE: C:\2017\2017-68\Construction Plans\C107.dwg

SANITARY SEWER EXTENSION
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CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

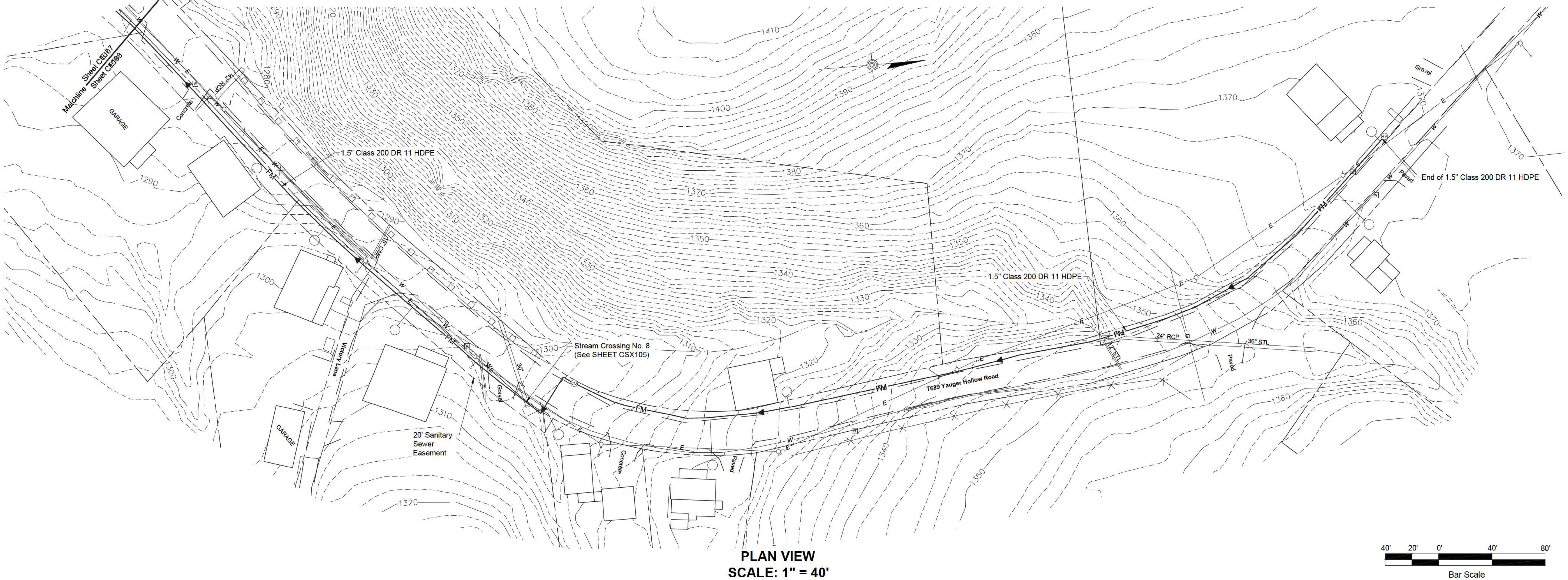
TITLE
CONSTRUCTION PLAN AND PROFILE

BOOK NO.	JOB NO.
ME 293	2017-68

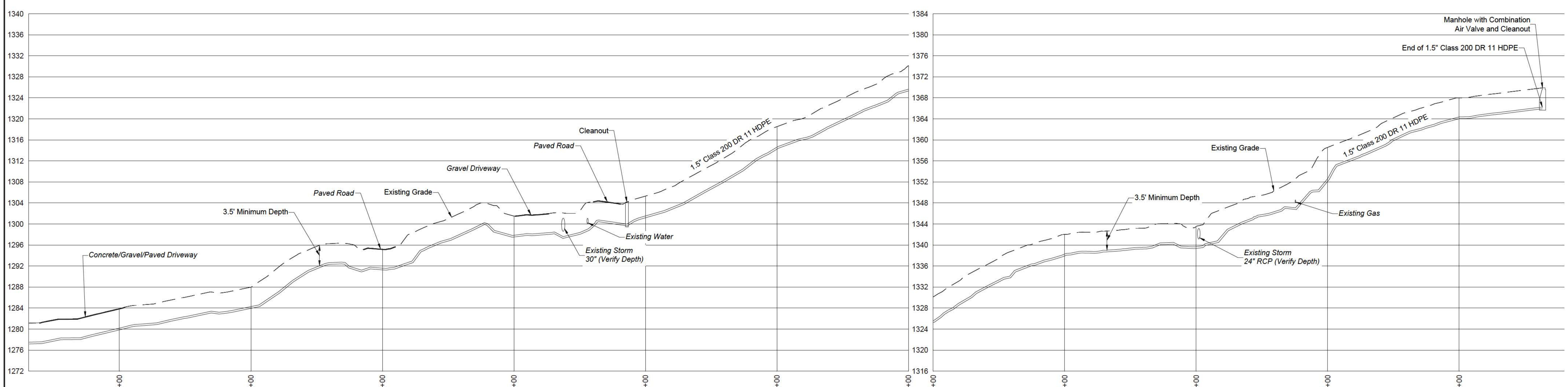
DRAWN	JE	10/19/18	
DESIGN	JE	10/19/18	
CHECKED	JS	10/19/18	
APPROVED	TMJR	10/23/18	

SCALE: AS NOTED

SHEET NUMBER
C107



PLAN VIEW
SCALE: 1" = 40'



PROFILE
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

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CONTRACT 2019-02
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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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TITLE
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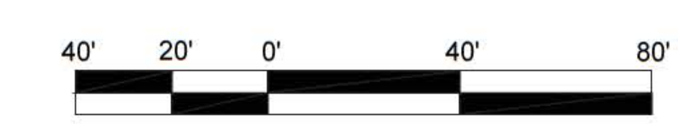
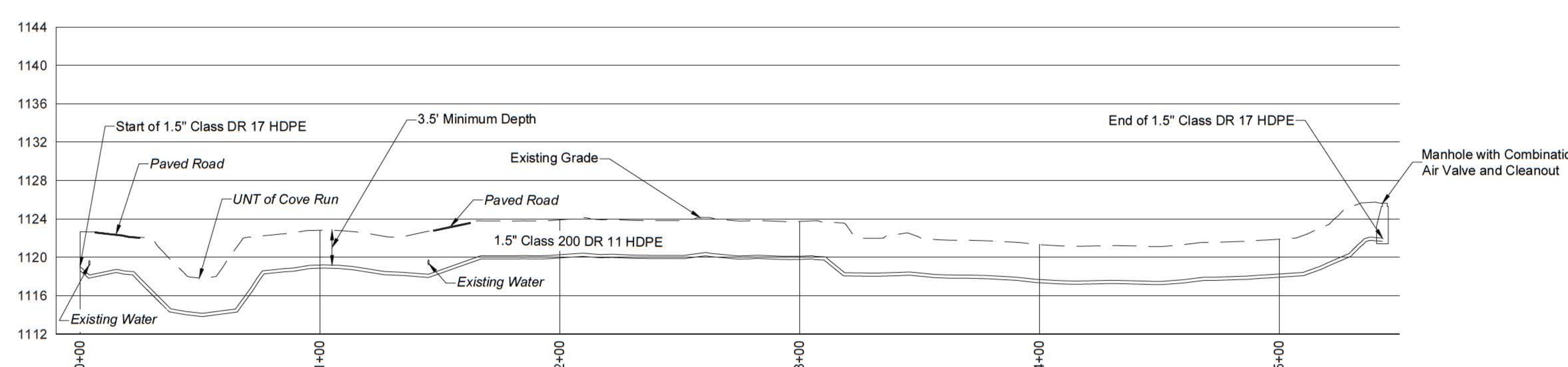
BOOK NO.	JOB NO.		
ME 293		2017-68	
DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE
AS NOTED

SHEET NUMBER
C108

PLAN VIEW
SCALE: 1" = 40'





PROFILE
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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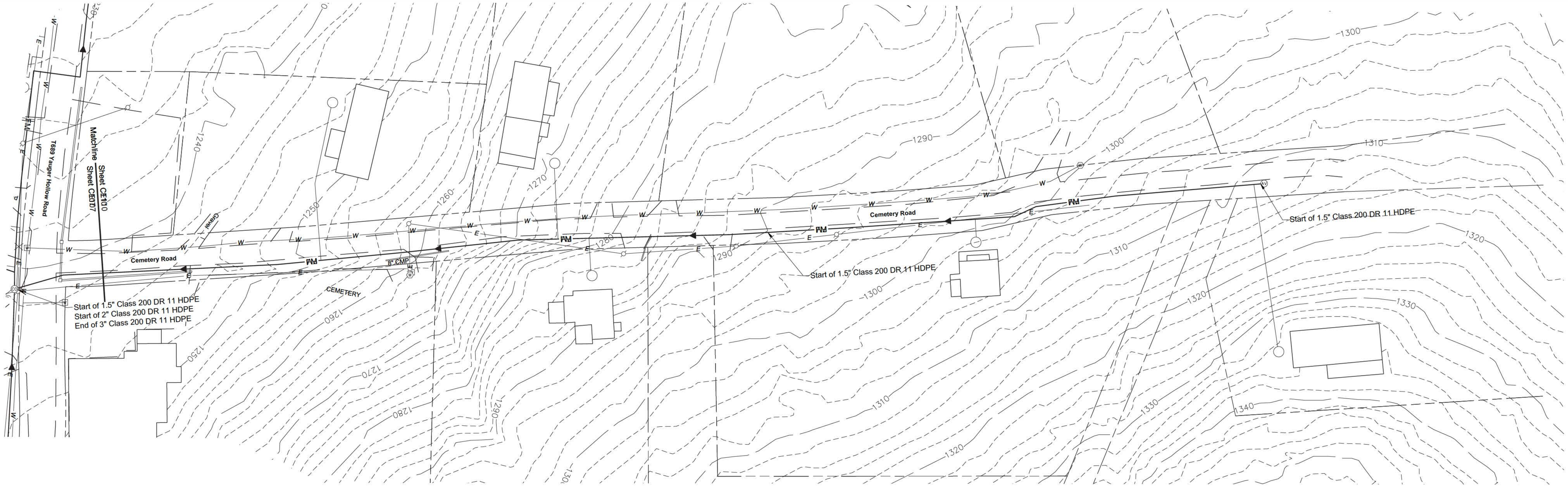
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18

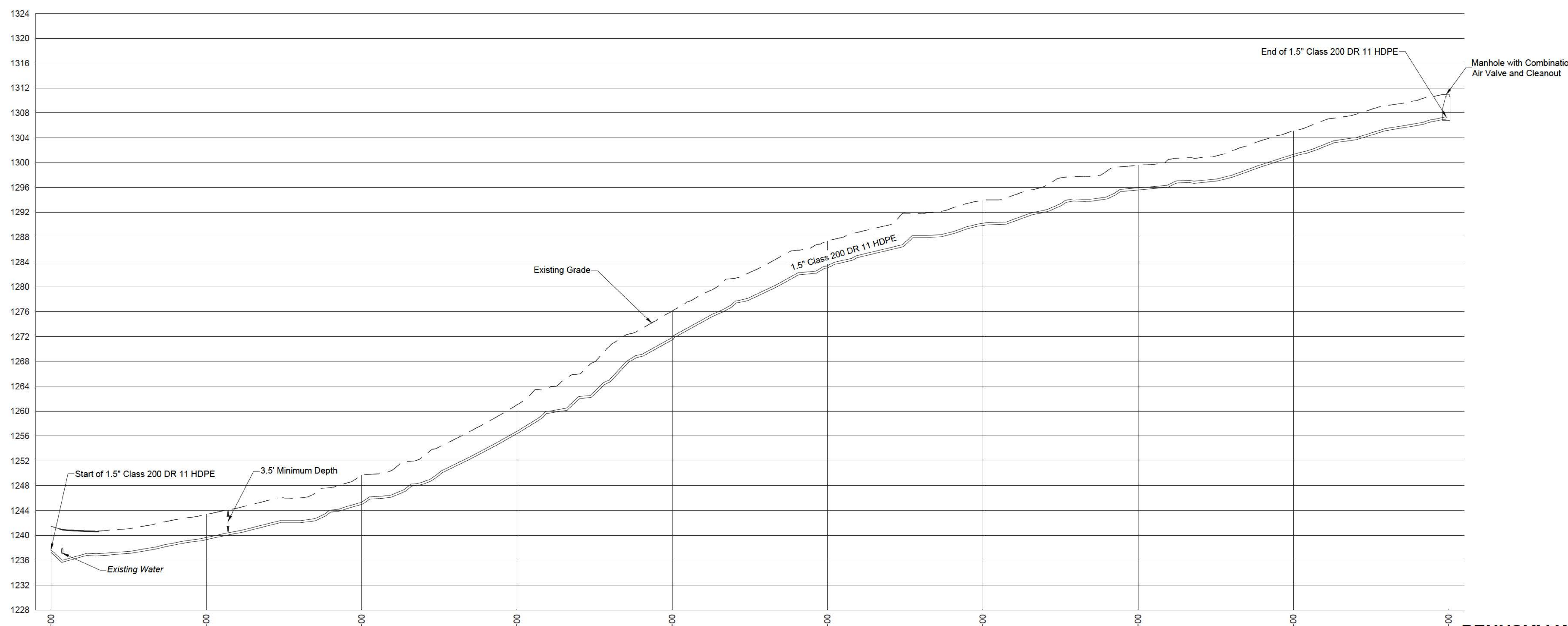
SCALE
AS NOTED

SHEET NUMBER
C109



PLAN VIEW
SCALE: 1" = 40'

40' 20' 0' 40' 80'
Bar Scale



PROFILE
SCALE: 1" = 40' (HORZ.)
1" = 10' (VERT.)

NOTE:
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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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TITLE
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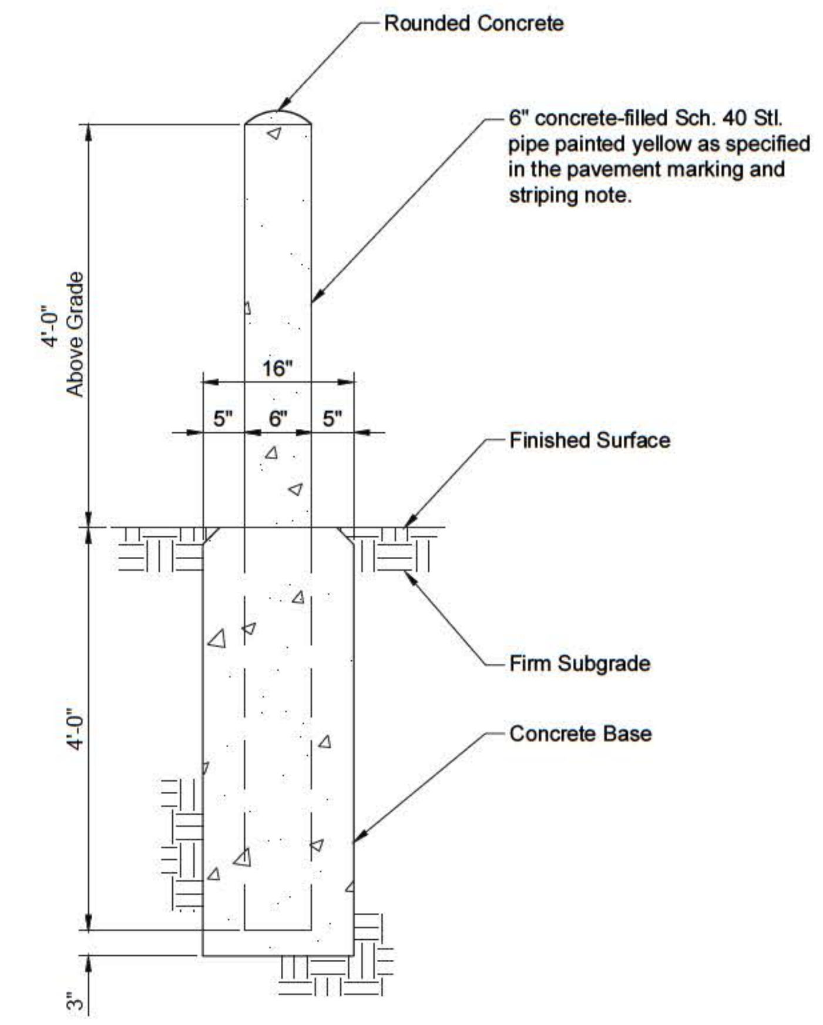
BOOK NO.	JOB NO.		
ME 293	2017-68		
DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE
AS NOTED

SHEET NUMBER
C110

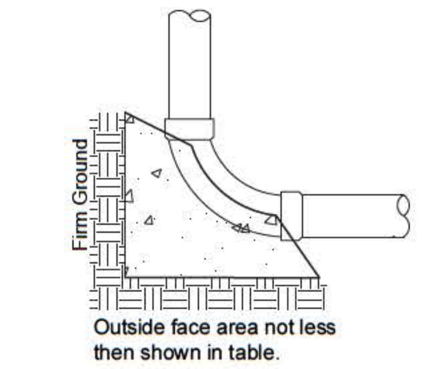


TYPICAL CONCRETE BOLLARD

N.T.S.

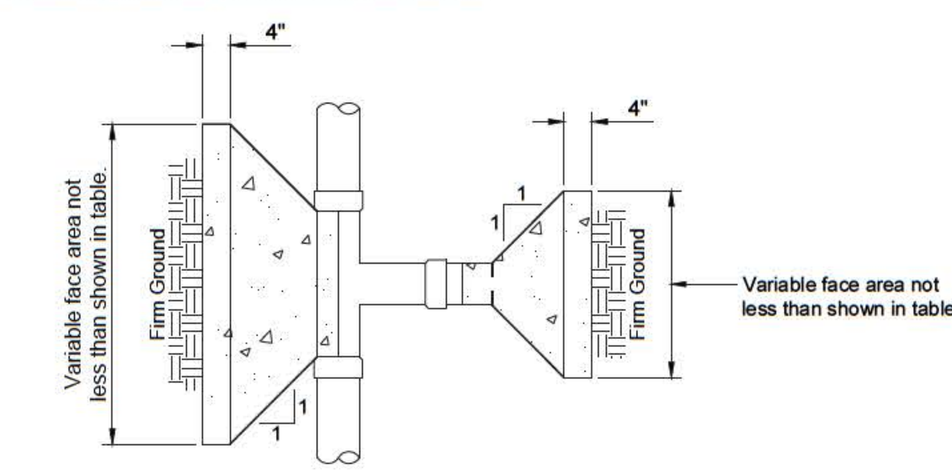
BLOCKING TABLE							
Pipe Size	Area Sq. In.	Total Press. in Lbs.	Area of Block in Square Feet				
			Tees & Plugs	90° Bends	45° Bends	22.5° Bends	11.5° Bends
2"	12"	2,700	0.7	1.0	0.5	0.5	0.5
4"	26"	5,800	1.5	2.1	1.1	1.0	1.1
6"	48"	10,800	2.7	3.8	2.1	1.0	1.0
8"	79"	17,800	4.5	6.4	3.5	2.0	1.0
10"	114"	25,700	6.4	9.0	4.9	2.5	1.25
12"	154"	34,700	8.8	12.9	6.9	3.9	1.7

Note:
Method of blocking is to be used for all fittings and bends in excess of ten degrees except as otherwise specified.



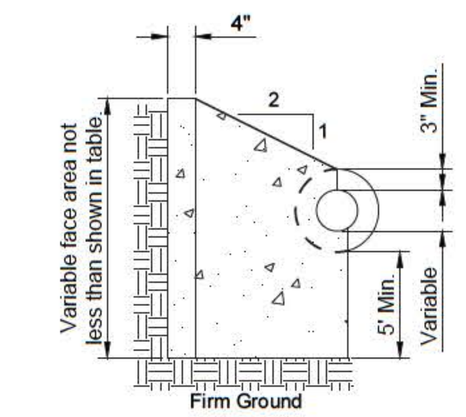
BLOCKING FOR BENDS

N.T.S.



BLOCKING FOR TEES AND PLUGS

N.T.S.

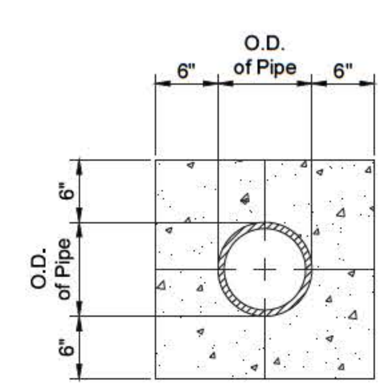


APPLICABLE TO TEES, WYES AND BENDS

N.T.S.

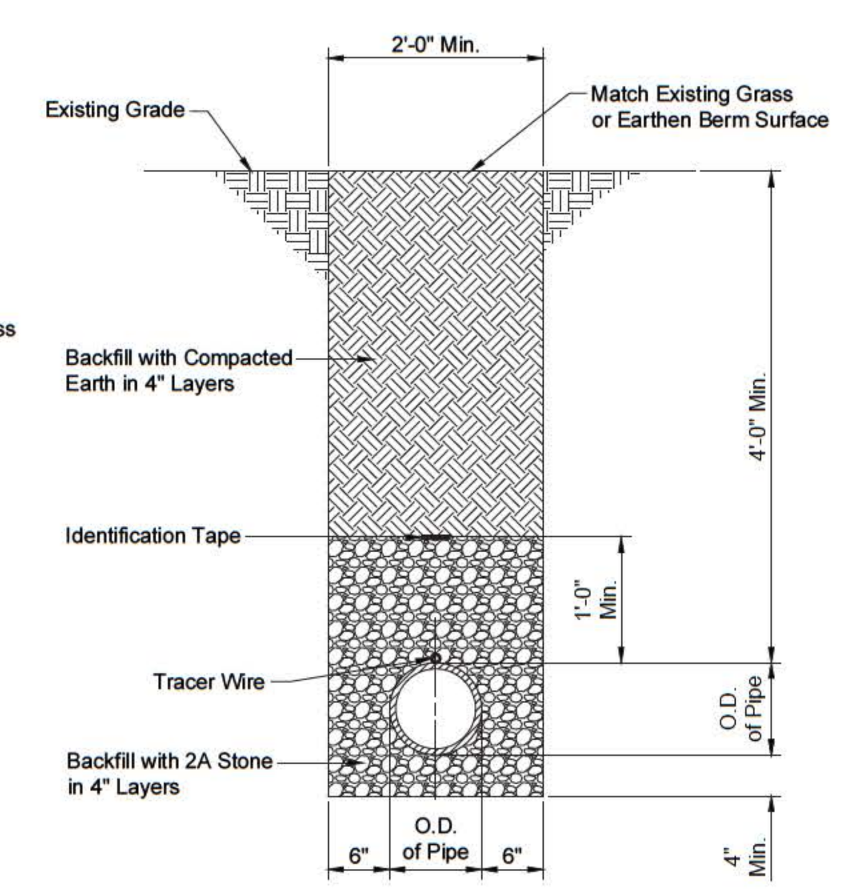
Notes:
1. Select Backfill is defined as native soil excavated from the trench, free of rocks, foreign materials, and frozen earth.
2. For trenches closer than 3' to the edge of the pavement along roadways, backfill the entire trench with compacted 2A modified crushed stone.
3. All roadway crossings shall be bored, unless otherwise noted.

Note:
Concrete encasement of the sanitary sewer is required for any crossing of 12" or less with a storm sewer or collector line.



PIPE ENCASEMENT

N.T.S.

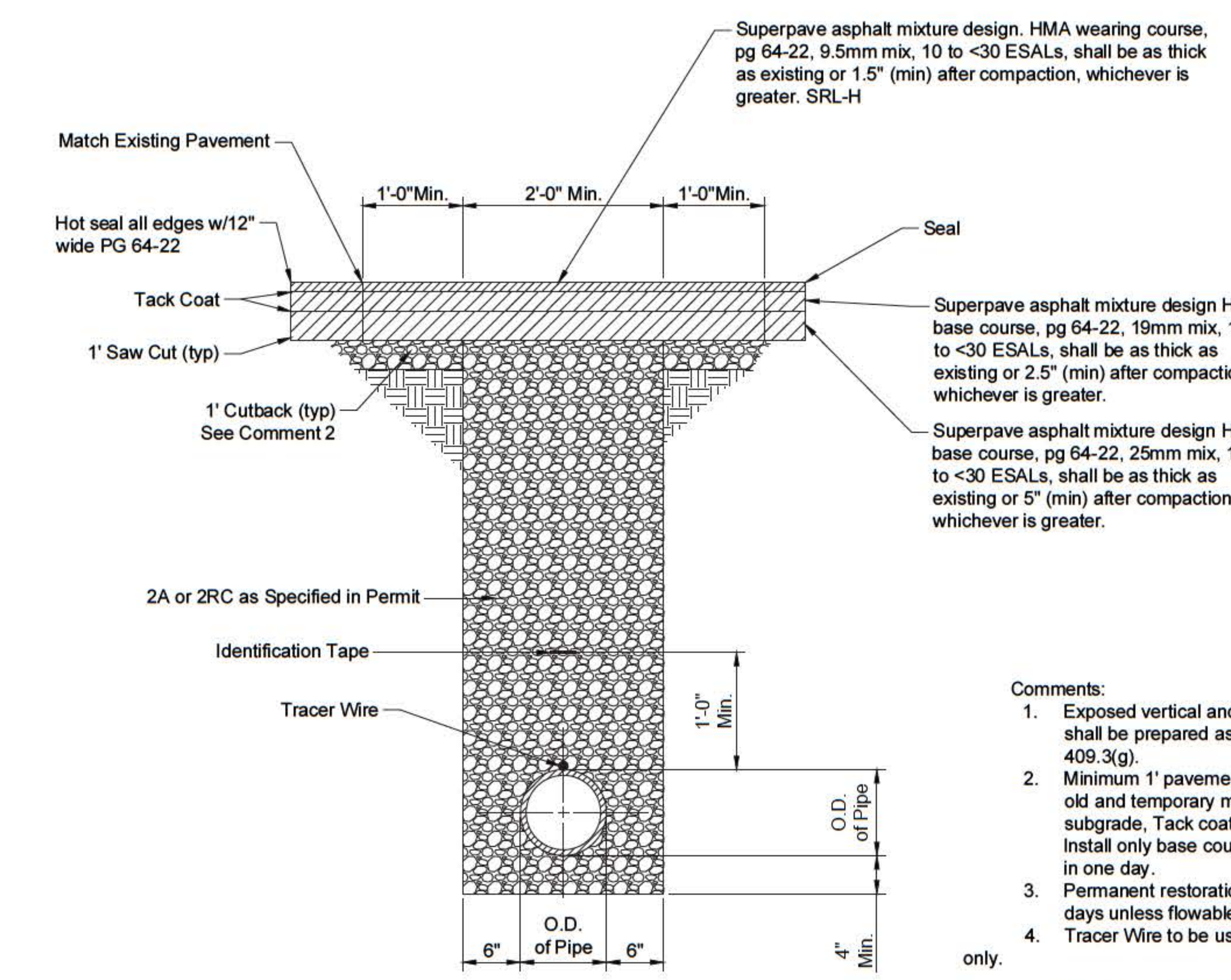


UTILITY TRENCH OUTSIDE OF IMPROVED BERM

N.T.S.

Tracer Wire Notes:

Tracer wire for directional drilling/boring shall be No. 12 AWG hard drawn, solid extra-high-strength copper-clad steel conductor, insulated with a 45 mil, high density, high weight molecular weight polyethylene insulation, and rated for direct burial use at 30 volts. Insulation color shall meet APWA color code standard for indentification. Copperhead Soloshot or equivalent with a minimum of 5 years underground testing, or 5 year warranty shall be used.

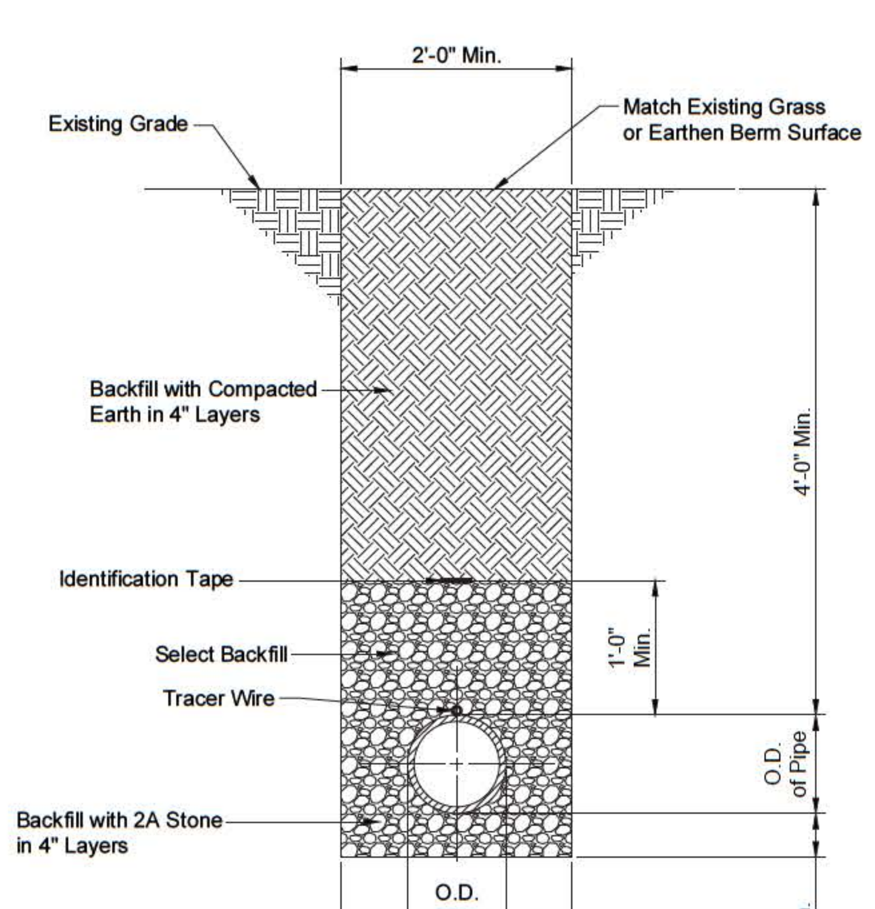


Comments:
1. Exposed vertical and horizontal surfaces shall be prepared as per pub. 408, section 409.3(g).
2. Minimum 1' pavement cutback, Excavate old and temporary material. Re-compact subgrade, Tack coat all vertical edges. Install only base course and binder course in one day.
3. Permanent restoration to be minimum 90 days unless flowable fill is used.
4. Tracer Wire to be used on force main lines only.

Note: Match Existing Depths if Greater.

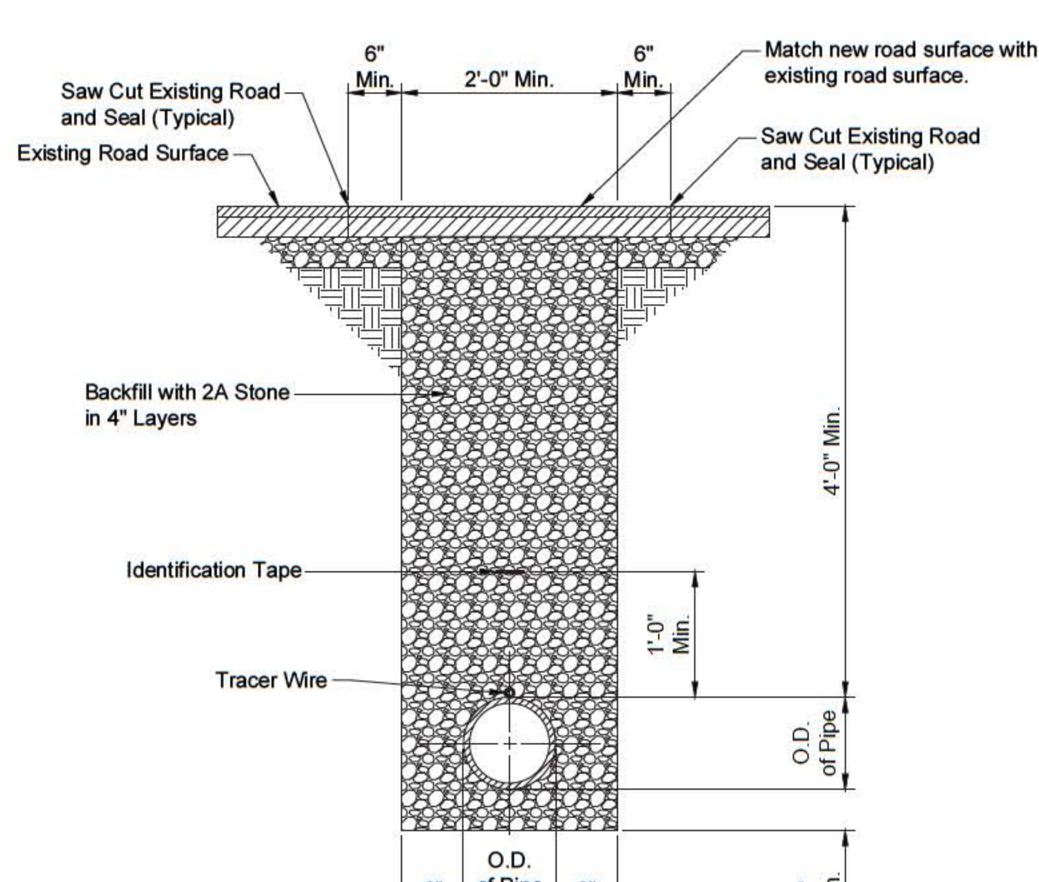
UTILITY TRENCH UNDER STATE ROAD SURFACE OR PAVED BERM

N.T.S.



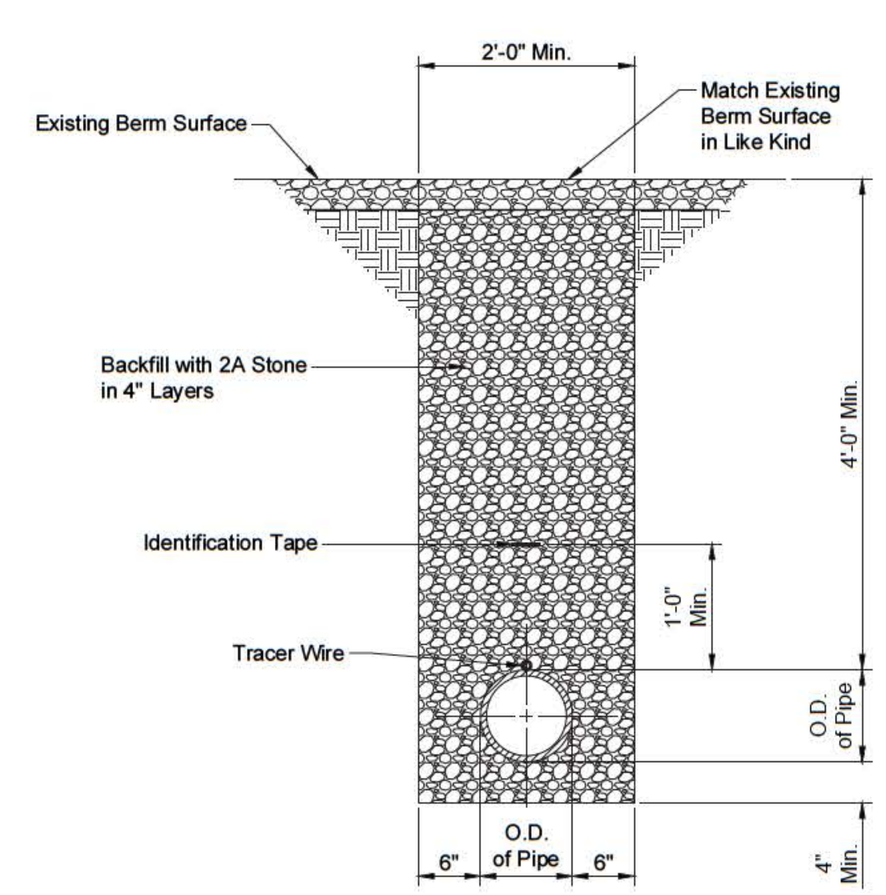
UTILITY TRENCH IN GRASS OR EARTHEN BERM

N.T.S.



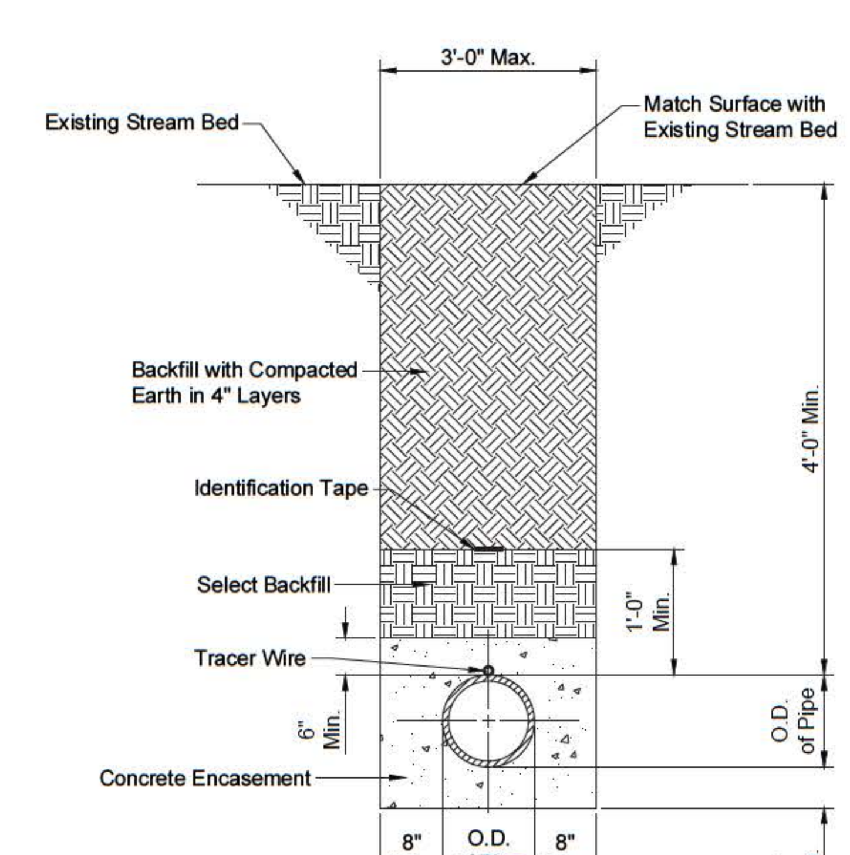
UTILITY DRIVEWAY CROSSING

N.T.S.



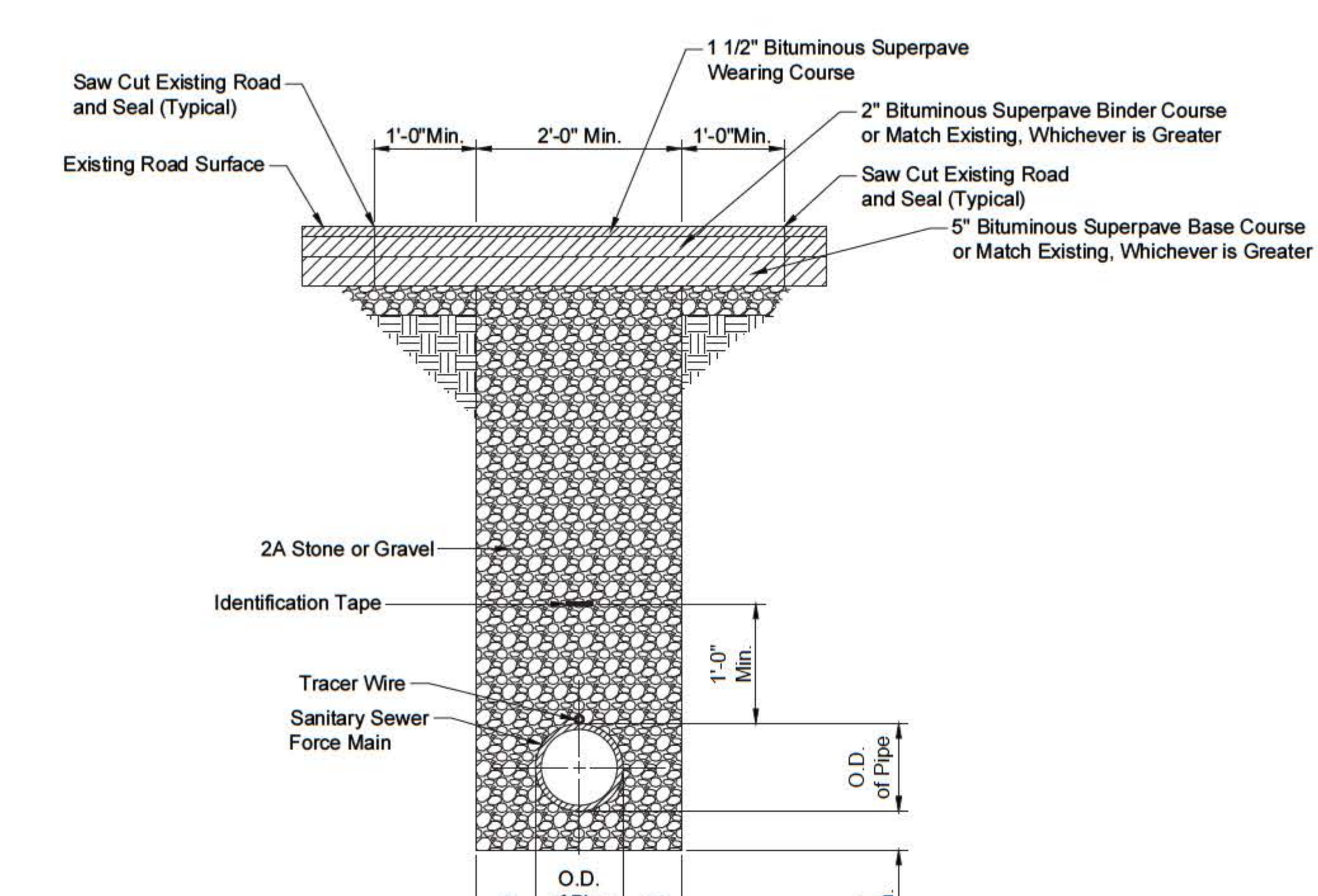
UTILITY TRENCH IN GRAVEL BERM

N.T.S.



UTILITY STREAM CROSSING TRENCH

N.T.S.



UTILITY TRENCH UNDER ROAD SURFACE OR PAVED BERM

N.T.S.

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civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

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REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE

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ME 293		2017-68	
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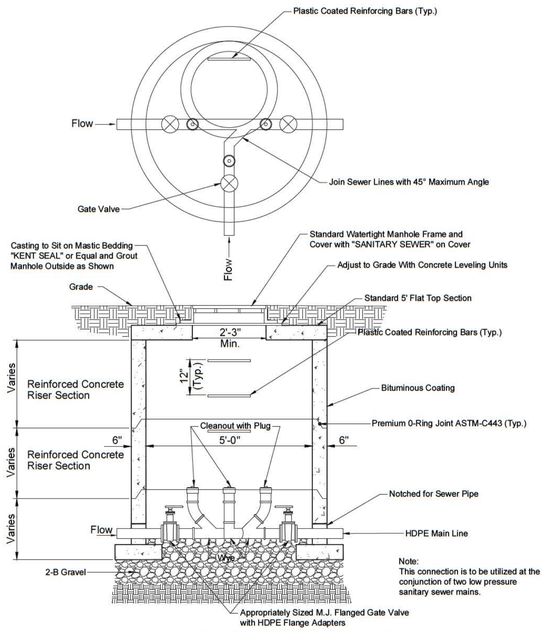
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE
N.T.S.

SHEET NUMBER
C111

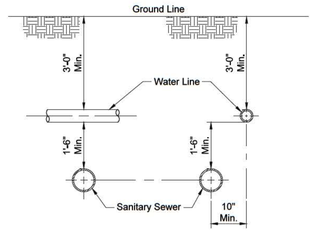


TYPICAL CLEANOUT CONNECTION PLACED IN MANHOLE

N.T.S.

Notes:

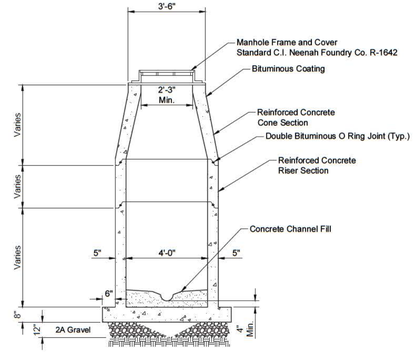
1. Concrete encasement of the sanitary sewer is required for any crossing of 12" or less with a storm sewer or collector line.
2. Construct the sanitary sewer first during all new construction.



TRANSVERSE CROSSING **PARALLEL UTILITIES**

SANITARY SEWER PLACEMENT ADJACENT TO WATER LINE

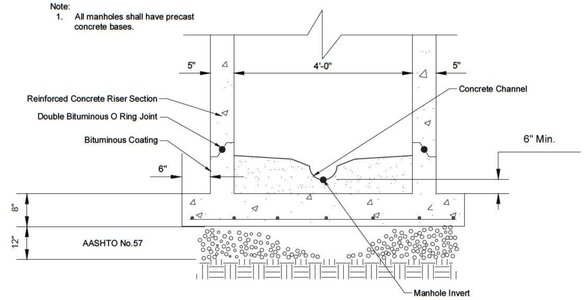
N.T.S.



TYPICAL CHANNEL SECTION THROUGH MANHOLE

N.T.S.

Note:
1. All manholes shall have precast concrete bases.



MANHOLE BASE DETAIL

N.T.S.

CONNECTION TO EXISTING FACILITIES

A. General Requirements - The contractor shall make all required connection of the proposed sanitary sewer into existing sewer facilities, where are as shown on the drawings.

B. The cost of making connections shall be included with the unit price bid for the pipe, complete in place.

SERVICE LINES

A. The contractor shall install 45° wye branches in the sanitary sewer mains in all locations where building sewer service line connections are shown on the drawings directly entering the sewer main. Connection of the sanitary sewer service lines shall be made into the wye branches by means of 45° bends. The connection shall be made thoroughly watertight, and Class C concrete shall be placed under each connection to bear on undisturbed earth to firmly support the connection. At least 2 ft. of the lateral pipe with a cap shall be placed beyond a wye branch on the main line.

B. The contractor shall mark the location of each "Y" branch with a hardwood stake extending from the sewer to the surface of the ground.

C. The contractor shall locate and keep a record of all openings and "Y" branches as located by measurement to the nearest downstream manhole. Such records shall be delivered to the engineer during the progress of the work.

TESTS

A. General Requirements - The contractor shall test the completed sewers, including manholes for leakage, compaction and deflection as specified herein after the trench backfill is completed. The tests will be conducted as approved by the township engineer.The contractor shall furnish all necessary equipment, materials and labor for performing the tests as specified.

The contractor shall notify the township engineer and municipal authority at least 48 hours prior to the start of testing. Testing shall only be performed in the presence of the township engineer and municipal authority representative. Sections of pipe tested prior to completion of the project shall be subject to additional leakage tests, if warranted in the opinion of the township engineer prior to acceptance of the project.

B. Procedure and Method of Testing - All sewer lines shall be thoroughly flushed with water to obtain free flow through the lines. All obstructions shall be removed and all defects corrected prior to testing. The sewer lines shall be given the following tests:

Air Testing - All gravity sewers shall be subject to a low pressure air test. The contractor shall furnish all necessary labor, equipment and material to perform the test. After flushing and removal of all obstruction, the sections of sewer line shall be tested from manhole to manhole. All openings, laterals, stubs, branches, wyes, tees and pipe ends shall be securely capped or plugged and adequately braced. Air testing may be dangerous if, because of carelessness, a line is improperly prepared for testing. An improperly installed plug could cause a sudden explosion. No one shall be allowed in the manholes during testing. The air test should consist of inflating the system to 5 psi and maintaining the pressure for 5 minutes without any pressure drop.

Deflection Tests - After installation and final backfill, all pipelines constructed of flexible materials shall be measured for vertical ring deflection by passing a test ball or "go no go" gauge through them to demonstrate that the deflection is less than 3-1/2% of the diameter of the pipe.

Weir Test - The sanitary sewer may also be required to be checked for actual infiltration by installation of a V-notch weir at the lower terminus of the new work or each section of new work. Measurements shall be made immediately following periods of extended rain or when the ground is saturated with water. The maximum infiltration permitted for the system shall be 100 gallons per inch of pipe diameter per mile of pipe per day. The sources of any infiltration shall be determined and corrected.

C. Correction of Defective Work - If leakage exceeds the specified amount, the contractor shall, at his own expense, make the necessary repairs or replacements required to permanently reduce the leakage to within the specified limit, and the tests shall be repeated until the leakage requirement is met.

Any defects found in the system are to be repaired at the expense of the contractor so as to conform strictly to the specifications. All repairs shown necessary by the tests are to be made, broken or cracked pipe replaced, all deposits removed, and sanitary sewer left true to line and grade and entirely clean, free from lumps of cement, protruding gaskets, bu kheads, etc., and ready for use before final acceptance by the owner.

CLEANING AND REPAIR

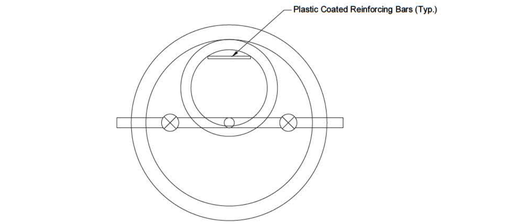
A. The contractor will be required to clean the entire sanitary sewer system of all debris and obstructions. This shall include, but is not limited to removal of all form work from structures, concrete and mortar droppings, construction debris and dirt. The system shall be thoroughly flushed clean and the contractor shall furnish all necessary hose, pumps, pipe and other equipment that may be required for this purpose. No debris shall be flushed into existing sanitary sewers. All debris shall be removed from the system.

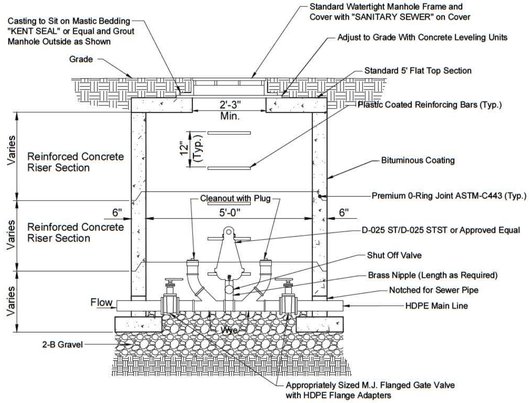
B. After the system has been cleaned, the contractor shall thoroughly inspect the system, and all repairs shown to be necessary shall be properly performed by the contractor. All work of cleaning and repair as specified herein shall be performed at the contractor's expense.

FINAL INSPECTION

Upon completion of the work and before final acceptance by the owner, the entire sanitary sewer system shall be subject to a final inspection in the presence of the township engineer and/or owner's representative. The work shall not be considered complete until all requirements for line, grade, cleanliness, leakage, tests, restoration, and workmanship have been met.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS FOR CONSTRUCTION PREPARED FOR THE NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY.

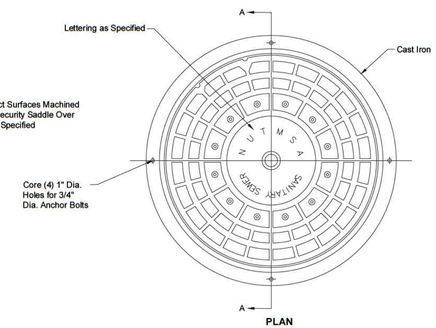




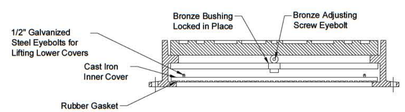
TYPICAL AIR RELIEF VALVE PLACED IN MANHOLE

N.T.S.

Notes:
1. All Contact Surfaces Machined
2. Provide Security Saddle Over Eyebolt if Specified



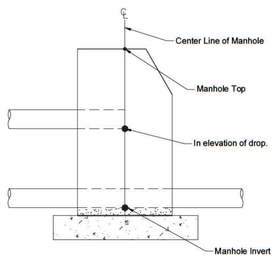
PLAN



SECTION A-A

WATERTIGHT MANHOLE FRAME AND COVER

N.T.S.



Note:
1. All manhole elevations are given at center line of manhole.
2. Pipe slopes are calculated from center line of manhole.

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civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

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REGISTERED PROFESSIONAL
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ENGINEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
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FILE: C:\2017\2017-68\Construction Plans\C112.dwg

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE

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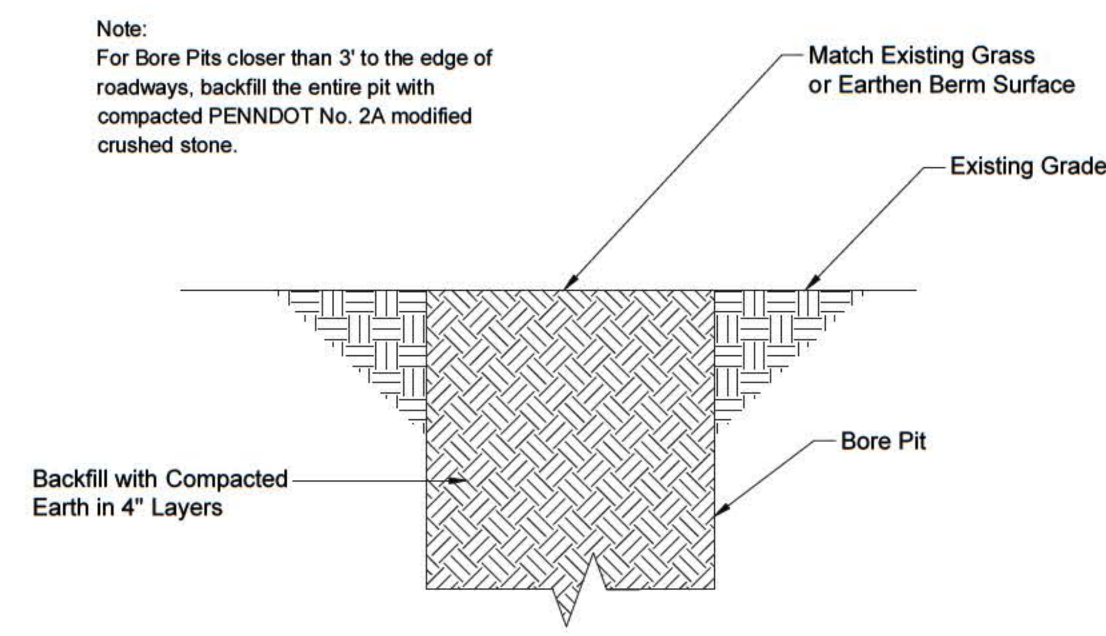
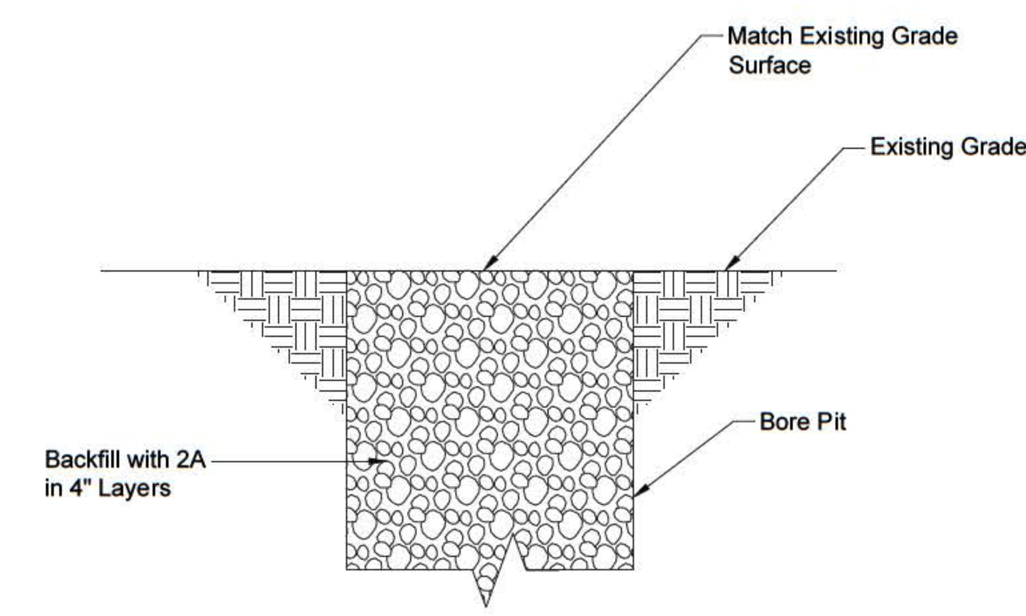
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE: N.T.S.

SHEET NUMBER: **C112**

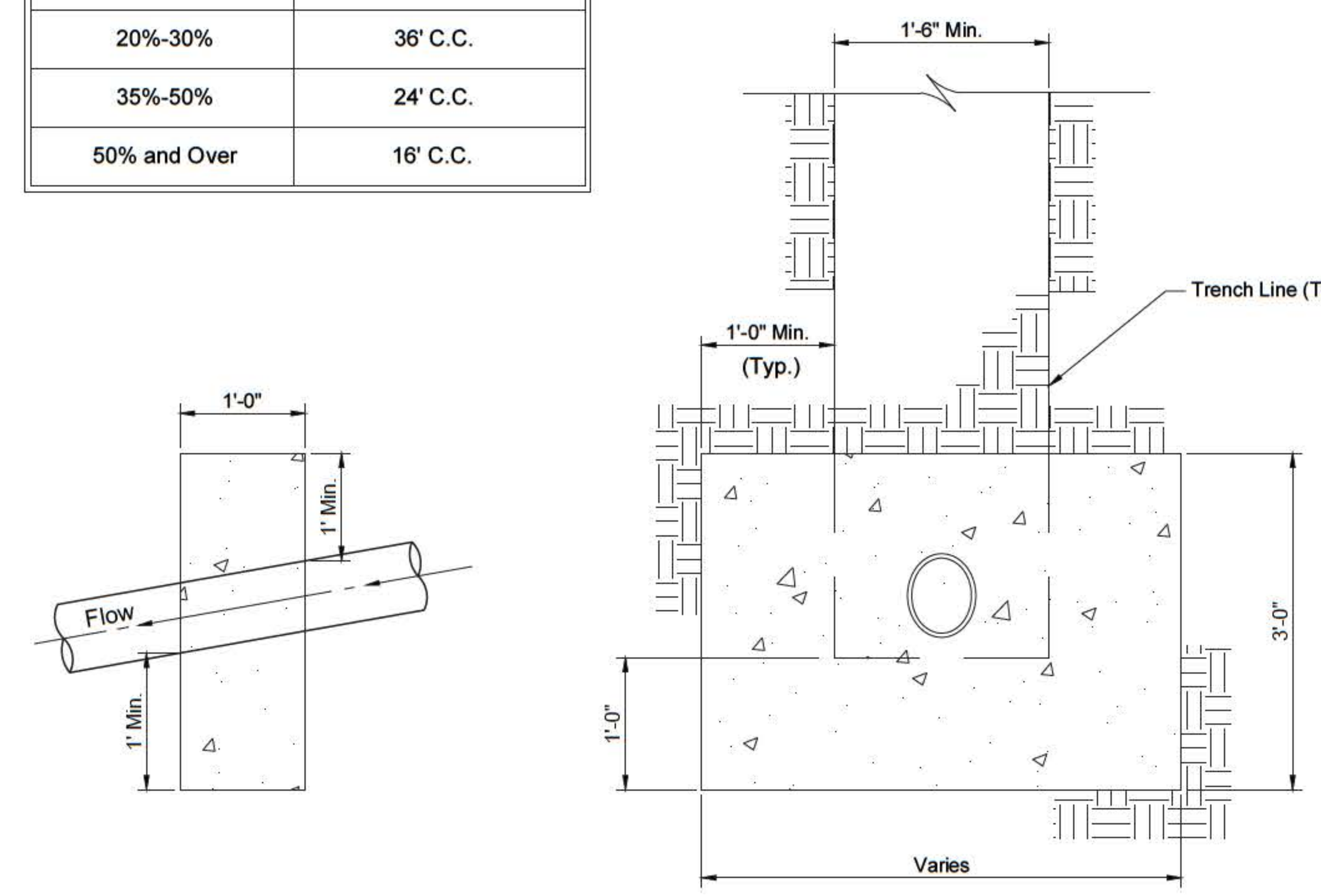


PIT RESTORATION OUTSIDE OF IMPROVED SURFACE
N.T.S.

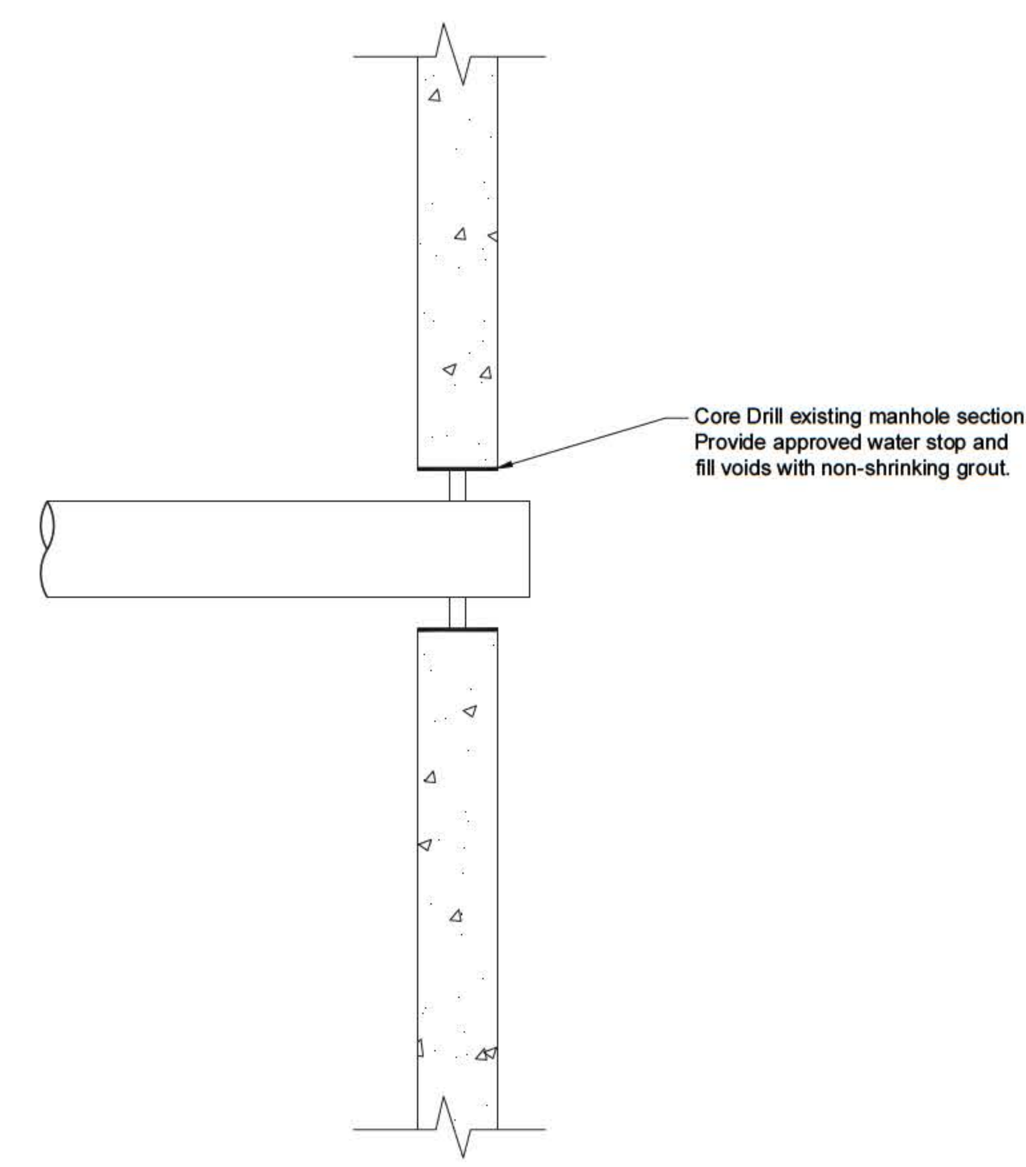


PIT RESTORATION WITHIN PAVED OR GRAVEL AREA
N.T.S.

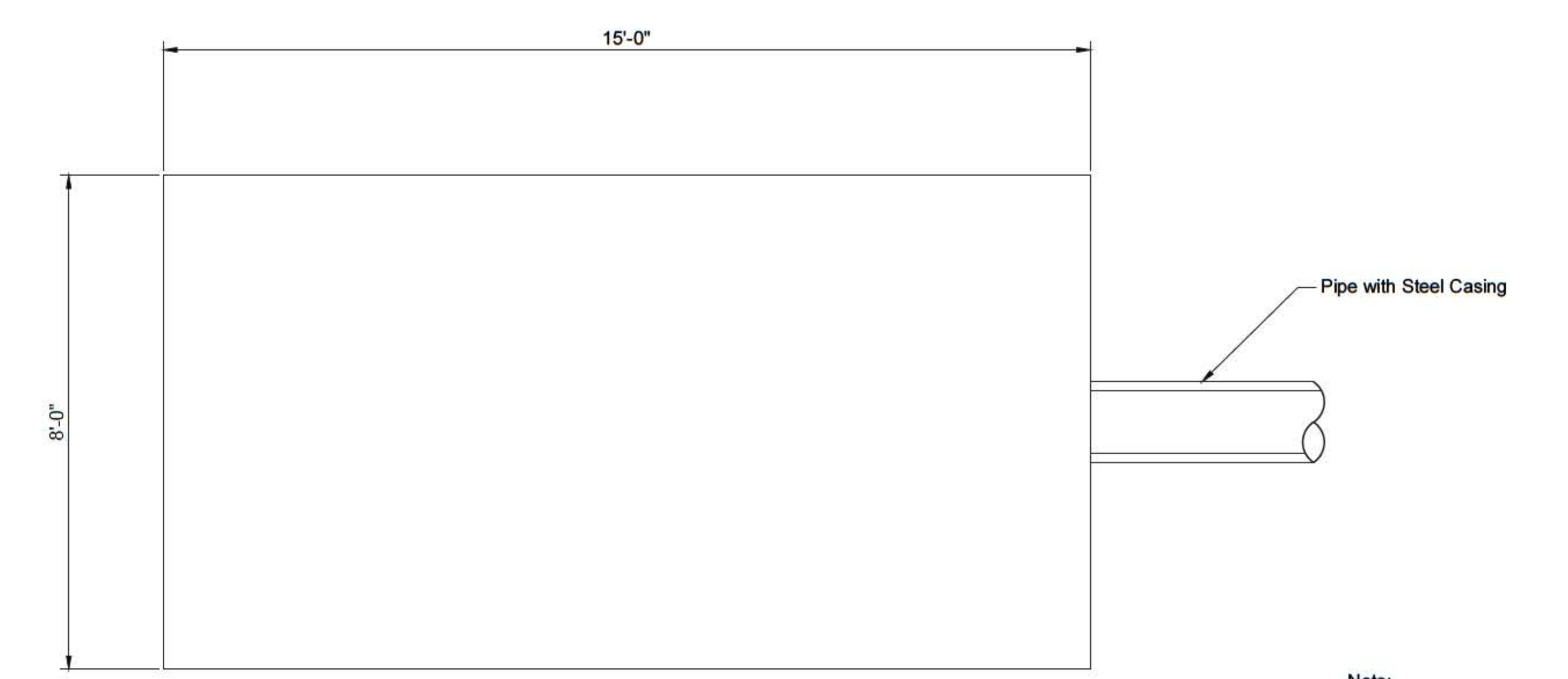
Anchor Placement Schedule	
Slope	Spacing
20%-30%	36' C.C.
35%-50%	24' C.C.
50% and Over	16' C.C.



CONCRETE ANCHOR FOR STORM SEWERS ON STEEP GRADES
N.T.S.

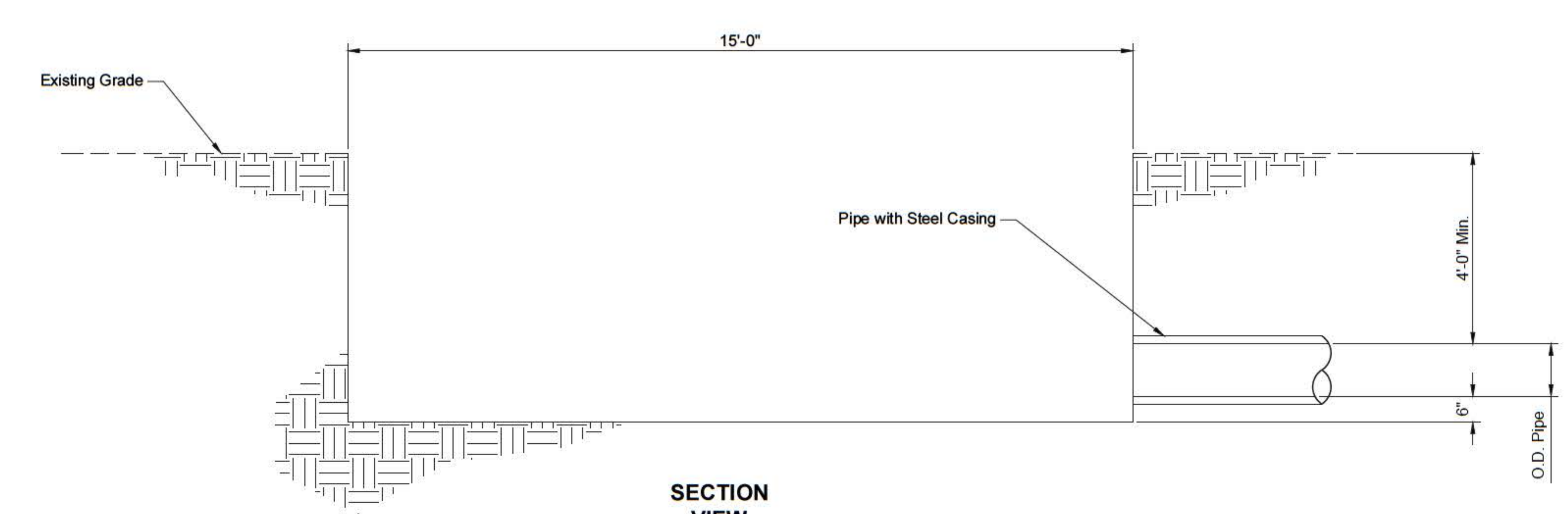


EXISTING MANHOLE AND EXISTING PUMP STATION CONNECTION DETAIL
N.T.S.



PLAN VIEW

Note:
Detail is typical for Bore Pit and Receiving Pit.



SECTION VIEW

BORE PIT
N.T.S.

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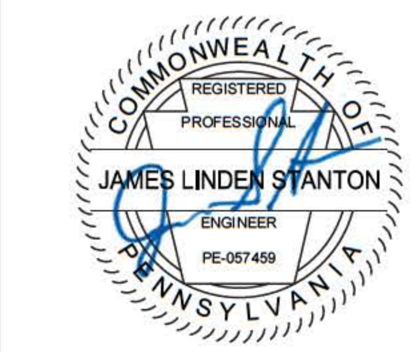
Phone: 724-439-8110
Email: info@mcmilleng.com



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SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
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NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH TOWNSHIP, FAYETTE COUNTY
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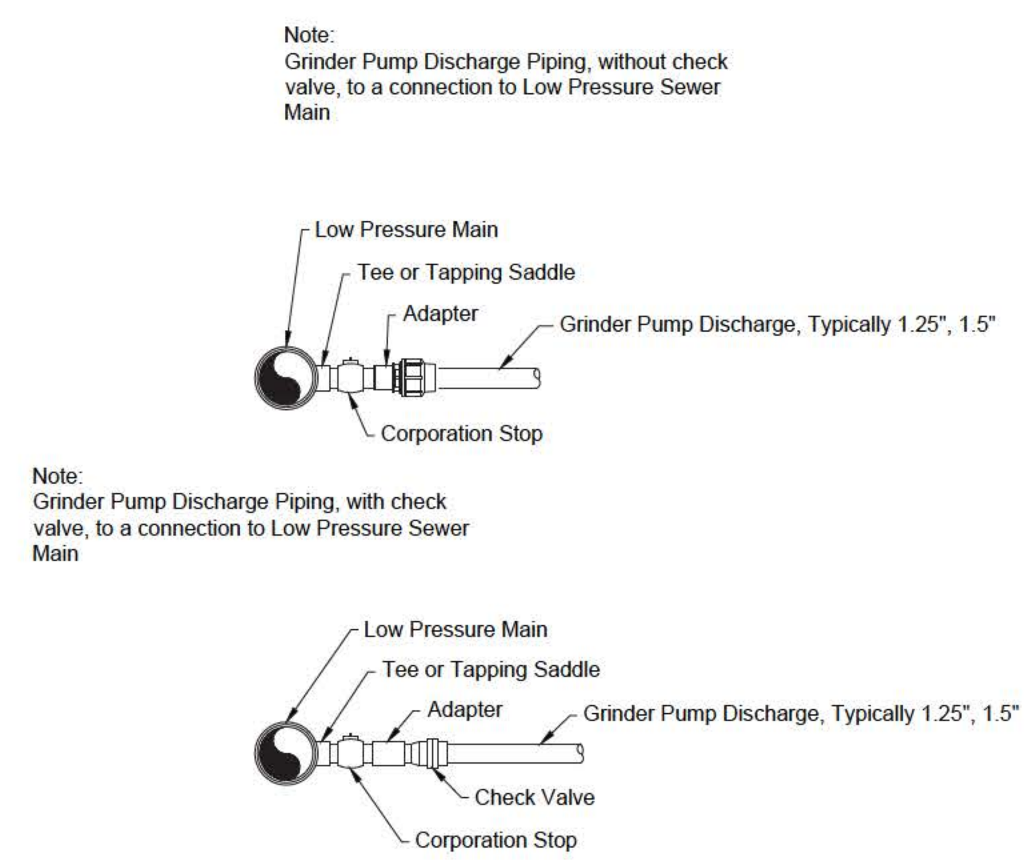
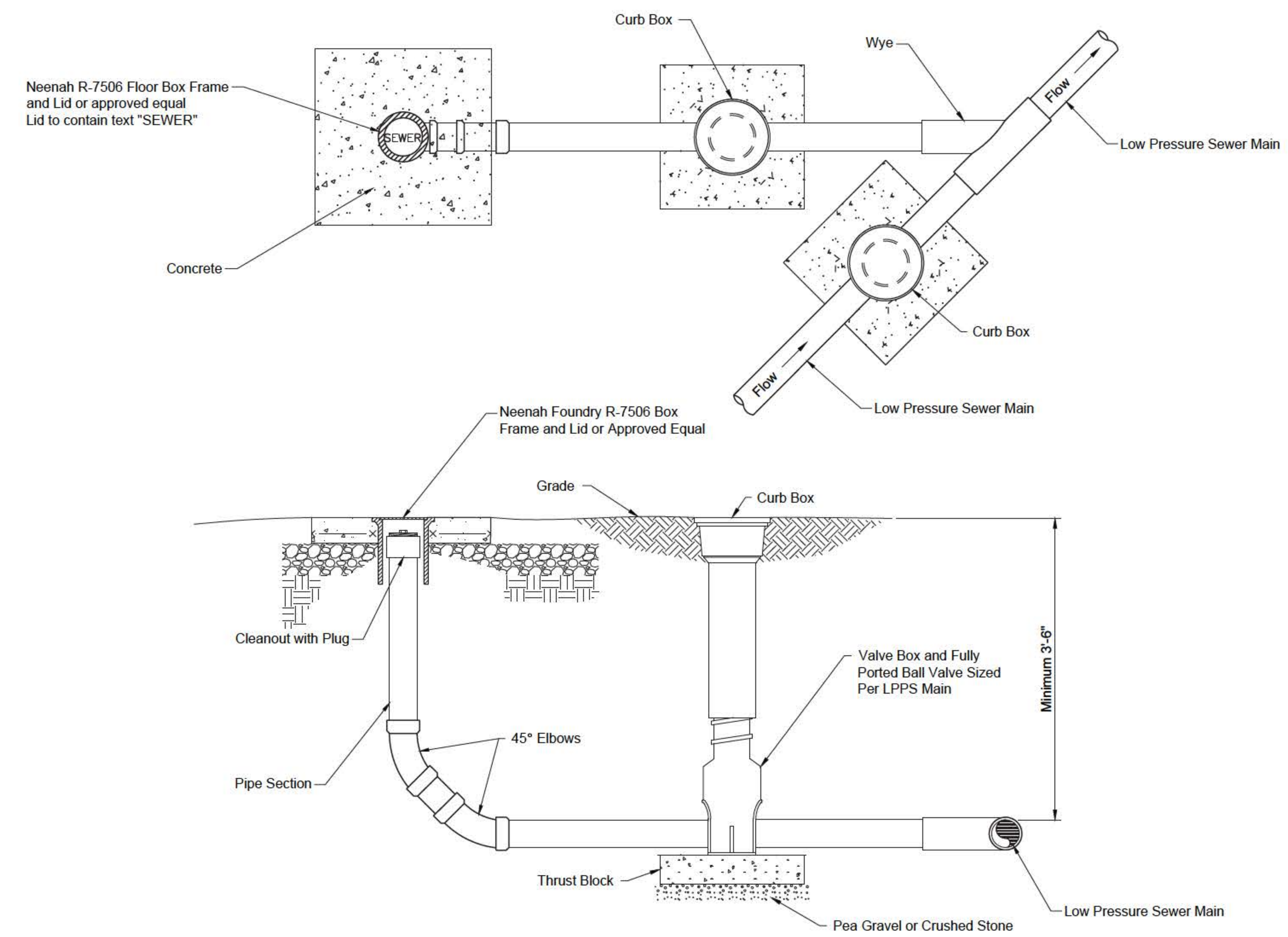
SCALE
N.T.S.

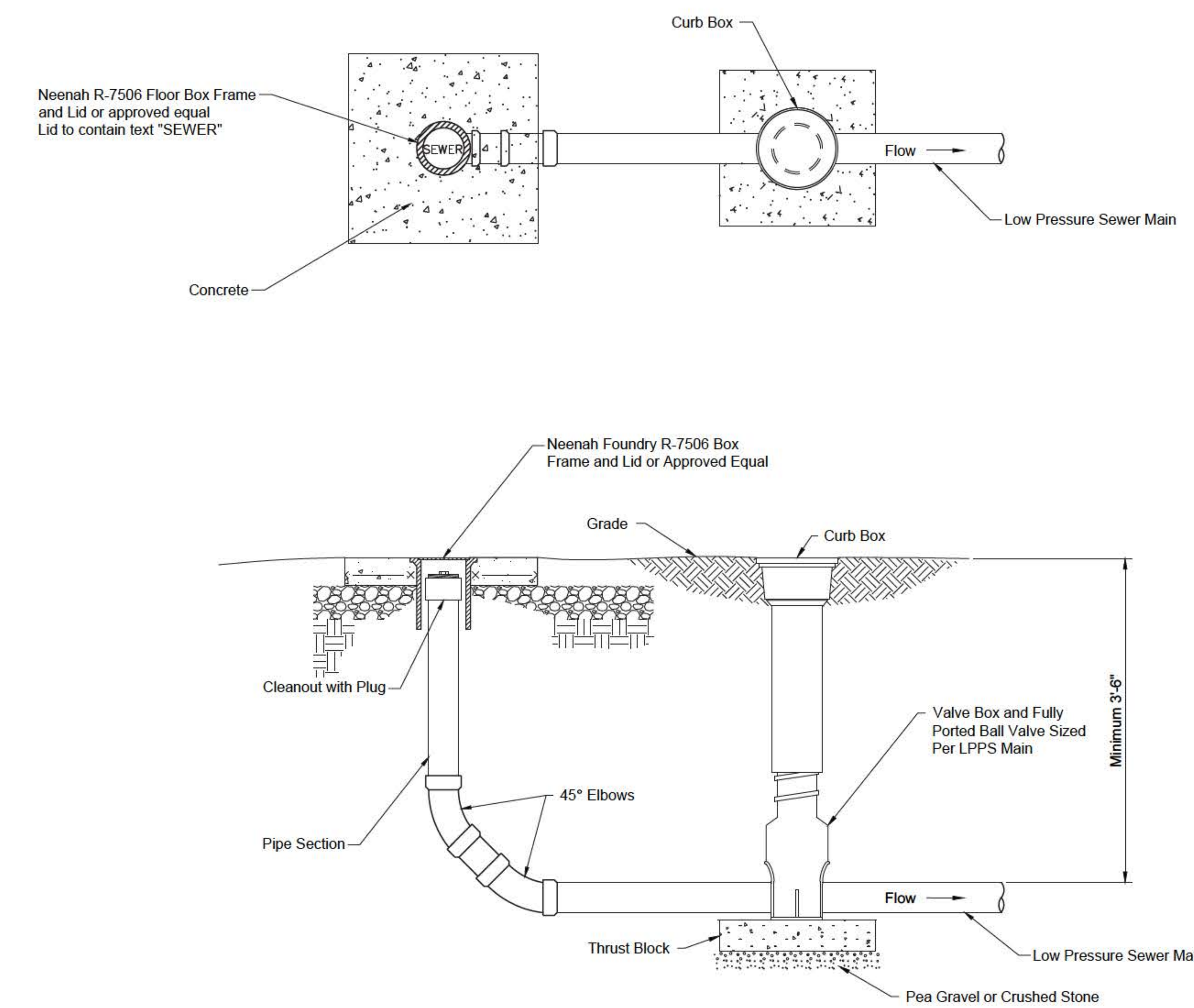
SHEET NUMBER
C113





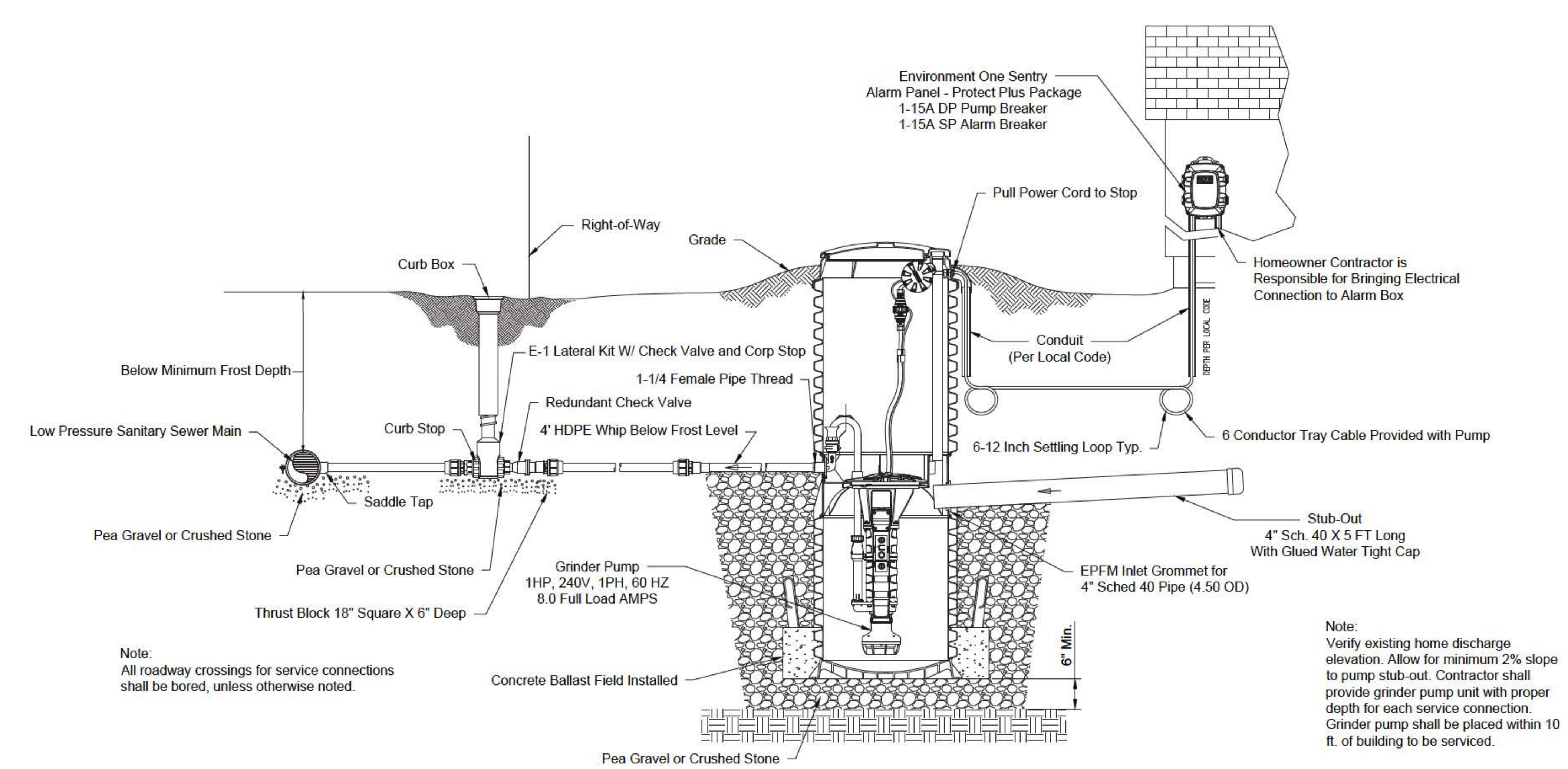
INLINE CLEANOUT CONNECTION FOR LOW PRESSURE SEWER SYSTEM

N.T.S.



TERMINAL CLEANOUT CONNECTION FOR LOW PRESSURE SEWER SYSTEM

N.T.S.



Note:
All roadway crossings for service connections shall be bored, unless otherwise noted.

Note:
Verify existing home discharge elevation. Allow for minimum 2% slope to pump stub-out. Contractor shall provide grinder pump unit with proper depth for each service connection. Grinder pump shall be placed within 10 ft. of building to be serviced.

GRINDER PUMP SERVICE CONNECTION

N.T.S.

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civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JAMES LINDEN STANTON PE-057459

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SANITARY SEWER EXTENSION
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CONTRACT 2019-02
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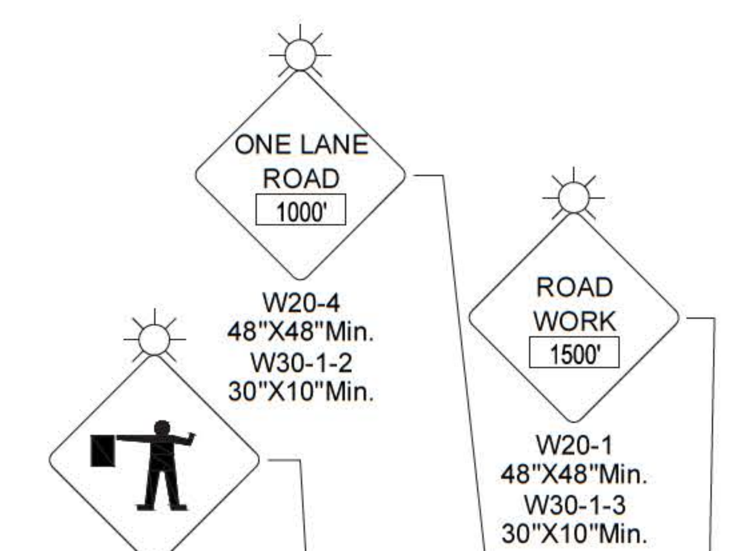
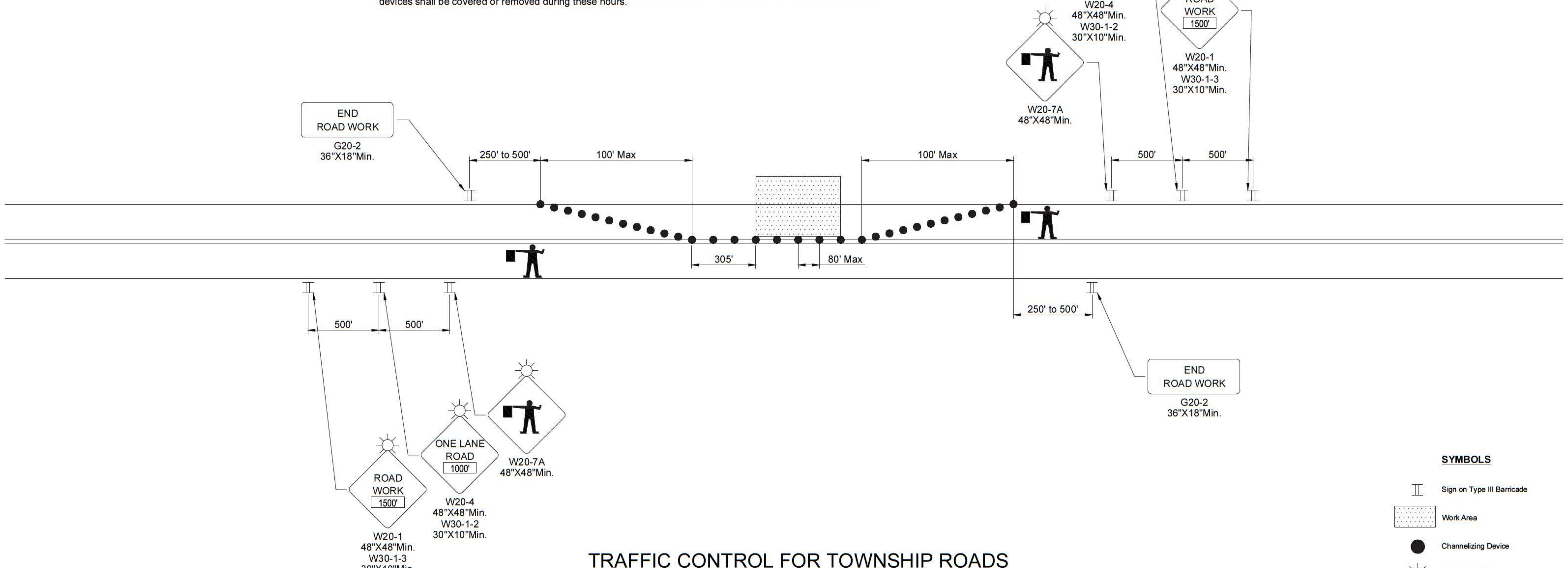
DRAWN JE 10/19/18	CHECKED JS 10/19/18
DESIGN JE 10/19/18	APPROVED TMJR 10/23/18

SCALE N.T.S.

SHEET NUMBER C114

NOTES:
1. All flaggers must be in communication with each other.
2. Each flagger should be clearly visible to traffic for a minimum distance of 360 feet.
3. At night, flagger stations shall be illuminated, except in emergencies.
4. The buffer space should be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.
5. The contractor shall also install a W20-1 (Road Work Sign) with a W30-1-6 (Ahead Plaque) on the approach of all side roads within the work area.
6. The contractor shall not perform work during inclement weather conditions. During these conditions, the road and shoulders shall be open to traffic and no equipment or material shall be left along the road. The contractor shall be responsible for coordinating with PADOT maintenance during winter months when snow plowing will occur.
7. The contractor shall not excavate more than 200 feet of trench at any time and no trench shall remain open over night.
8. The contractor shall not leave any material on or along the edge of the road over night.
9. All shoulders and paved driveways shall have temporary pavement installed immediately upon installation of the utility.
10. All temporary pavement shall be a hot mix asphalt. Cold patch shall not be used.
11. All travel lanes and shoulders shall remain open during non-working hours. The conflicting signage and channelizing devices shall be covered or removed during these hours.





TRAFFIC CONTROL FOR TOWNSHIP ROADS

SYMBOLS
- Sign on Type III Barricade
- Work Area
- Channelizing Device
- Type B Flasher
- Type B Flasher, White
- Flagger

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TITLE
TRAFFIC CONTROL DETAIL

BOOK NO.	JOB NO.
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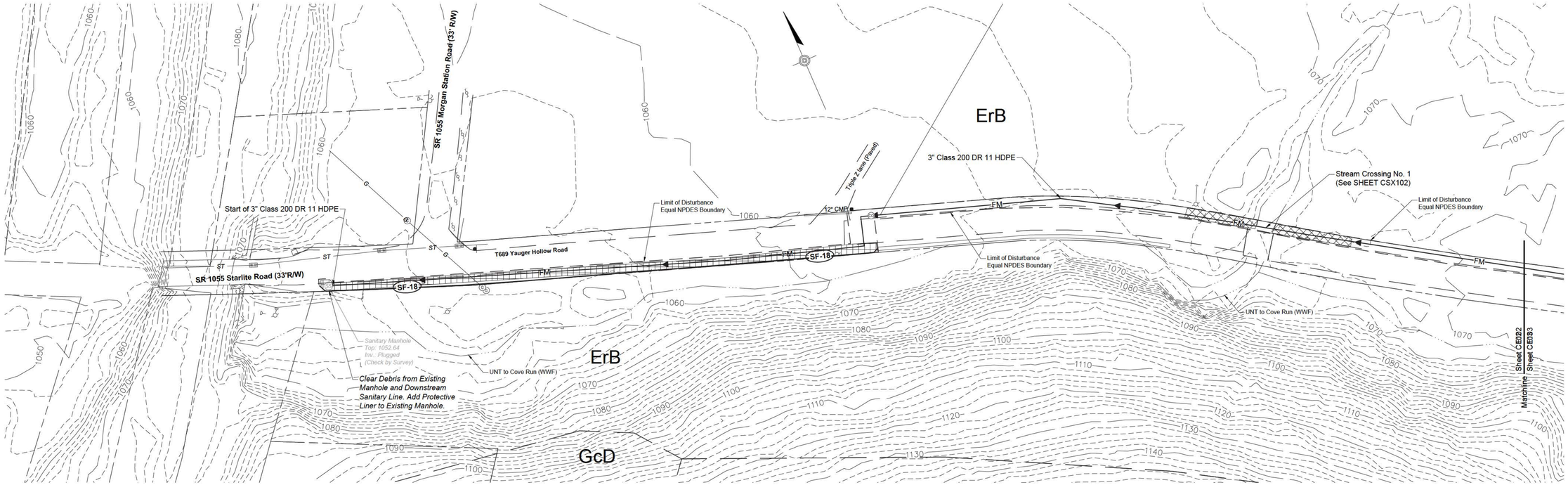
DRAWN: JE 10/19/18	CHECKED: JS 10/19/18
DESIGN: JE 10/19/18	APPROVED: TMJR 10/23/18
SCALE: N.T.S.	
SHEET NUMBER: C115	



Erosion Control Notes:

1. The Erosion Control measures shown on this plan and detailed within this set is the minimum amount of Erosion Control measures required. It is the contractor's responsibility to properly maintain the Erosion Control facilities, as per plans and details. Additionally, it is the contractor's responsibility to employ best management practices to prevent sedimentation from leaving the disturbed site.
2. Mud and sediments tracked onto the paved roadways are to be removed and returned to the site immediately.
3. Erosion Control Mat is to be installed on all earth disturbance within the "hatched" areas of the plan drawings that are to be revegetated.
4. U.S. Fish and Wildlife Service Avoidance Measure: Conduct any tree cutting, tree inundation (flooding), and prescribed burning between November 15 and March 31.

Stormwater Outflow
Discharge from the construction area on this plan ultimately discharges to a UNT of Cove Run (WWF)

Total Project Area = 2.9 ac.
Disturbed Area = 2.9 ac.
Impervious Area Added = 0.0 ac.

Developer / Applicant:
North Union Township Municipal Services Authority
120 Commonwealth Drive, Suite 101
Lemont Furnace, PA 15456

Notes:

1. Declaration is made to original purchaser of the plan. It is not transferable to additional institutions or subsequent owners.
2. This drawing is based upon tax mapping, Penn DOT mapping, LiDAR imaging and deeds of record. This Plan is not based upon an actual field survey and does not constitute a survey of any kind for the property shown hereon.
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40' 20' 0' 40' 80'
Bar Scale

PENNSYLVANIA ONE CALL SYSTEM, INC.
Call Us Before You Dig!
1-800-242-1776
PA. Act 287 (1974) Requires 3 Working Days Notice
Design Serial Number: 20172830925

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LEGEND

- EXISTING STRUCTURE
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- WFT-12 — 12" WEIGHTED FILTER TUBE
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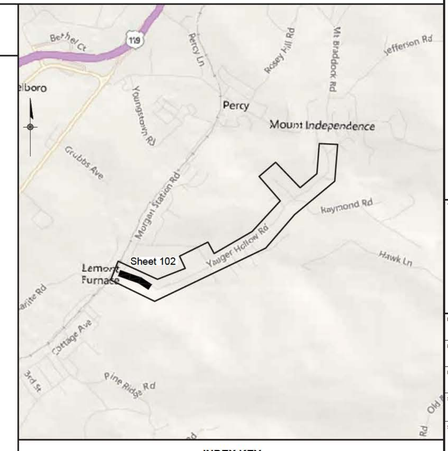


INDEX KEY
SCALE: 1"=2,000'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

REVISIONS			
NO.	DESCRIPTION	DATE	BY
.	.	.	.

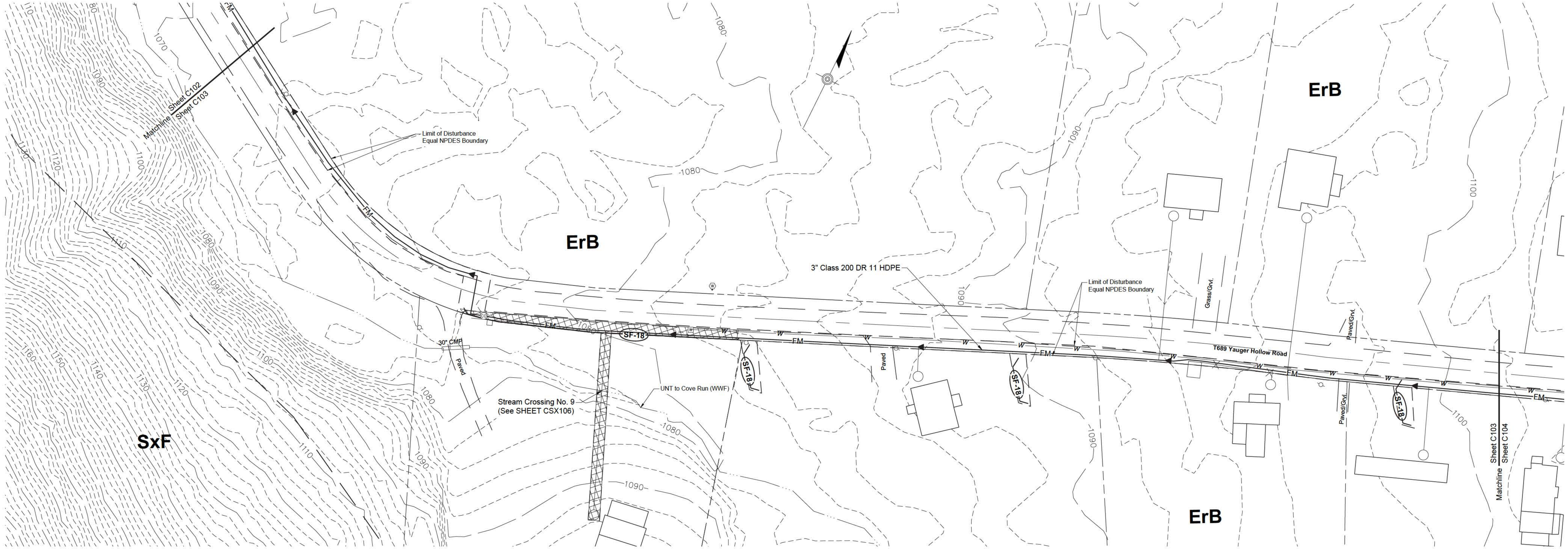
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-01
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL PLAN

BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN	CHECKED	APPROVED
JE 10/19/18	JS 10/19/18	TMJR 10/23/18
DESIGN JE 10/19/18		

SCALE: 1" = 40'
SHEET NUMBER: **CE102**



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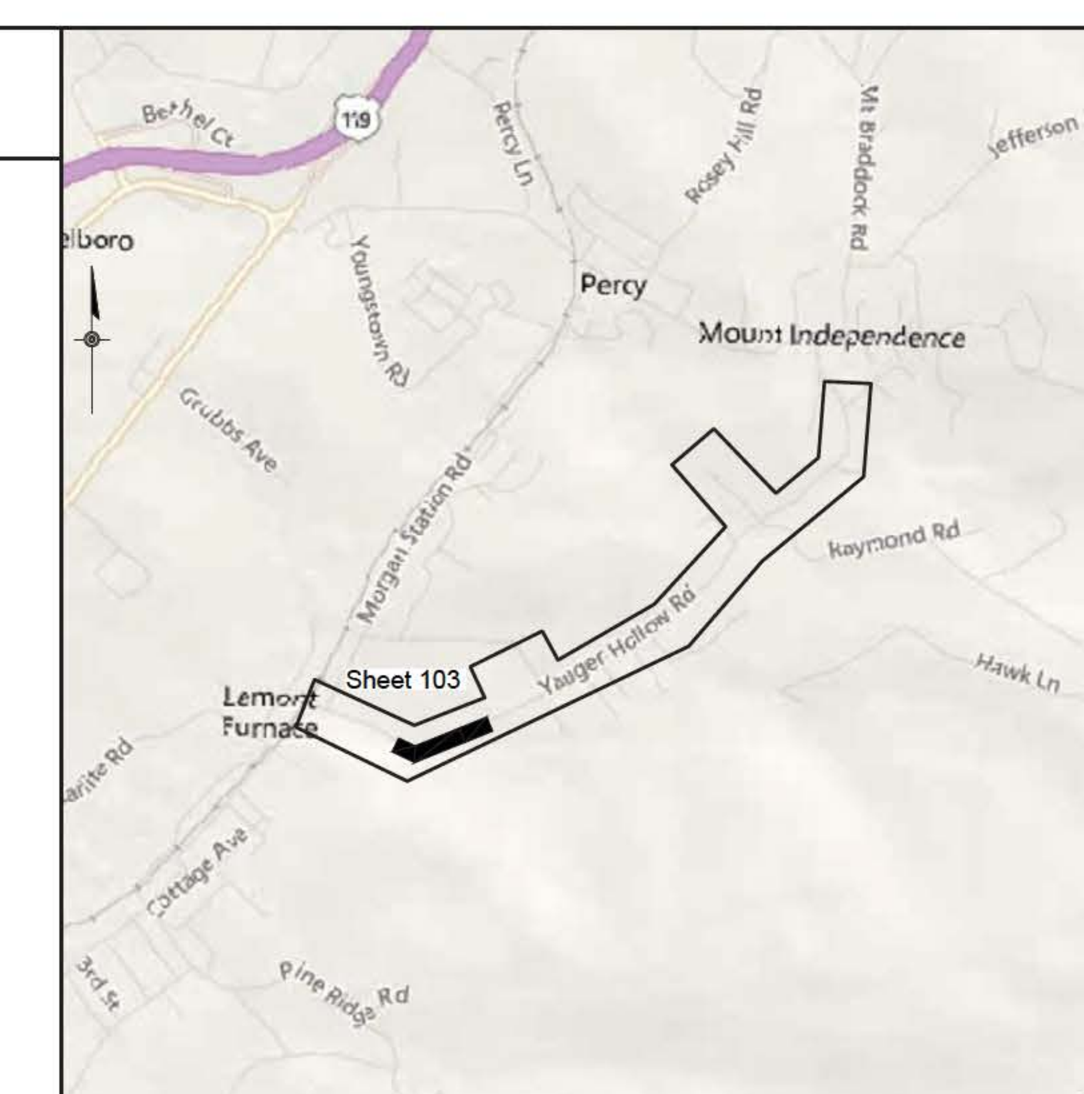

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PE-057459

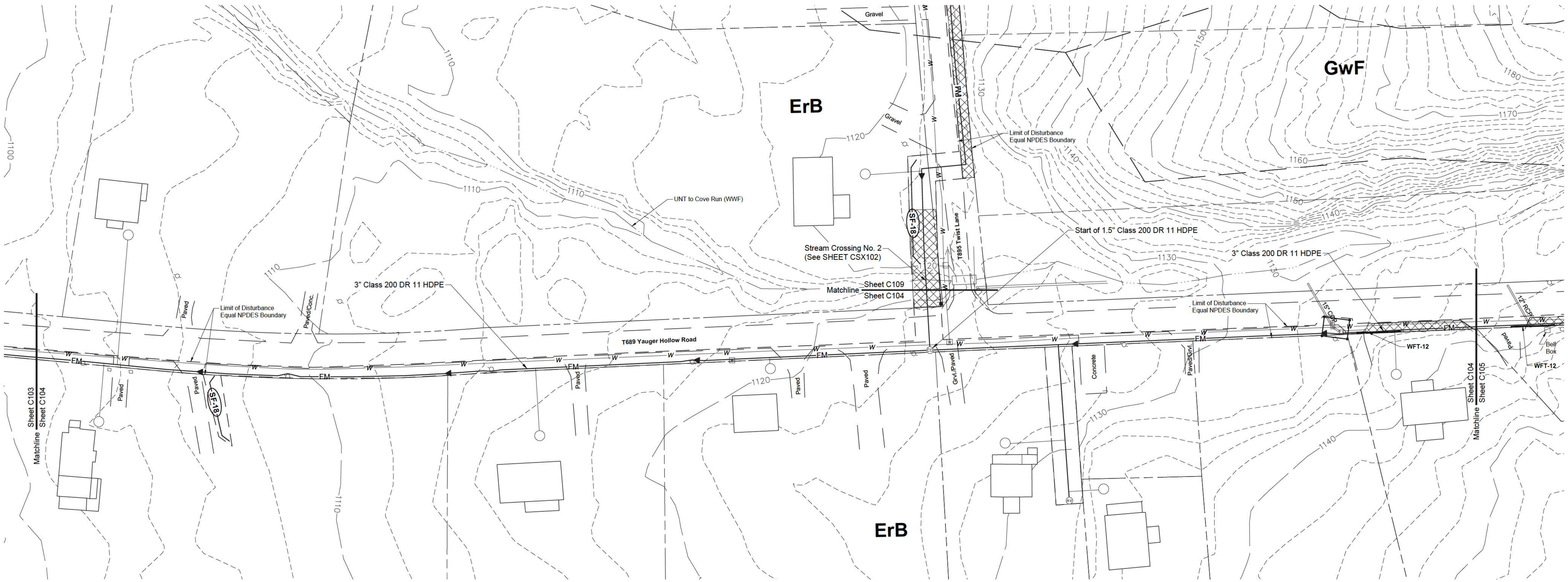
REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL PLAN

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18
SCALE 1" = 40'			
SHEET NUMBER CE103			



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LEGEND

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CO	PROPOSED CLEANOUT
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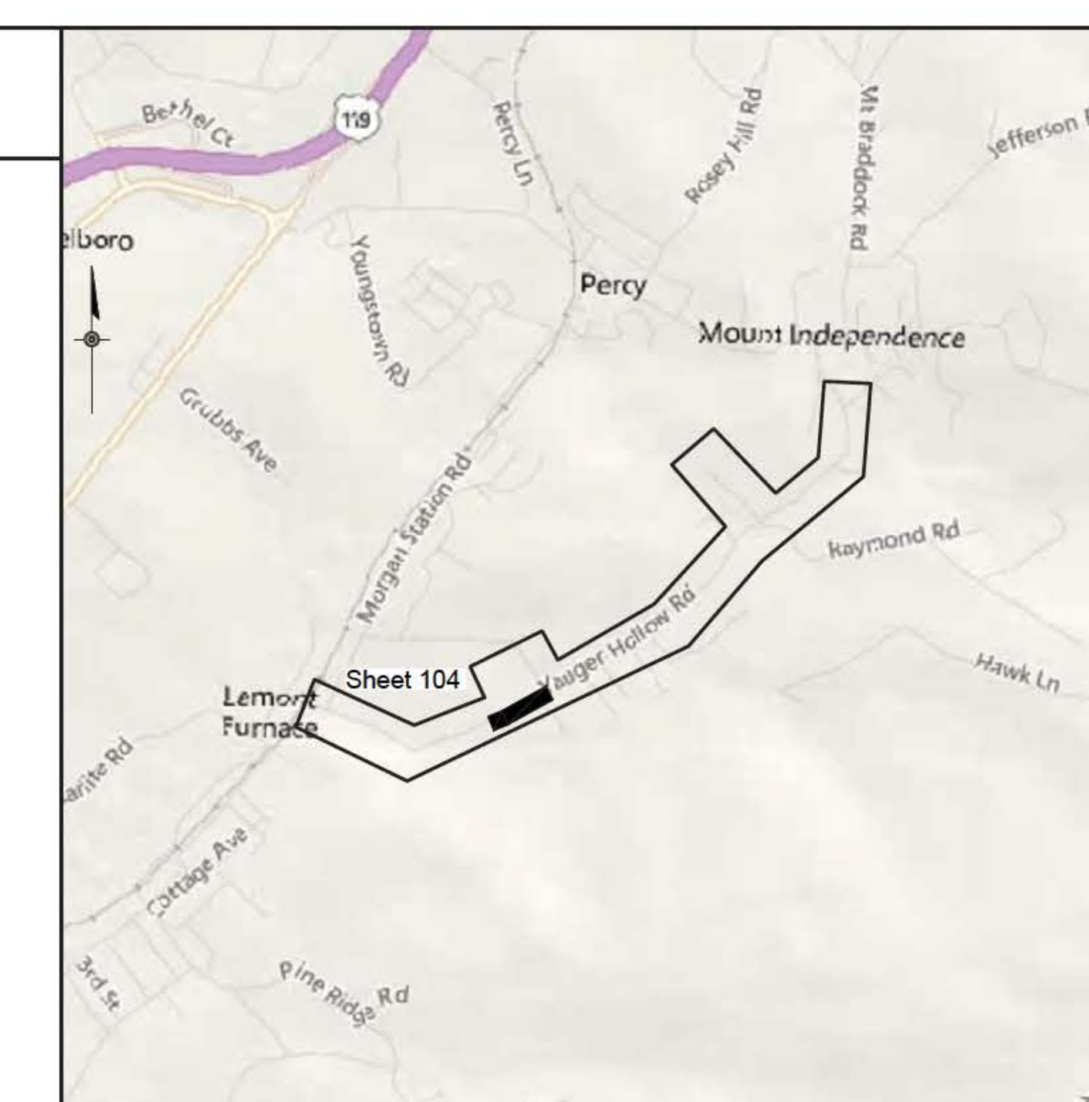

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PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

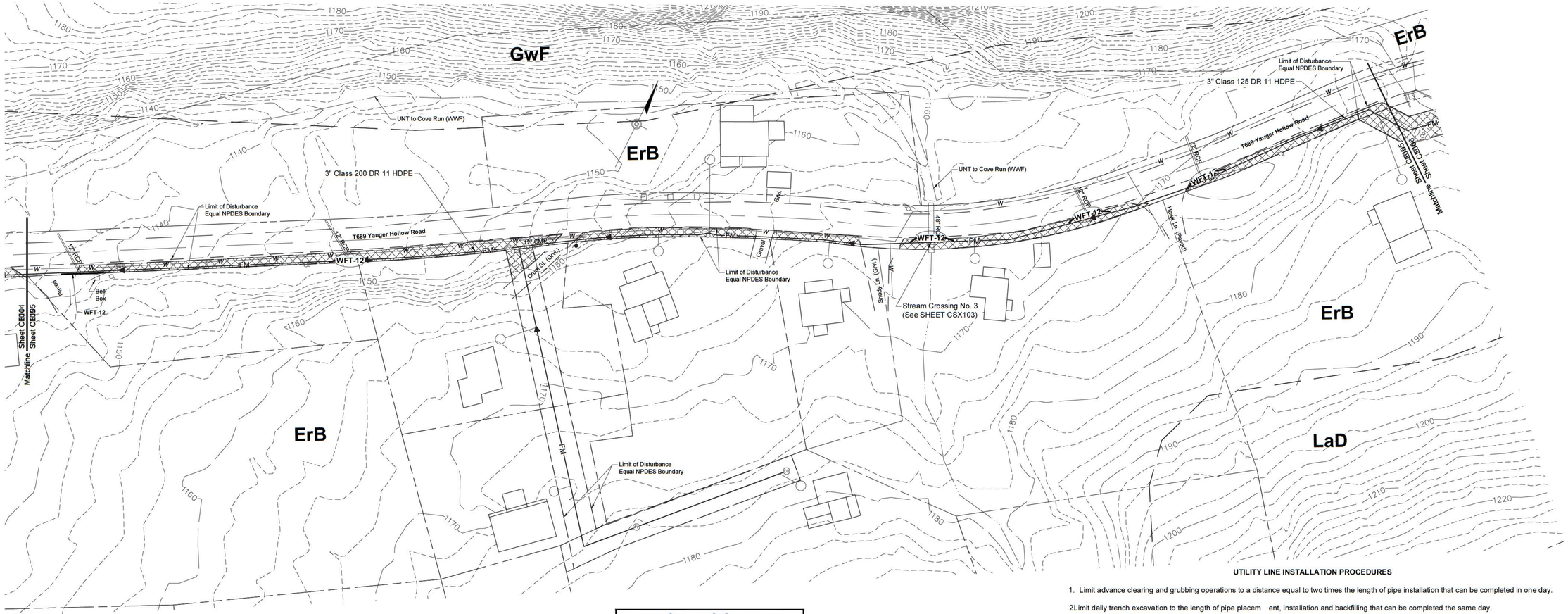
TITLE
EROSION CONTROL PLAN

BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE
1" = 40'

SHEET NUMBER
CE104



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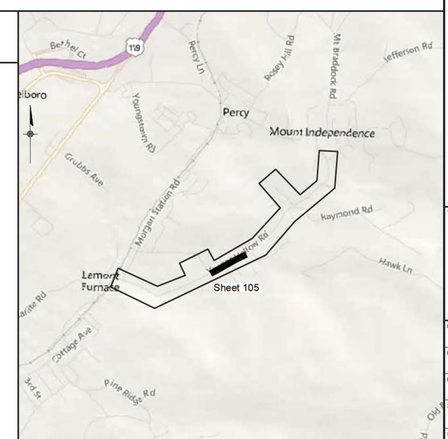

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	Sewer Line Adjustment	10/31/19	JE

FILE: D:\2017\2017-68\MapCove Run\2017-68 Construction Plans-CE.dwg

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
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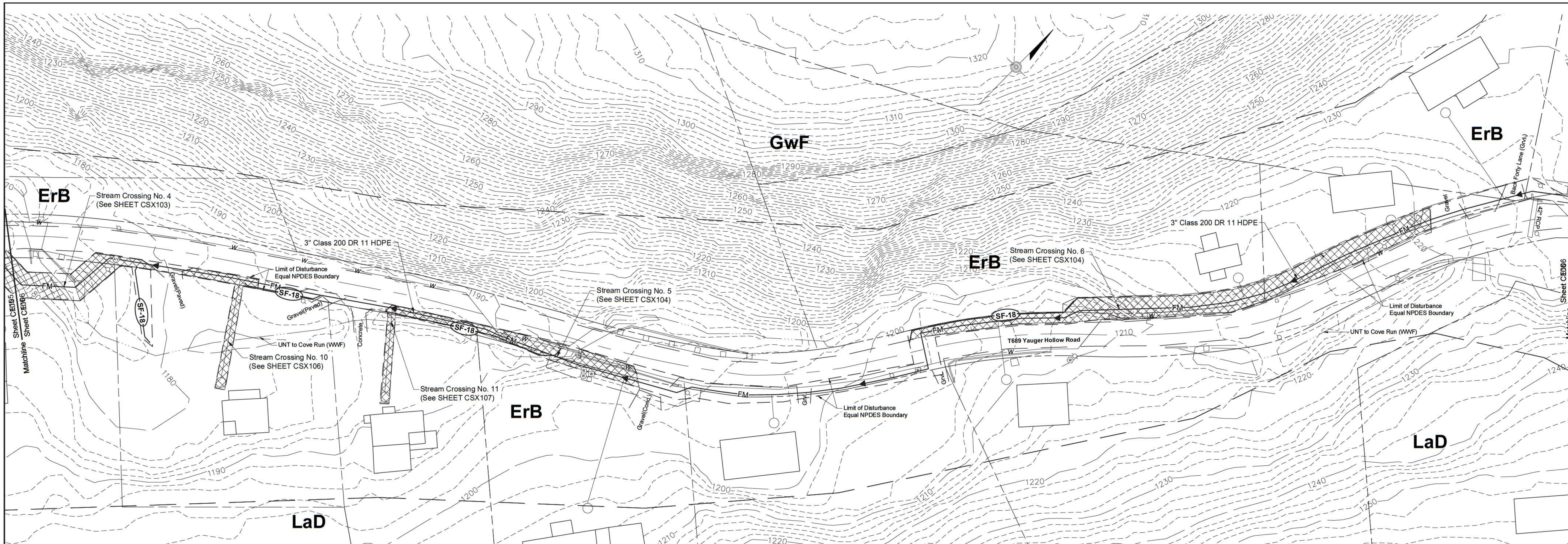

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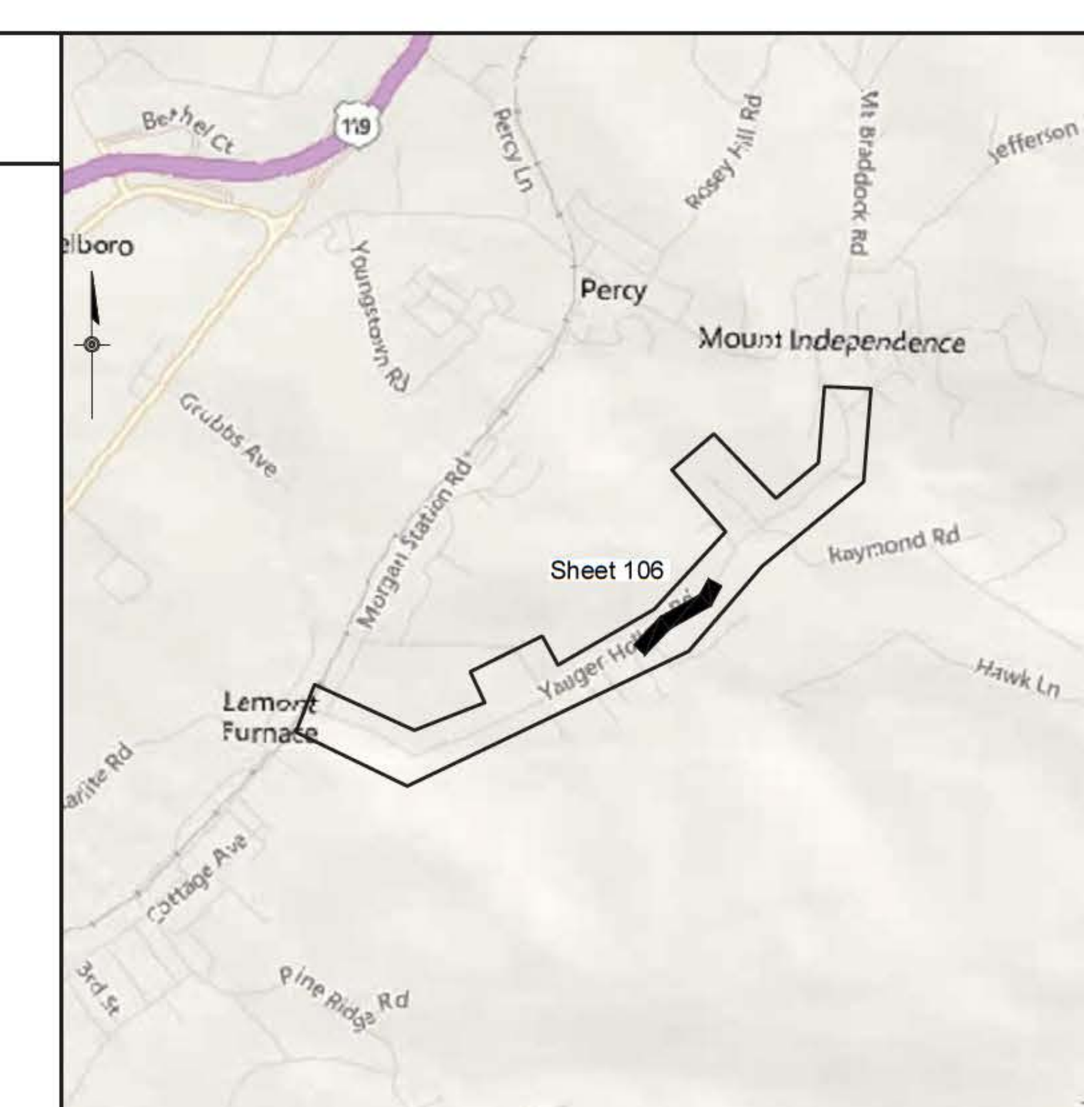

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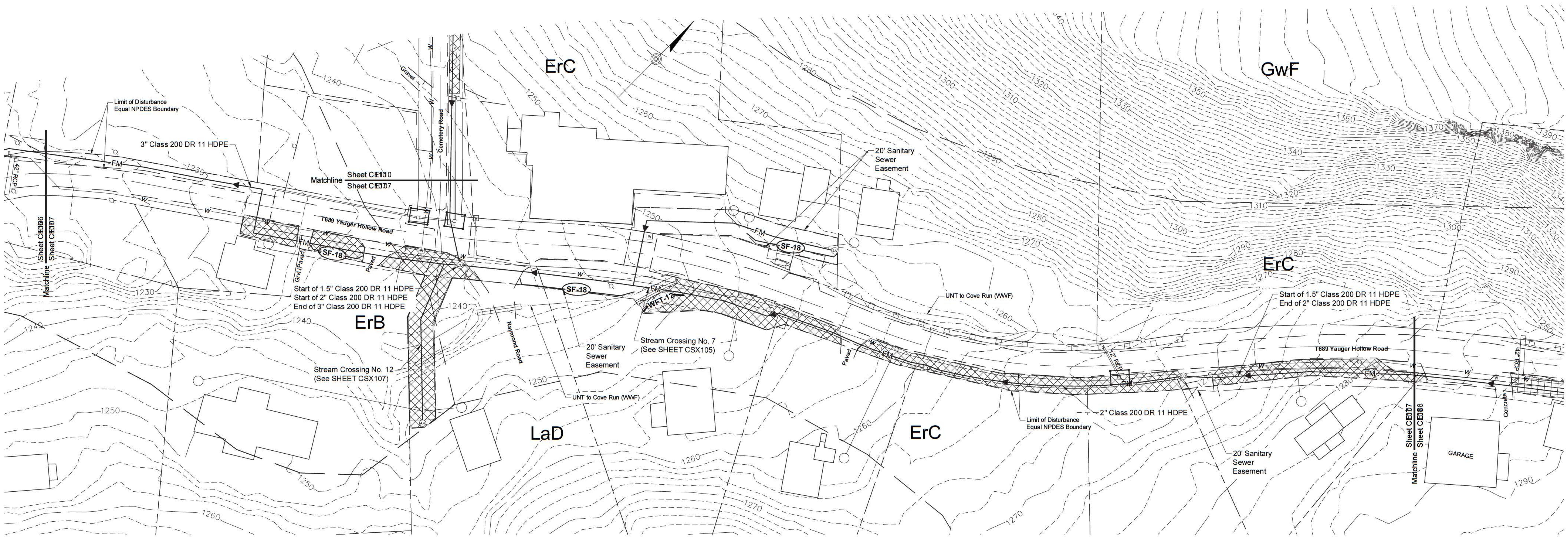
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL PLAN

BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE 1" = 40'

SHEET NUMBER
CE106



UTILITY LINE INSTALLATION PROCEDURES

1. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.

2. Limit daily trench excavation to the length of pipe placement, installation and backfilling that can be completed the same day.

3Trenching shall be done in accordance with layout shown on the site layout plan.

4Water which accumulates in the open trench will be complet ely removed by pumping before pipe placement and/or backfilling begins.

5On the day following pipe placement and trench backfilling , the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measure/facilities will be installed. Seeding and mulching of all utility line installation disturbed areas will be done at the end of each week as specified in the Final Site Preparation for Turfgrass Establishment.

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2. Mud and sediments tracked onto the paved roadways are to be removed and returned to the site immediately.

3. Erosion Control Mat is to be installed on all earth disturbance within the "hatched" areas of the plan drawings that are to be revegetated.

4. U.S. Fish and Wildlife Service Avoidance Measure: Conduct any tree cutting, tree inundation (flooding), and prescribed burning between November 15 and March 31.

Stormwater Outflow
Discharge from the construction area on this plan ultimately discharges to a UNT of Cove Run (WWF)

Total Project Area = 2.9 ac.
Disturbed Area = 2.9 ac.
Impervious Area Added = 0.0 ac.

Developer / Applicant:
North Union Township Municipal Services Authority
120 Commonwealth Drive, Suite 101
Lemont Furnace, PA 15456

Notes:

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LEGEND

	EXISTING STRUCTURE
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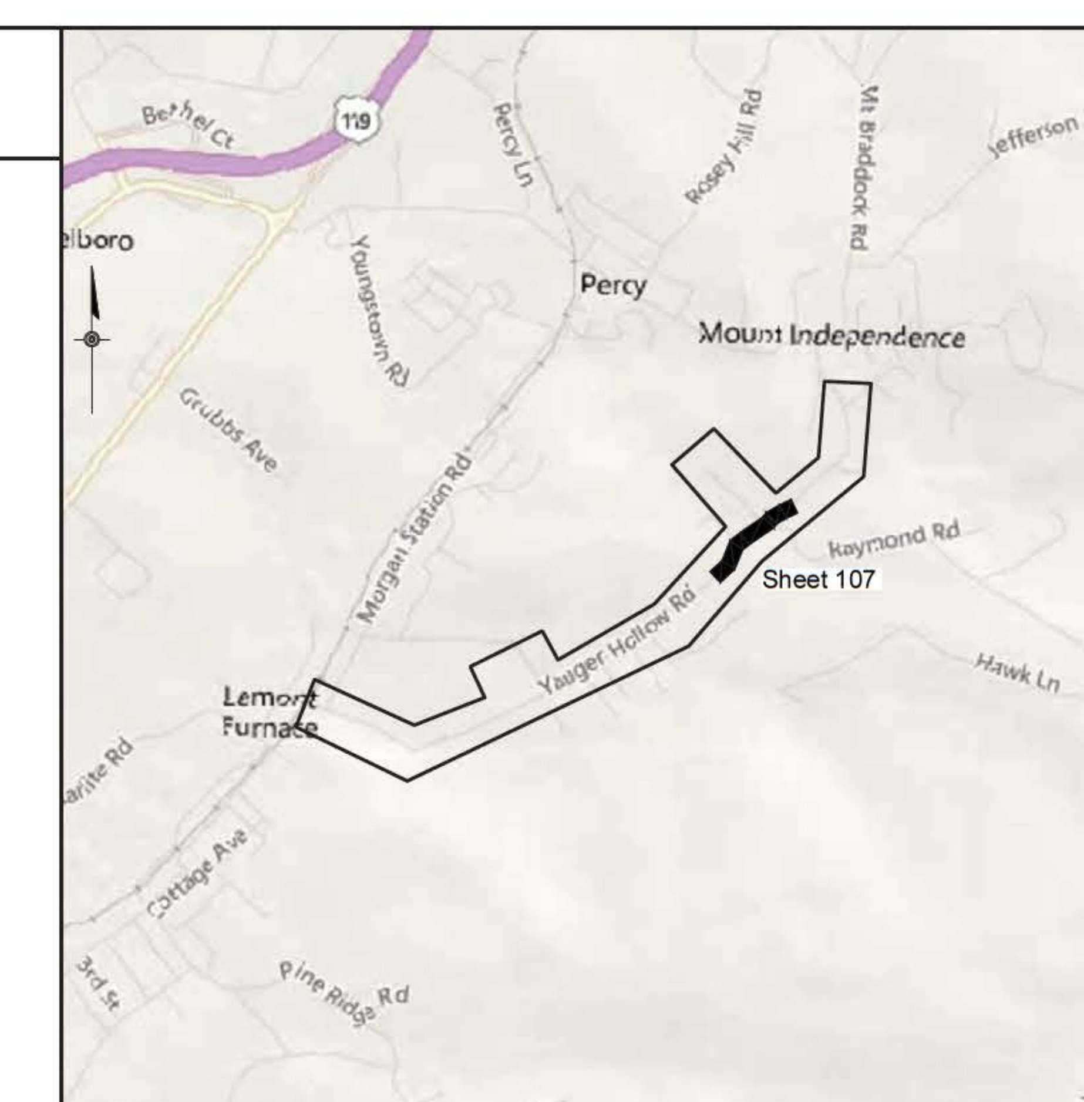
	PROPOSED CLEANOUT
	PROPOSED COMBINATION AIR VALVE
	LEGAL RIGHT OF WAY
	EDGE OF PAVEMENT
	SOIL BOUNDARY
	LIMIT OF DISTURBANCE/ NPDES BOUNDARY
SF-18	18" SILT FENCE
	INLET PROTECTION
ErB	SOIL DESCRIPTION
WFT-12	12" WEIGHTED FILTER TUBE
	EROSION CONTROL MAT

*Final location to be field determined



INDEX KEY
SCALE: 1"=2,000'

PENNSYLVANIA ONE CALL SYSTEM, INC.
Call Us Before You Dig!
1-800-242-1776
PA. Act 287 (1974) Requires 3 Working Days Notice
Design Serial Number: 20172830925

NOTE:
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Bar Scale

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civil engineers • land surveyors
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Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JAMES LINDEN STANTON PE-057459

REVISIONS			
NO.	DESCRIPTION	DATE	BY

FILE O:\2017\2017-68\Site\Cove Run\2017-68-Construction Plans-CR.dwg

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
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TITLE
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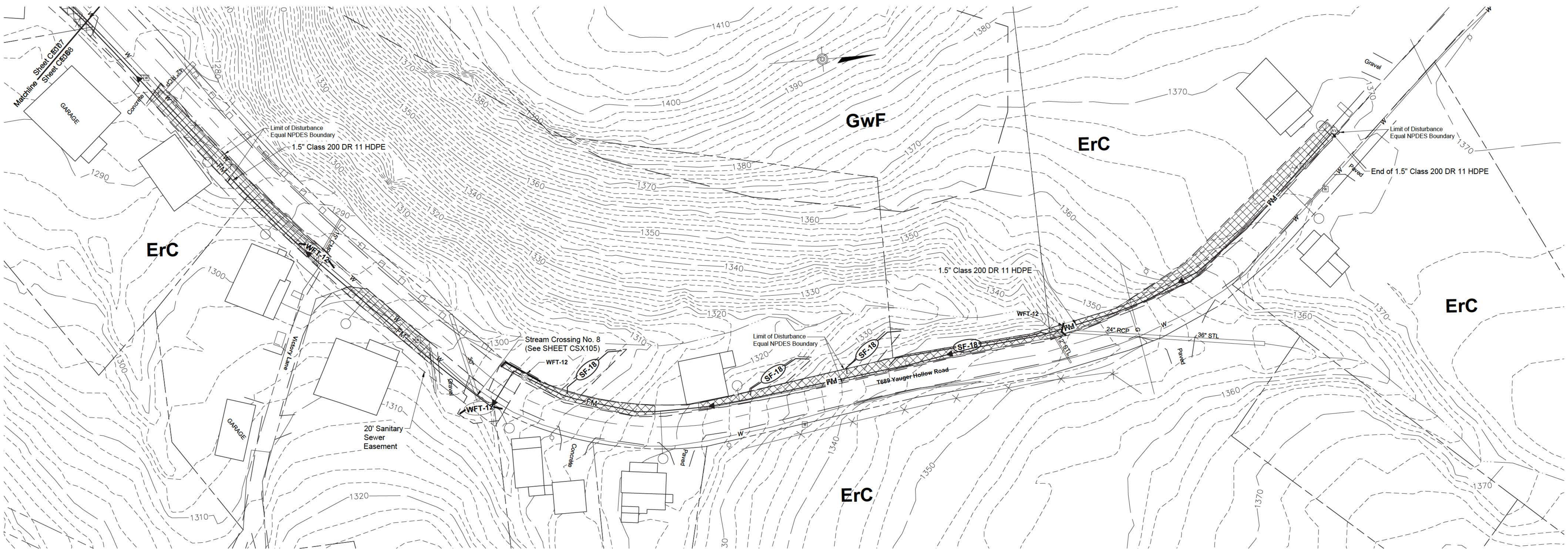
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18
SCALE 1" = 40'			
SHEET NUMBER **CE107**			



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Bar Scale

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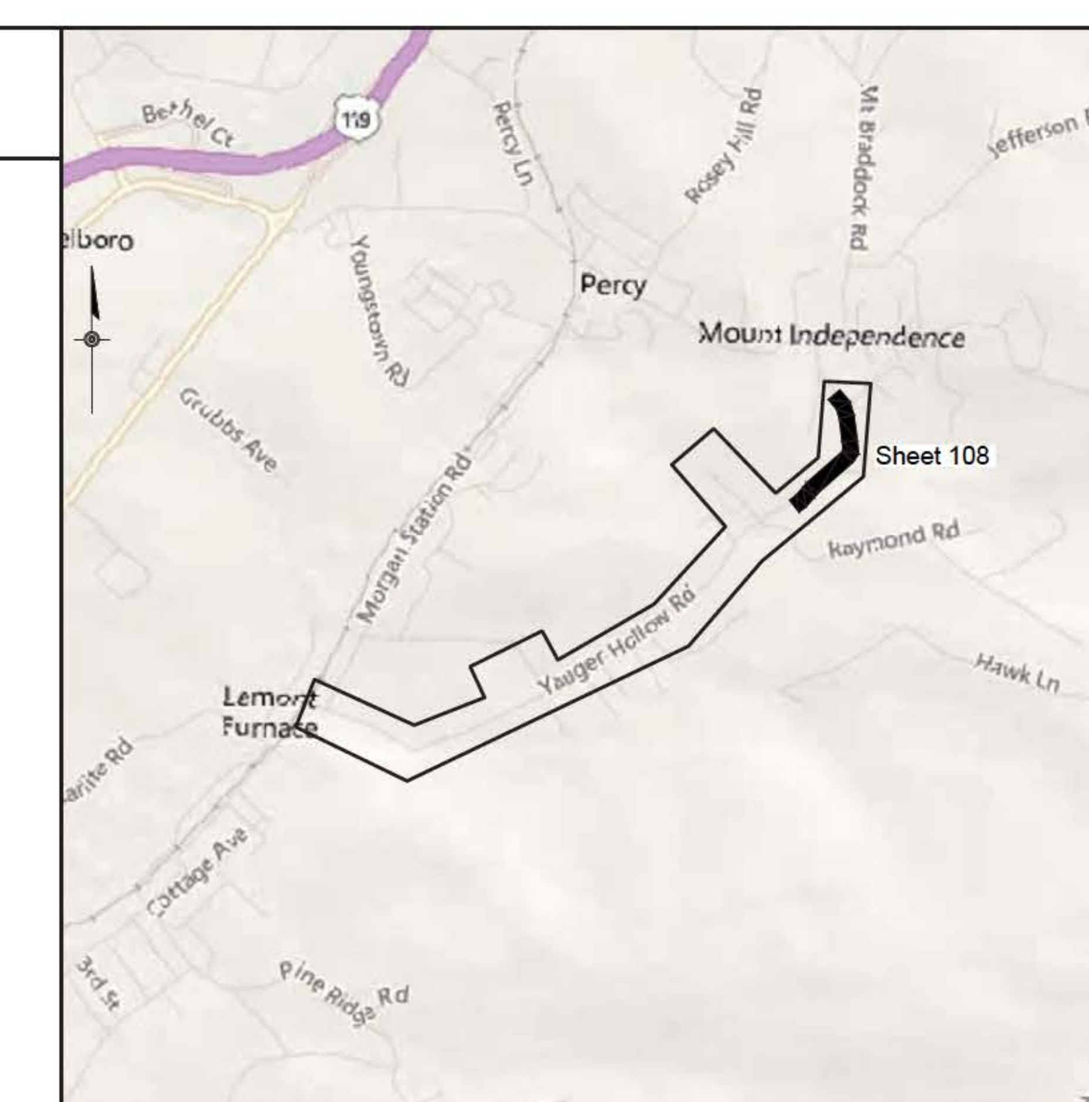

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COMMONWEALTH OF PENNSYLVANIA
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JAMES LINDEN STANTON
PE-057458

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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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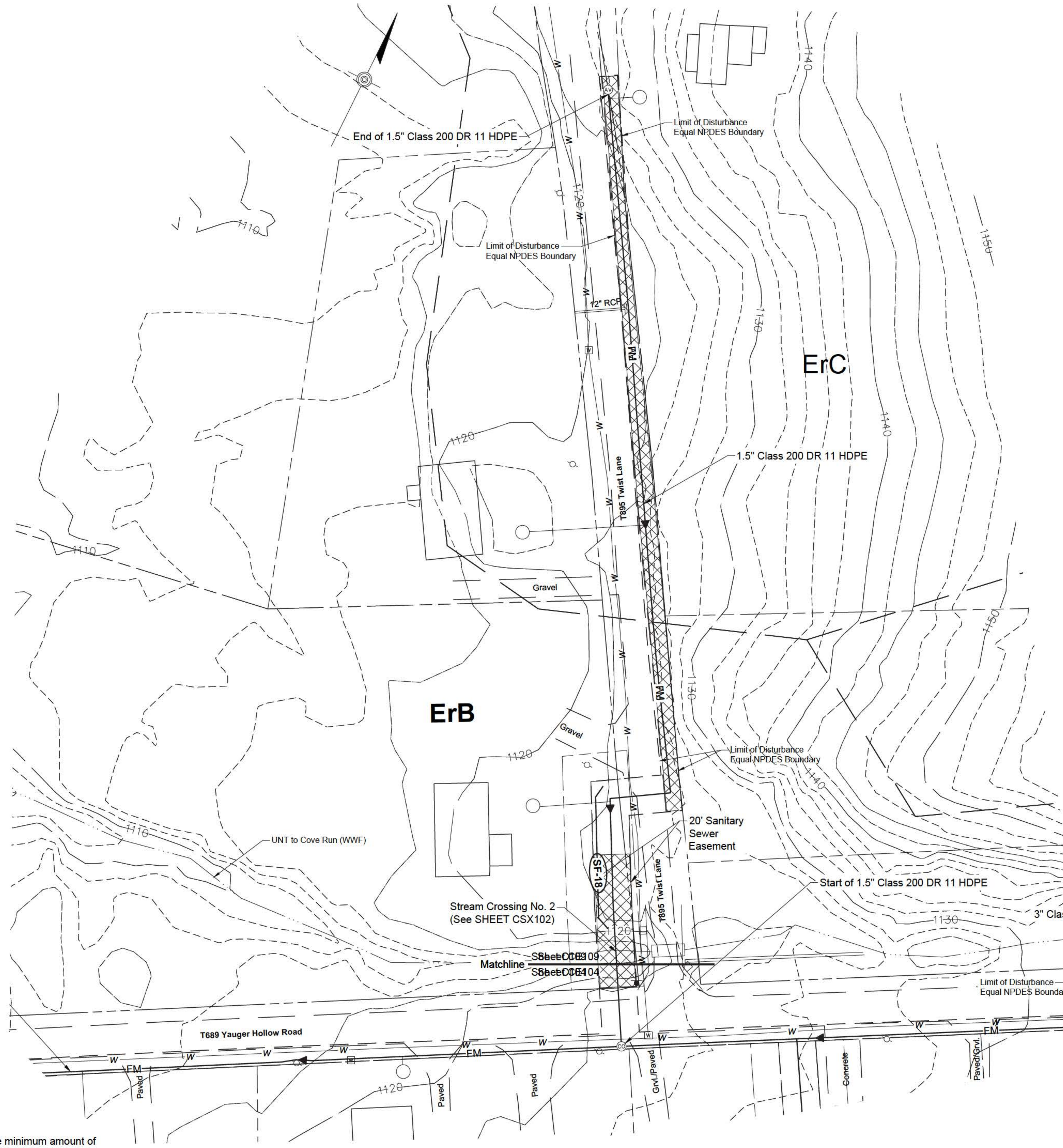
SHEET NUMBER
CE108



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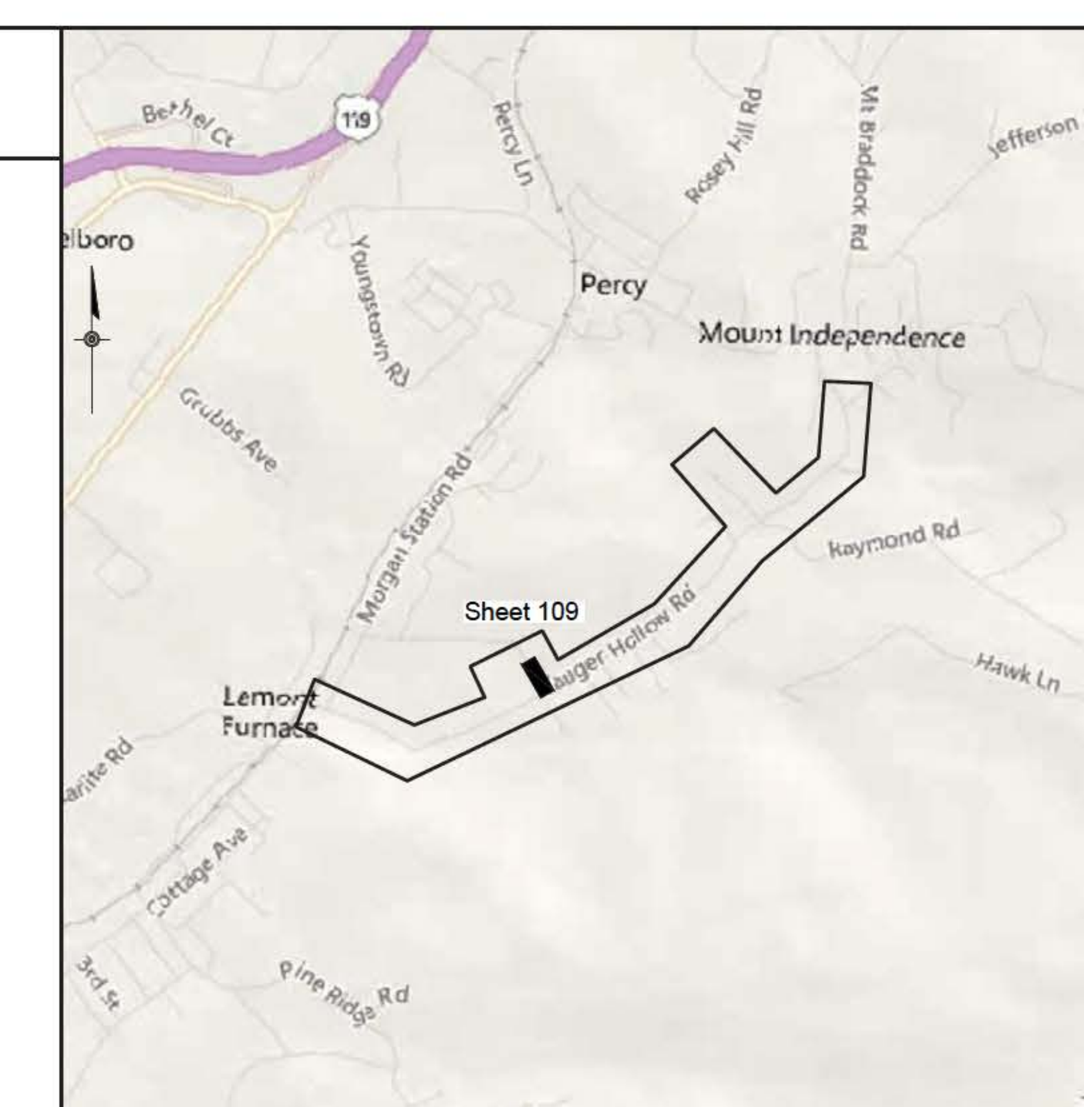

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JAMES LINDEN STANTON PE-057459

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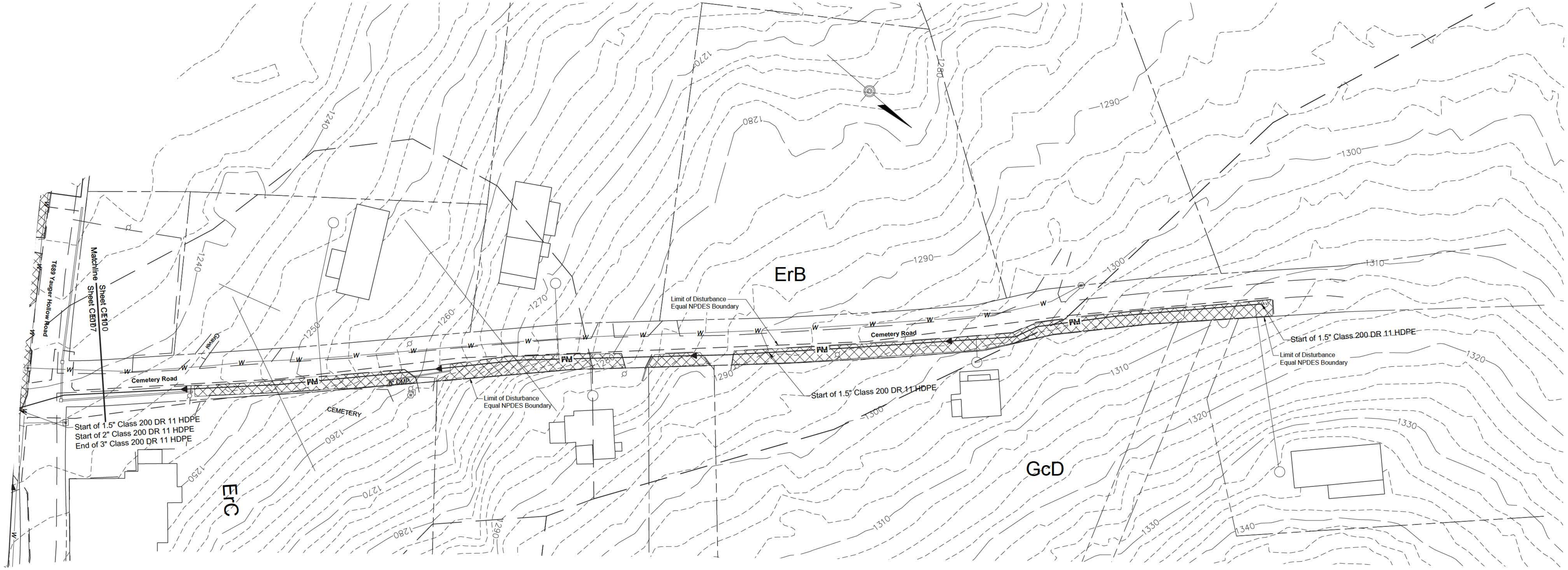

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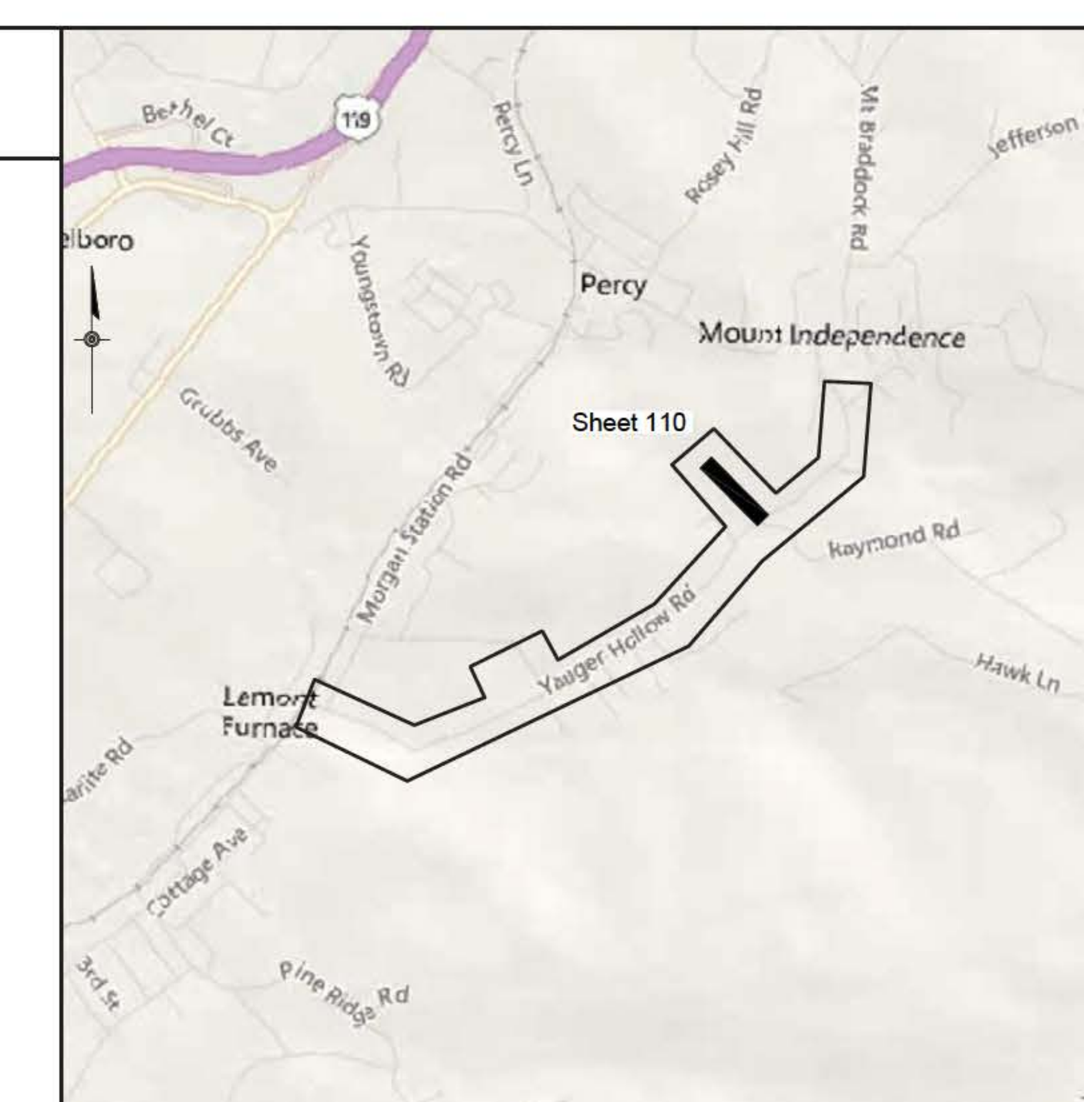

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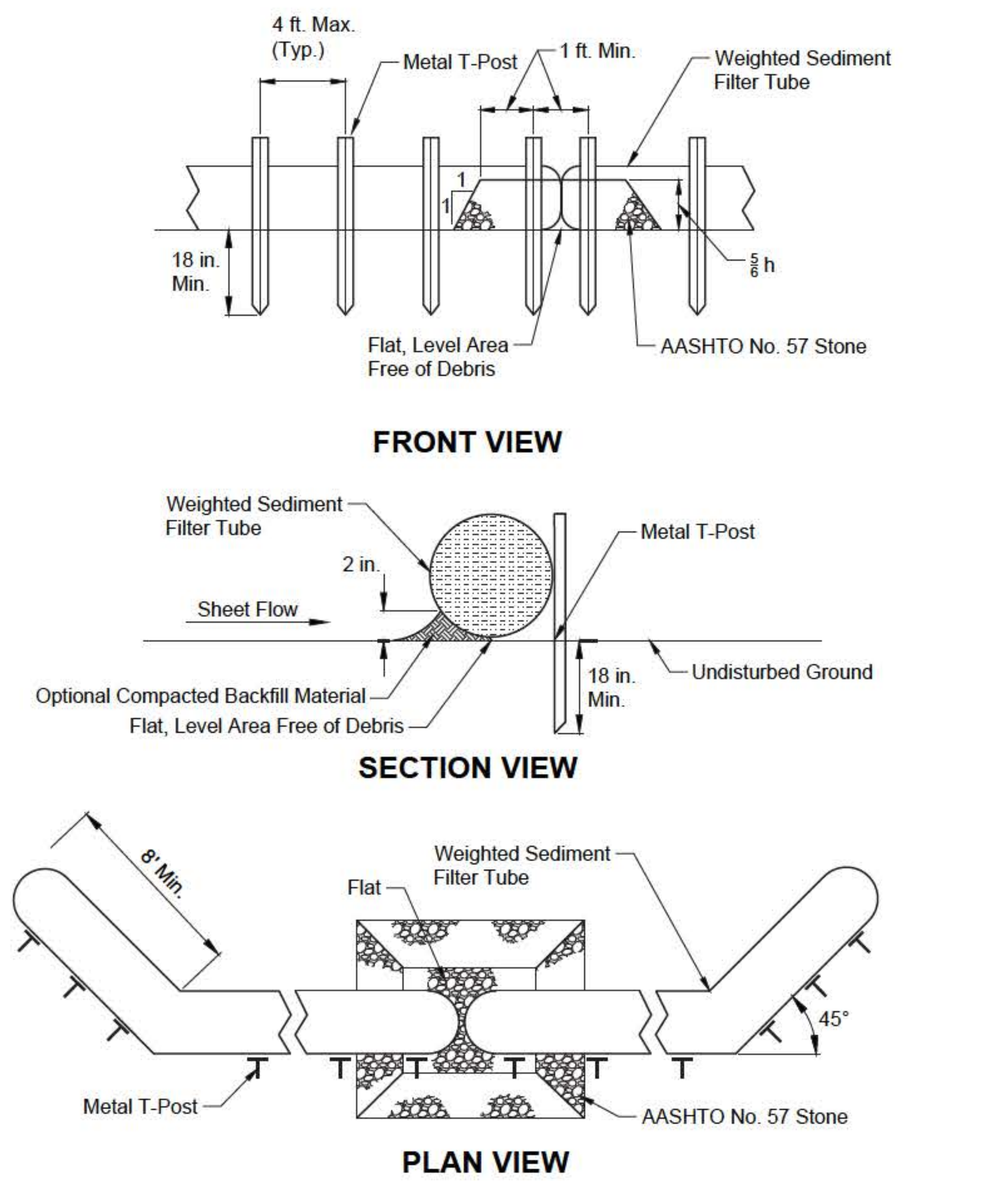
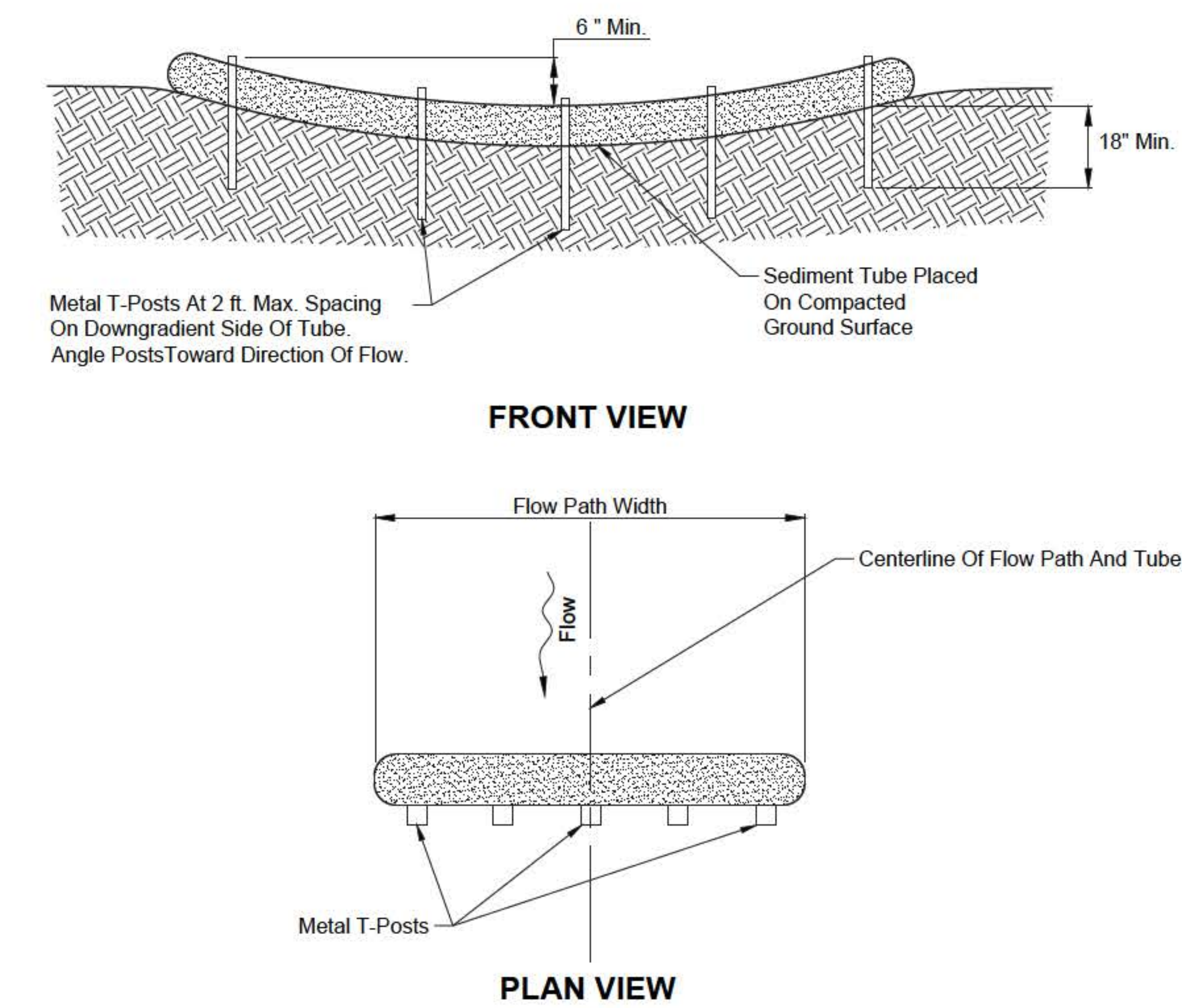


Notes:

1. A sediment tube placement area shall be prepared so that it is free of all debris, including rocks, sticks, roots, etc. A 2" layer of AASHTO No.57 stone shall be placed where the logs come together. Ends of tubes may be overlapped according to manufacturer's specifications instead of the AASHTO No.57 stone.
2. Sediment tubes shall be placed at existing level grade. Ends shall be extended upslope at 45 degrees to the main filter log alignment for a minimum of 8 feet.
3. Sediment tubes shall be inspected weekly and after each runoff event.
4. Sediment deposits shall be cleaned from the log when it reaches half the height of the tube.
5. Damaged tubes shall be replaced within 24 hours of inspection. A supply of tubes shall be maintained on site for this purpose.

WEIGHTED SEDIMENT FILTER TUBE INSTALLATION

N.T.S.

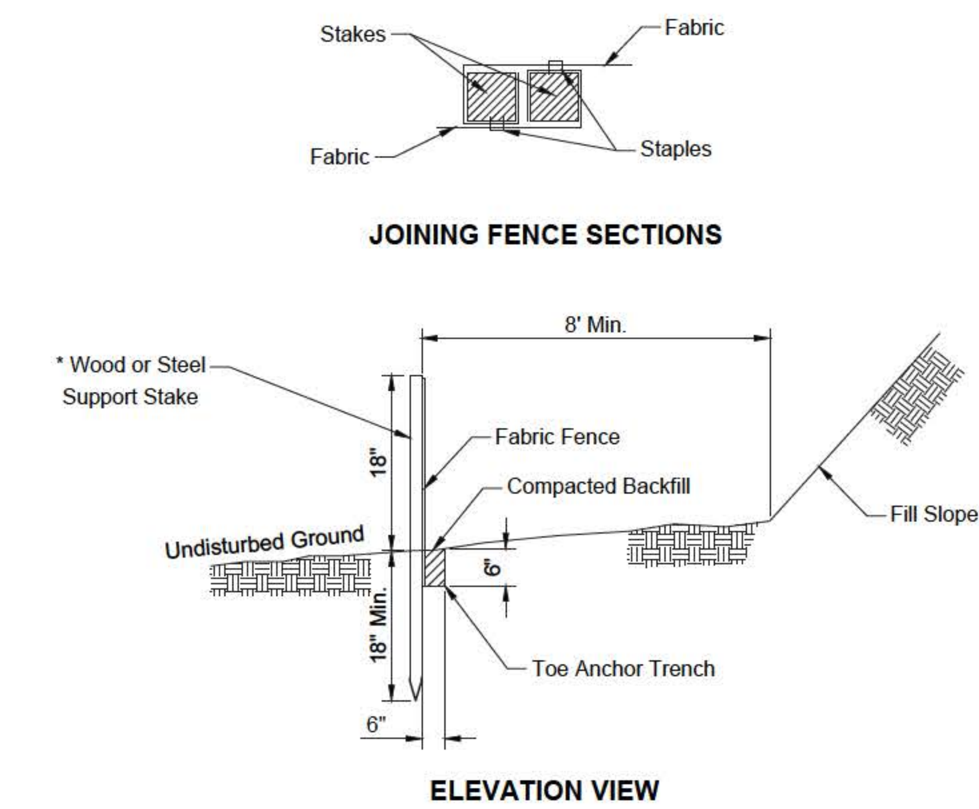


Notes:

1. This detail applicable to flow paths with widths less than or equal to one tube length.
2. Metal t-posts shall be installed at the center and at each end of the tube. Additional t-posts shall be installed as needed to meet the maximum 2-foot spacing.
3. Sediment tubes shall be inspected weekly and after each runoff event.
4. Accumulated sediment shall be removed when it reaches half the height of the tube and disposed as directed elsewhere in the E&S plan.
5. Damaged tubes shall be repaired or replaced within 24 hours of inspection. A supply of tubes shall be kept on site for this purpose.

WEIGHTED SEDIMENT FILTER TUBE INSTALLATION CONCENTRATED FLOW AREA

N.T.S.



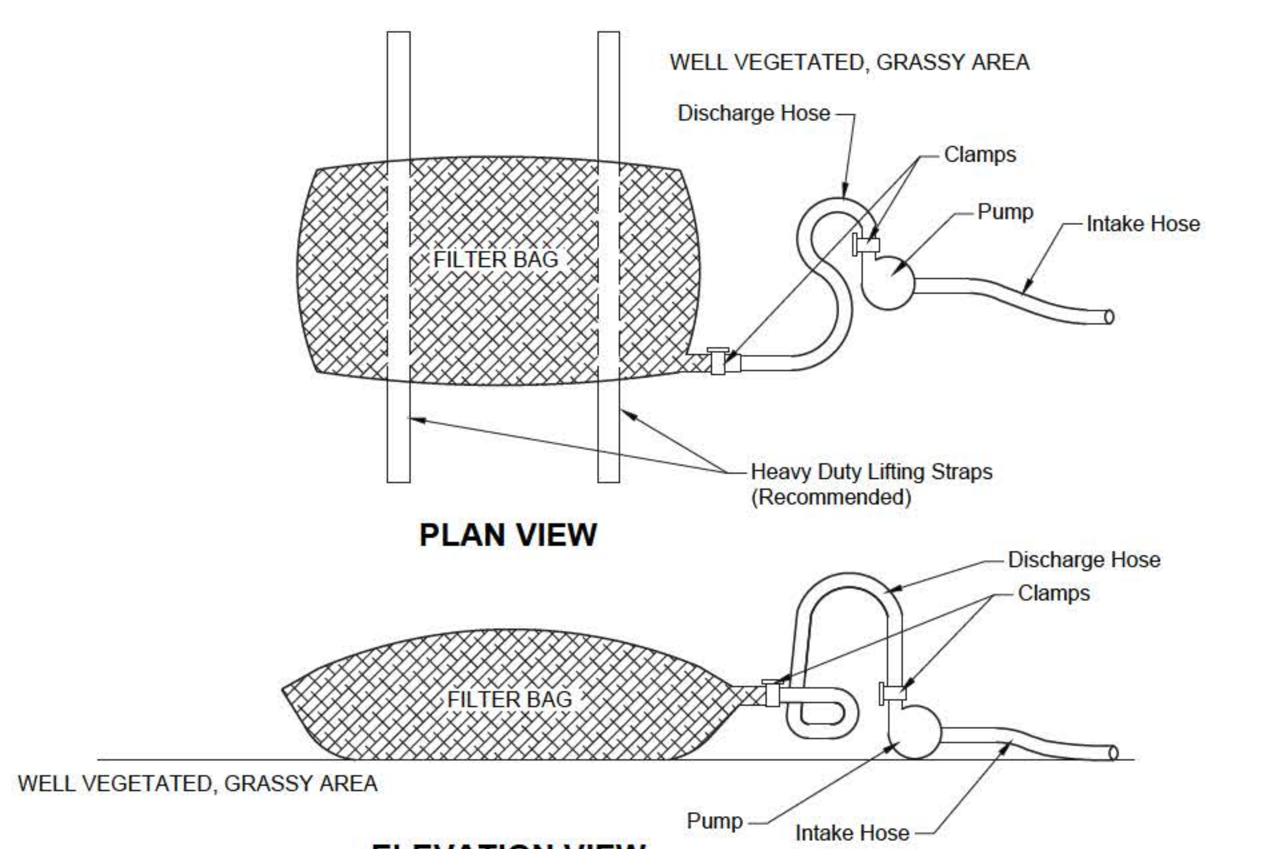
Notes:

1. Stakes spaced at 8' maximum. Use 2" x 2" (±3/8") wood or equivalent steel (U or T) stakes.
2. Fabric shall have the minimum properties as shown in Table 4.3.
3. Fabric width shall be 30" minimum. Stakes shall be hardwood or equivalent steel (U or T) stakes.
4. Silt fence shall be placed at level existing grade. Both ends of the fence shall be extended at least 8 feet up slope at 45 degrees to the main fence alignment.
5. Sediment shall be removed when accumulations reach half the above ground height of the fence.
6. Any section of silt fence which has been undermined or topped shall be immediately replaced with a rock filter outlet (Standard Construction Detail #4-6).
7. Fence shall be removed and properly disposed of when tributary area is permanently stabilized.

18" SILT FENCE

(TYPE SF)

N.T.S.



Notes:

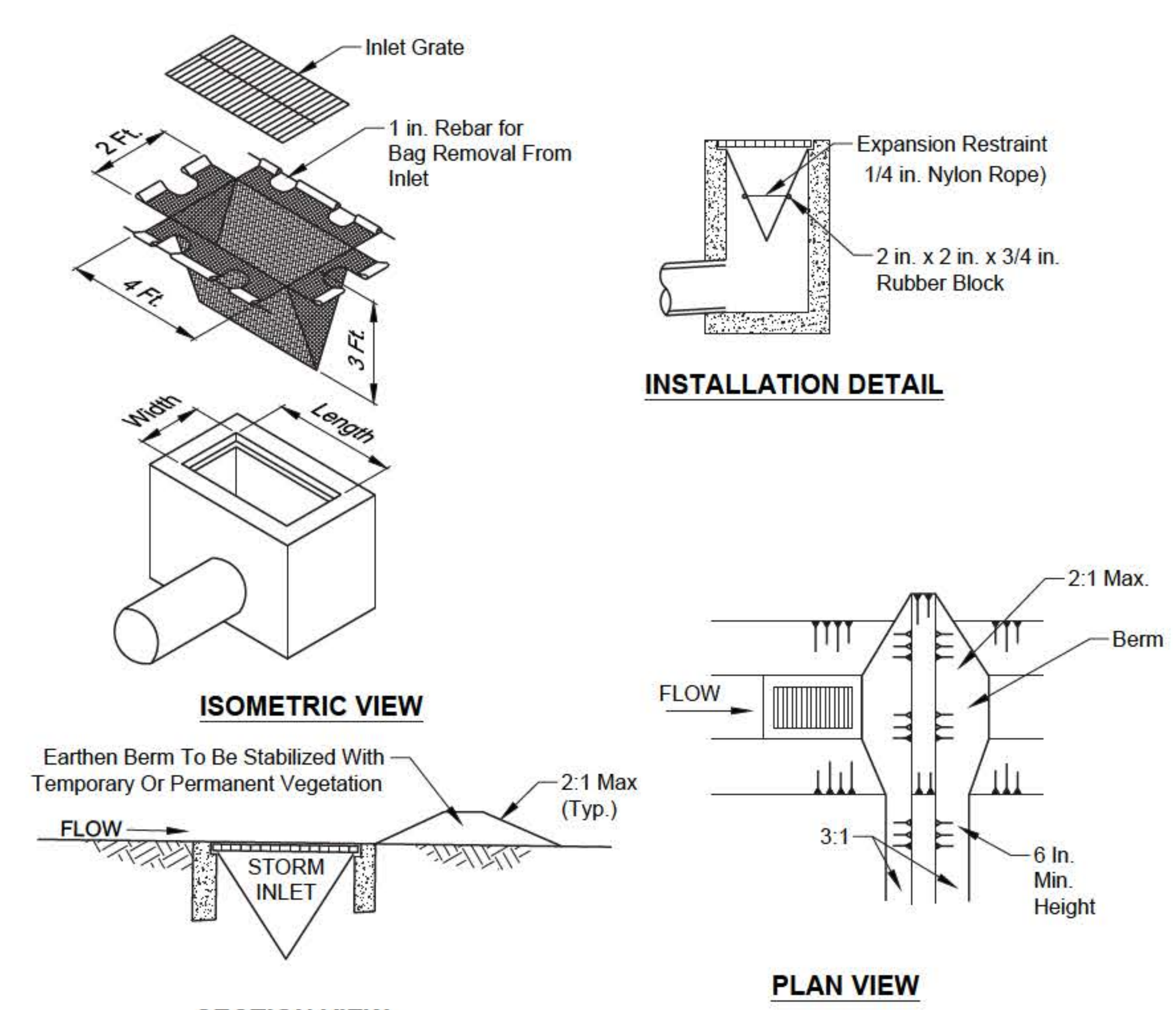
1. Low volume filter bags shall be made from non-woven geotextile material sewn with high strength, double stitched "J" type seams. They shall be capable of trapping particles larger than 150 microns. High volume filter bags shall be made from woven geotextiles that meet the following standards:

PROPERTY	TEST METHOD	MINIMUM STANDARD
Avg. Wide Width Strength	ASTM D-4884	60 lb/in
Grab Tensile	ASTM D-4632	205 lb
Puncture	ASTM D-4833	110 lb
Mullen Burst	ASTM D-3786	350 psi
UV Resistance	ASTM D-4355	70%
AOS % Retained	ASTM D-4751	80 Sieve

2. A suitable means of accessing the bag with machinery required for disposal purposes shall be provided. Filter bags shall be replaced when they become 1/2 full of sediment. Spare bags shall be kept available for replacement of those that have failed or are filled. Bags shall be placed on straps to facilitate removal unless bags come with lifting straps already attached.
3. Bags shall be located in well-vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, a geotextile underlayment and flow path shall be provided. Bags may be placed on filter stone to increase discharge capacity. Bags shall not be placed on slopes greater than 5%. For slopes exceeding 5%, clean rock or other non-erodible and non-polluting material may be placed under the bag to reduce slope steepness.
4. No downslope sediment barrier is required for most installations. Compost berm or compost filter sock shall be installed below bags located in HQ or EV watersheds, within 50 feet of any receiving surface water or where grassy area is not available.
5. The pump discharge hose shall be inserted into the bags in the manner specified by the manufacturer and securely clamped. A piece of PVC pipe is recommended for this purpose.
6. The pumping rate shall be no greater than 750 gpm or 1/2 the maximum specified by the manufacturer, whichever is less. Pump intakes shall be floating and screened.
7. Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

PUMPED WATER FILTER BAG

N.T.S.

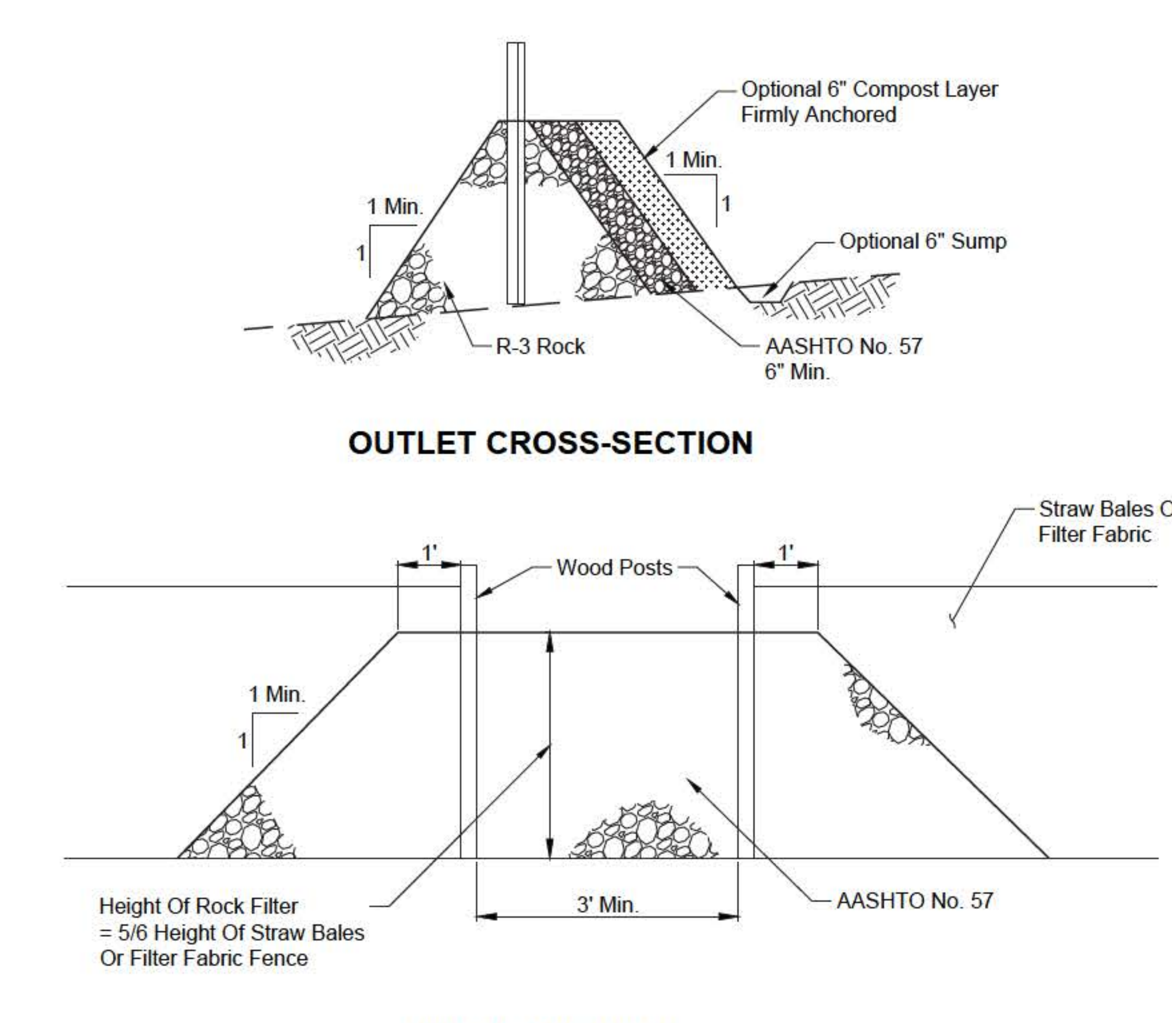


Notes:

1. Maximum drainage area = 1/2 acre.
2. Inlet protection shall not be required for inlet tributary to sediment basin or trap. Berms shall be required for all installations.
3. Rolled earthen berm shall be maintained until roadway is stoned. Road subbase berm shall be maintained until roadway is paved. Six inch minimum height asphalt berm shall be maintained until roadway surface receives final coat. At a minimum, the fabric shall have a minimum grab tensile strength of 120 bs, a minimum burst strength of 200 psi, and a minimum trapezoidal tear strength of 50 lbs. Filter bags shall be capable of trapping all particles not passing a no. 40 sieve.
4. Inlet filter bags shall be inspected on a weekly basis and after each runoff event. Bags shall be emptied and rinsed or replaced when half full or when flow capacity has been reduced so as to cause flooding or bypassing of the inlet. Damaged or clogged bags shall be replaced. A supply shall be maintained on site for replacement of bags. All needed repairs shall be initiated immediately after the inspection. Dispose of accumulated sediment as well as all used bags according to the plan notes.
5. Do not use on major paved roadways where ponding may cause traffic hazards.

FILTER BAG TYPE "M" INLET PROTECTION (ROADSIDE SWALE)

N.T.S.



Notes:

1. A rock filter outlet shall be installed where failure of a silt fence or straw bale barrier has occurred due to concentrated flow. Anchored compost layer shall be used on upslope face in HQ and EV watersheds.
2. Sediment shall be removed when accumulations reach 1/3 the height of the outlet.

ROCK FILTER OUTLET

N.T.S.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057458

NO.	DESCRIPTION	DATE	BY

REVISIONS

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL DETAILS

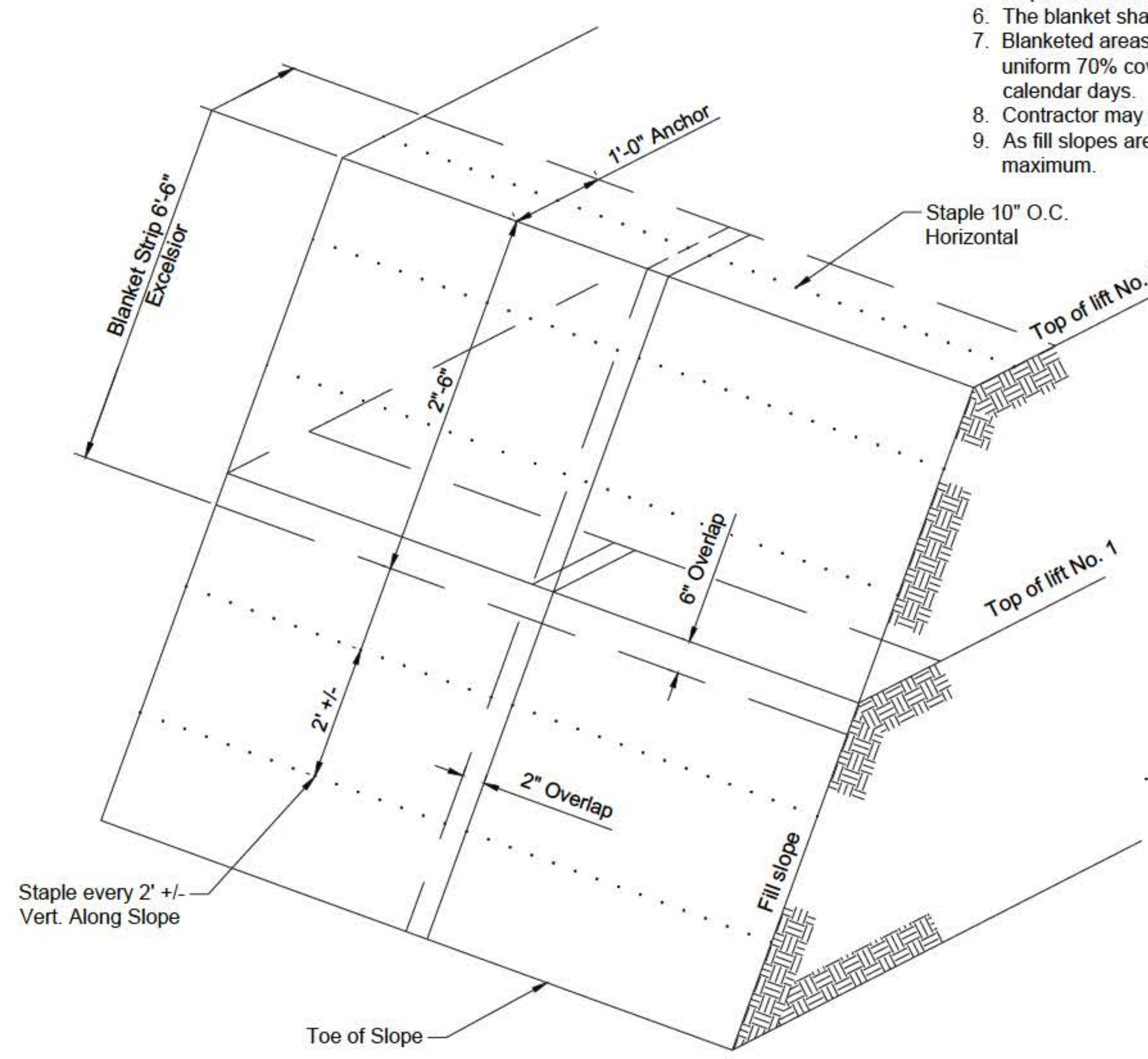
BOOK NO.		JOB NO.	
ME 293		2017-68	
DRAWN		CHECKED	
JE	10/19/18	JS	10/19/18
DESIGN		APPROVED	
JE	10/19/18	TMJR	10/23/18

SCALE
N.T.S.

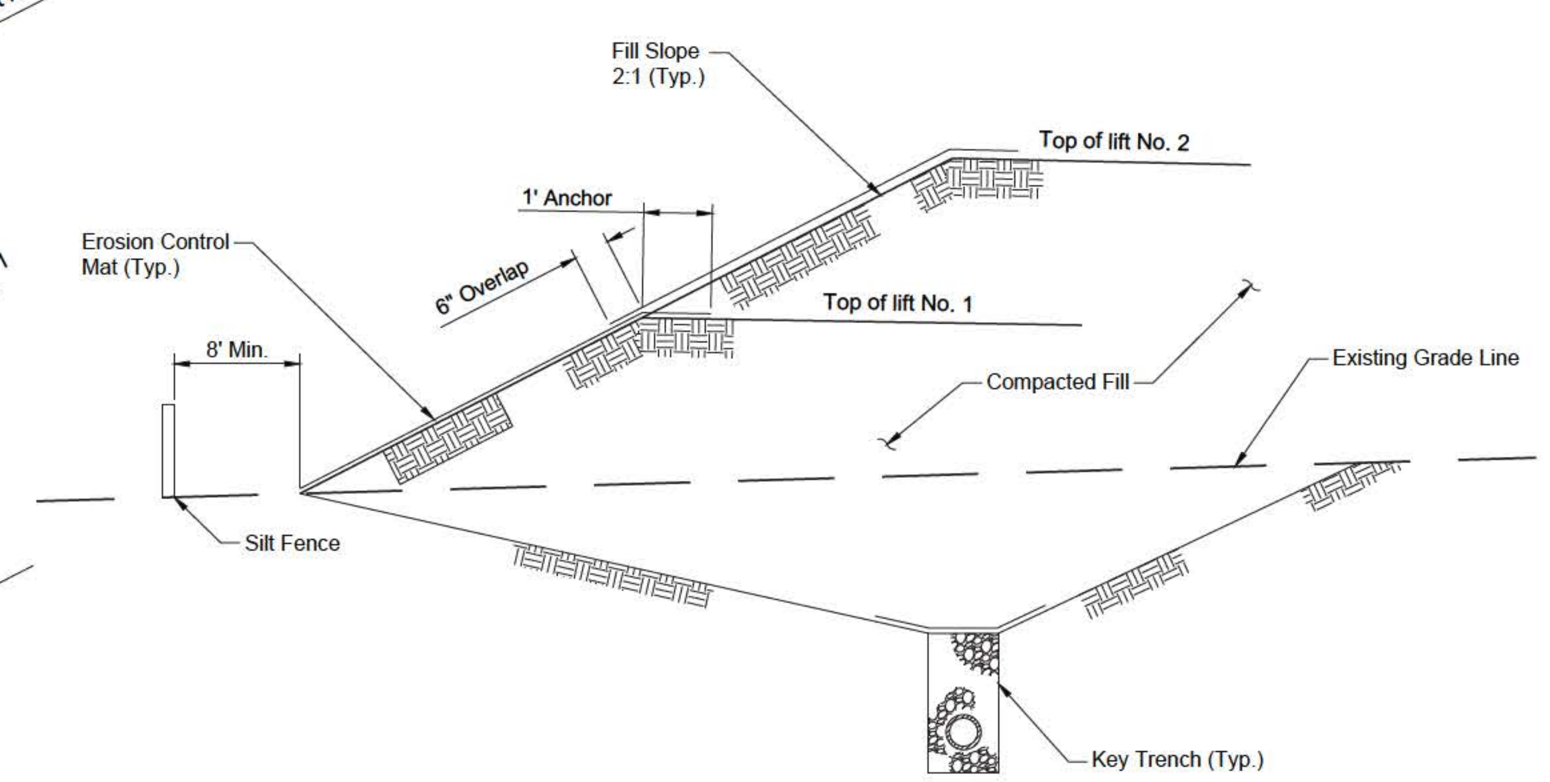
SHEET NUMBER
CE111

Notes:

1. Install on slopes 3H:1V or steeper, (all seeded slopes within 50 feet of a surface water - 100 ft of Special Protection waters - regardless of slope), and on all other areas specified in the plan drawings. Cut slopes in competent bedrock and rock fill slopes need not be blanketed.
2. Seed and soil amendments shall be applied according to the rates in the plan drawings prior to installing the blanket.
3. Provide anchor trench at toe of slope in similar fashion as at top of slope.
4. Slope surface shall be free of rocks, clods, sticks, and grass.
5. Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.
6. The blanket shall be stapled in accordance with the manufacturer's recommendations.
7. Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.
8. Contractor may use Hydroseed with a tackifier, on slopes, in lieu of the Erosion Control Blanket.
9. As fill slopes are brought to grade, stabilize by applying erosion control blanket. Install in vertical increments of fifteen feet, maximum.



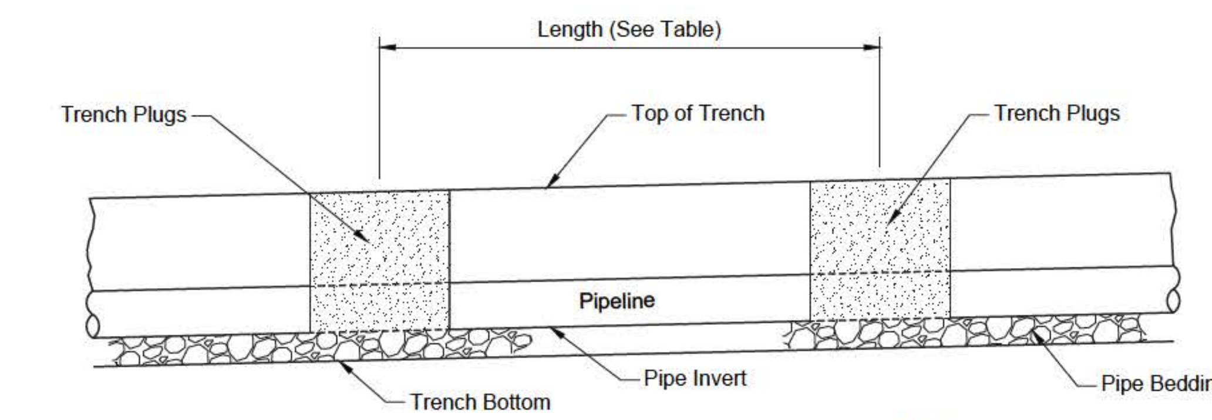
OBLIQUE VIEW



SECTION VIEW

EROSION CONTROL MAT PLACEMENT ON FILL SLOPES

N.T.S.



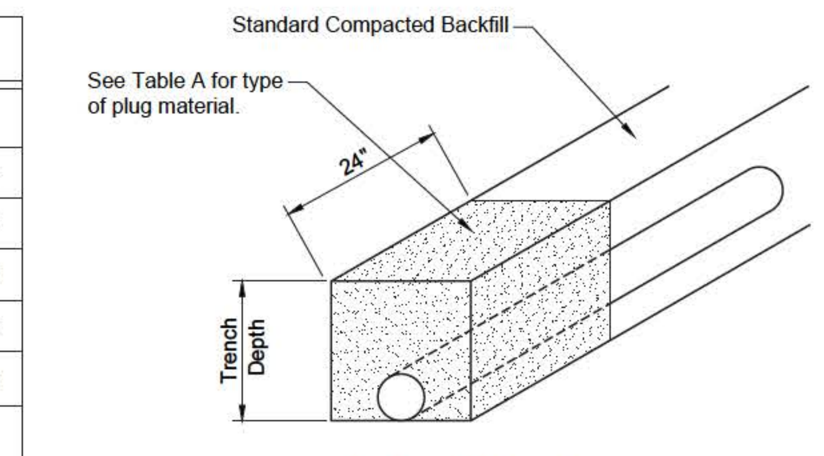
ELEVATION

Notes:

1. Impervious Trench Plugs are required for all stream, river, wetland, or other water body crossings regardless of trench slope.
2. Topsoil may not be used to fill sacks.

Required Spacing and Materials for Trench Plugs		
Trench Slope	Length (feet)	Plug Material
0 - 5	1000	Clay, Bentonite, or Concrete-Filled Sacks
5 - 15	500	Clay, Bentonite, or Concrete-Filled Sacks
15 - 25	300	Clay, Bentonite, or Concrete-Filled Sacks
25 - 35	200	Clay, Bentonite, or Concrete-Filled Sacks
35 - 100	100	Clay, Bentonite, or Concrete-Filled Sacks
Over 100	50	Cement Filled Bags (wetted) or Mortared Stone.

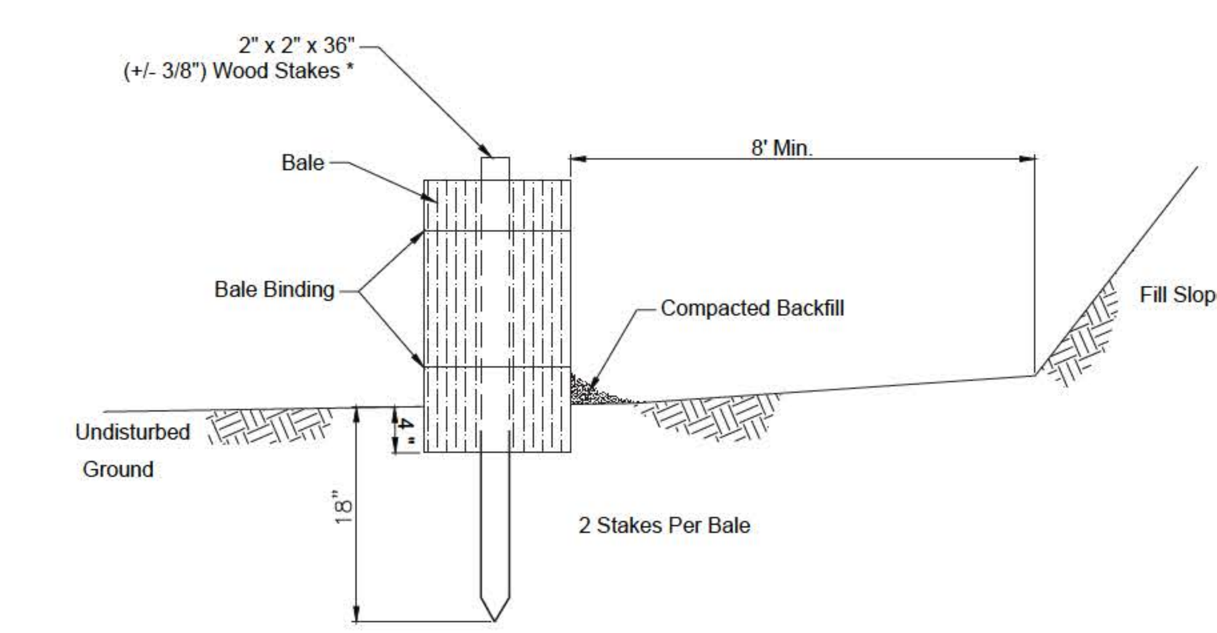
Topsoil may not be used to fill sacks.



SECTION VIEW

TYPICAL TRENCH PLUG INSTALLATION

N.T.S.



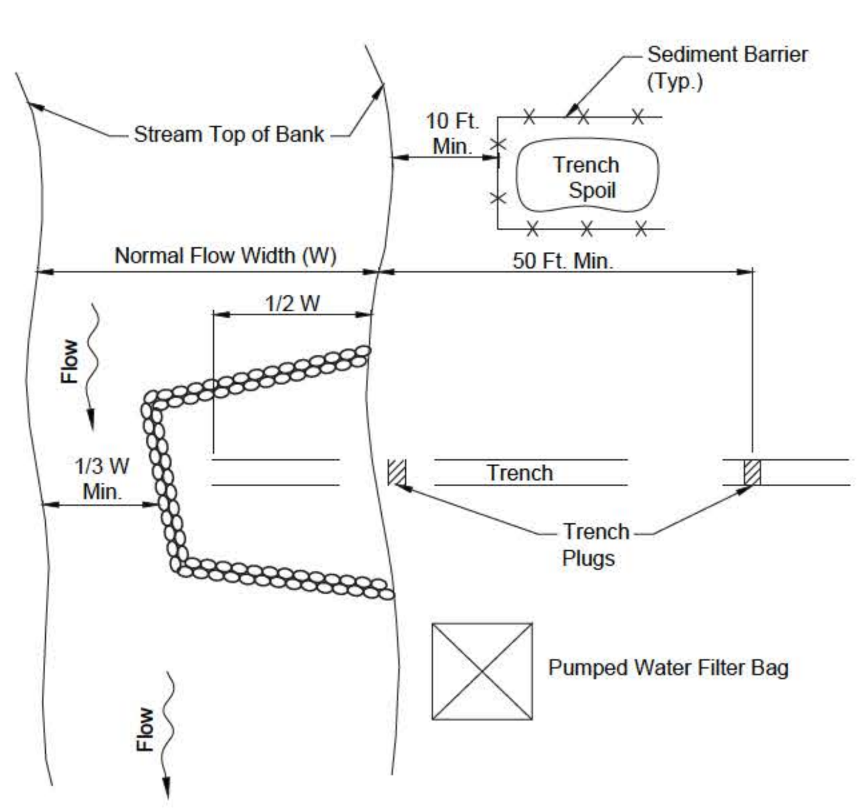
SECTION VIEW

Notes:

1. Straw bale barriers shall not be used for projects extending more than 3 months.
2. Straw bale barriers shall be placed at existing level grade with ends tightly abutting the adjacent bales. First stake of each bale shall be angled toward adjacent bale to draw bales together. Stakes shall be driven flush with the top of the bale. Both ends of the barrier shall be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.
3. Compacted backfill shall extend approximately 4 in. above ground level.
4. Sediment shall be removed when accumulations reach 1/3 the above ground height of the barrier. Damaged or deteriorated bales shall be replaced immediately upon inspection.
5. Any section of straw bale barrier which has been undermined or topped shall be immediately replaced with a rock filter outlet (standard construction detail No. 4-6).
6. Bales shall be removed when the tr butary area has been permanently stabilized.

STRAW BALE BARRIER

N.T.S.

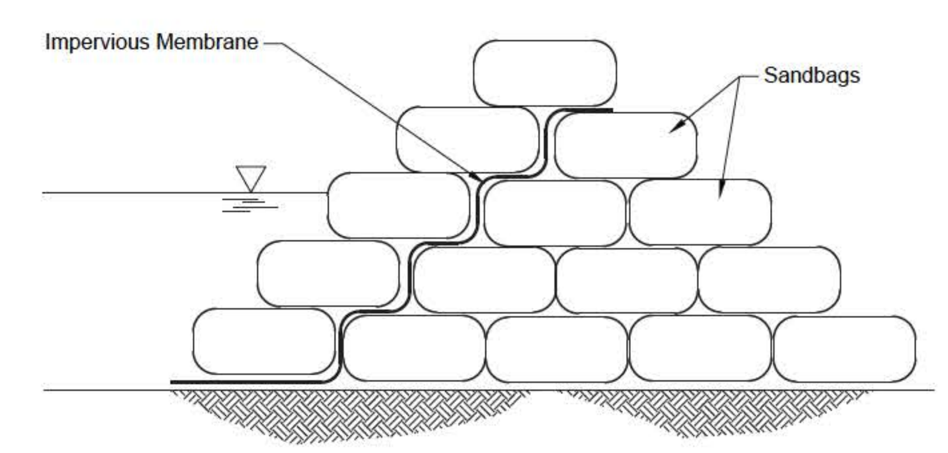


Notes:

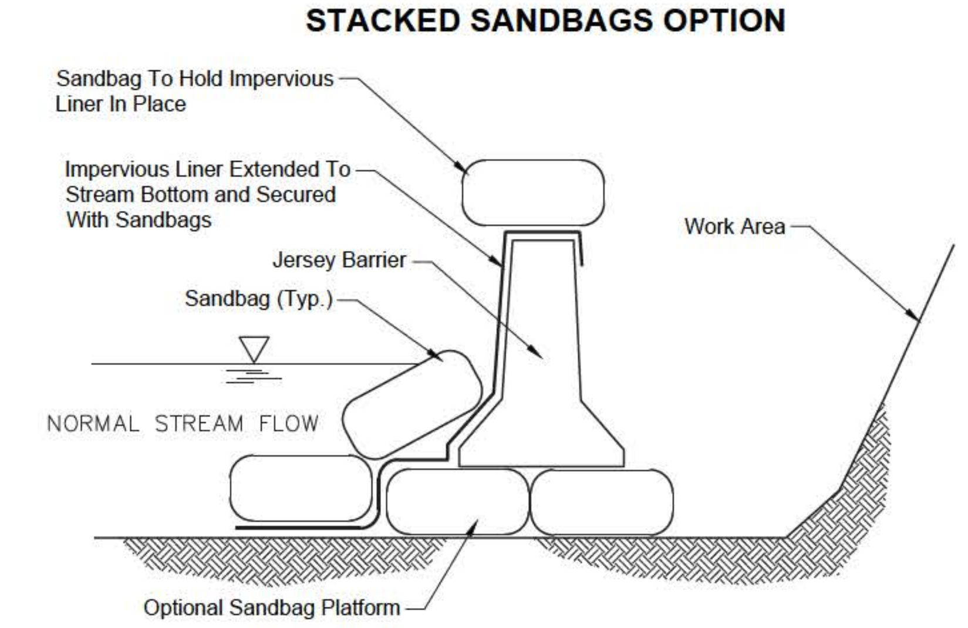
1. Grubbing shall not take place within 50 feet of top-of-bank until all materials required to complete crossing are on site and pipe is ready for installation.
2. Trench plugs shall be installed within the trench on both sides of the stream channel (standard construction detail No. 13-4).
3. Water accumulating within the work area shall be pumped to a pumped water filter bag or sediment trap prior to discharging into any surface water.
4. Hazardous or pollutant material storage areas shall be located at least 100 feet back from the top of stream bank.
5. All excess excavated material shall be immediately removed from the stream crossing area.
6. All disturbed areas within 50 feet of top-of-bank shall be blanketed or matted within 24 hours of initial disturbance for minor streams or 48 hours of initial disturbance for major streams unless otherwise authorized.
7. Appropriate stream bank protection shall be provided within the channel.

TYPICAL UTILITY LINE STREAM CROSSING WITH COFFERDAM

N.T.S.



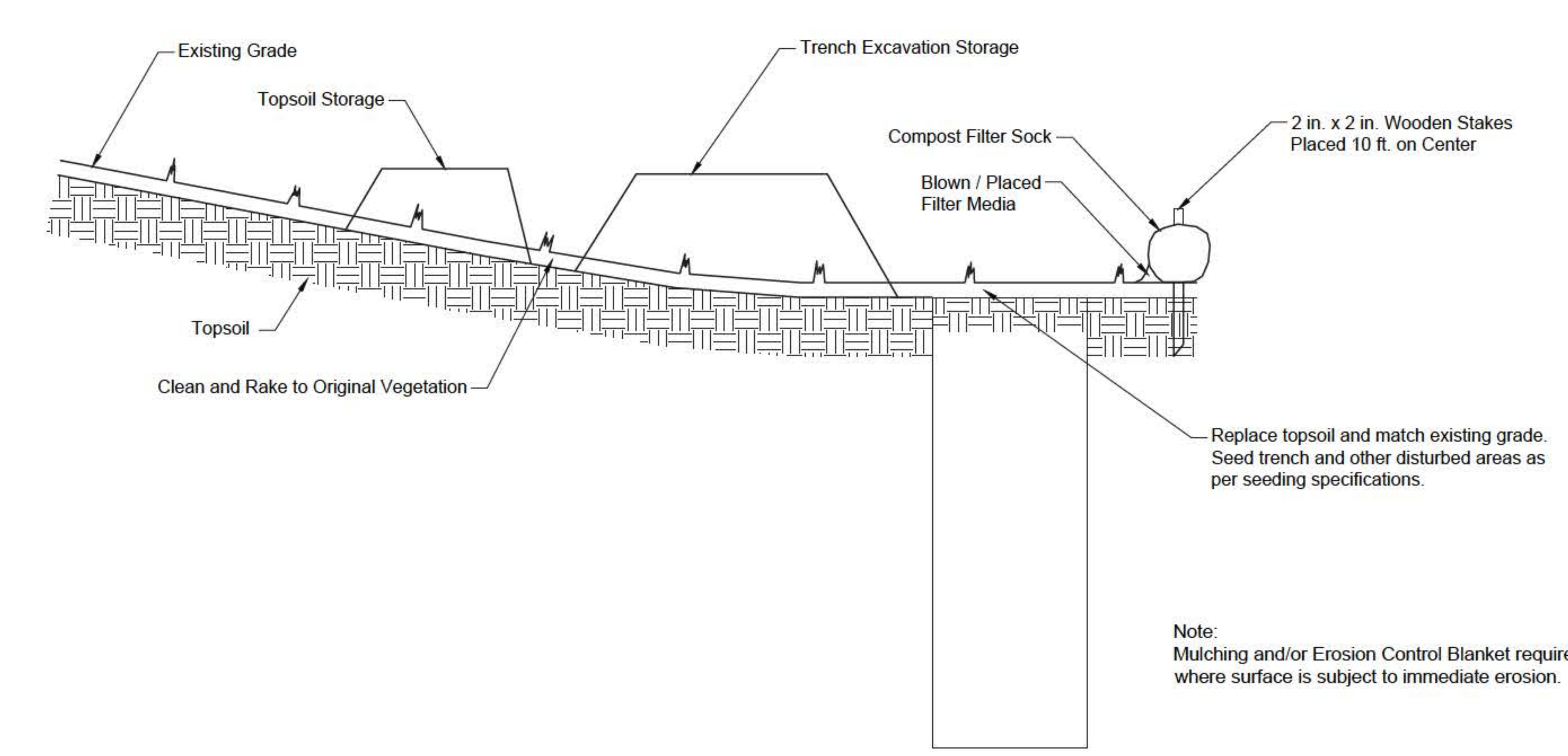
STACKED SANDBAGS OPTION



JERSEY BARRIER OPTION

SANDBAG DIVERSION DAM OR COFFERDAM

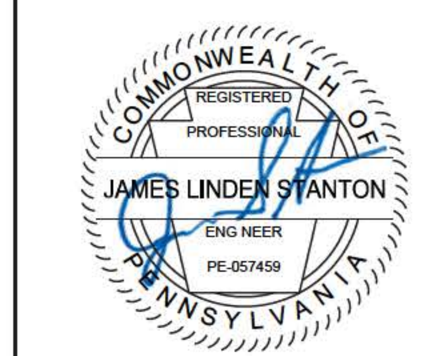
N.T.S.



EROSION CONTROL FOR TRENCHES

N.T.S.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com



REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	Straw Bale Detail	3-7-19	KK

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE

EROSION CONTROL DETAILS

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18
SCALE N.T.S.			

SHEET NUMBER

CE112

STANDARD E&S PLAN NOTES

1. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
2. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the local conservation district to an on-site preconstruction meeting.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the local conservation district or by the Department prior to implementation.
5. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
6. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S BMPs specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E&S plan.
7. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
8. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan maps(s) in the amount necessary to complete the finish grading of all exposed areas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 2H:1V or flatter.
9. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or the regional office of the Department.
10. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
11. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the Department fully implemented prior to being activated.
12. The contractor is respons ble for ensuring that any material brought on site is clean fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
13. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
14. Vehicles and equipment may neither enter directly nor exit directly from lots (specify lot numbers) onto (specify road names)
15. Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, re-grading, re-seeding, re-mulching and re-netting must be performed immediately. If the E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
16. A log showing dates that E&S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
17. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface water.
18. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
19. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches - 6 to 12 inches on compacted soils - prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outslopes shall have a minimum of 2 inches of topsoil.
20. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes.
21. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
22. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
23. Frozen materials or soft, mucky, or highly compress ble materials shall not be incorporated into fills.
24. Fill shall not be placed on saturated or frozen surfaces.
25. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
26. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
27. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective 'blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
28. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
29. E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the local conservation district or the Department.
30. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E&S BMPs.
31. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs shall be stabilized immediately. In order to ensure rapid re-vegetation of disturbed areas, such removal/conversions are to be done only during the germinating season.
32. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
33. Failure to correctly install E&S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to $10,000 per day in civil penalties, up to $10,000 in summary criminal penalties, and up to $25,000 in misdemeanor criminal penalties for each violation
34. Applicants must use environmental due diligence to ensure that the excess fill material associated with this project qualifies as Clean Fill. Clean Fill is defined as uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block, or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. *The term "used asphalt" does not include milled asphalt or asphalt that has been processed from re-use. Environmental Due Diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic database searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing environmental assessments, or audits.
35. Temporary stabilization must be applied to a site when cessation of earth disturbance activities will exceed 4 days.
36. Contractor must prepare topsoil stockpile areas prior to establishment of a stockpile by removing the topsoil and excavating each stockpile area as per the Grading Plan. If unable to grade these areas prior to stockpile establishment, the contractor must ensure that these areas are graded to final grade after stockpiles are removed.

UTILITY LINE INSTALLATION PROCEDURES

1. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
2. Limit daily trench excavation to the length of pipe placement, installation and backfilling that can be completed the same day.
3. Trenching shall be done in accordance with layout shown on the site layout plan.
4. Water which accumulates in the open trench will be completely removed by pumping before pipe placement and/or backfilling begins.
5. On the day following pipe placement and trench backfilling, the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measure/facilities will be installed. Seeding and mulching of all utility line installation disturbed areas will be done at the end of each week as specified in the Final Site Preparation for Turfgrass Establishment.
6. Exceptions - In certain cases where trenches cannot be backfilled until the pipe is hydrostatically tested, or anchors and other permanent features are to be installed. In these cases, all of the requirements listed above will remain in effect with the following exceptions:
   a. Daily backfilling of the trench may be delayed for six days. All pressure testing and the complete backfilling of the open trench must be completed by the seventh working day.
   b. If daily backfilling is delayed, the disturbed area will be graded to final contour, appropriate temporary erosion and sediment control measures/facilities will be installed, and the areas seeded and mulched within the next two calendar days.

CONTRACTOR'S CONSTRUCTION SEQUENCE FOR SEWER LINE

1. At least 7 days prior to starting any earth disturbance activities (including clearing and grubbing), the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S Plan preparer, the PCSM Plan preparer, and the Fayette County Conservation District to an on-site pre-construction meeting.
2. Upon installation or stabilization of all perimeter sediment control BMPs and at least 3 days prior to proceeding with the bu k earth disturbance activities, the permittee or co-permittee shall provide notification to the Department or authorized conservation district.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the PA One Call System shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. The contractor shall coordinate all construction within the public right-of-ways with Penn-DOT and the local municipalities.
5. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved by the Fayette County Conservation District or by Department prior to implementation. Each step of the sequence shall be completed before proceeding to the next step, except where noted.
6. U.S. Fish and Wildlife Service Avoidance Measure: Conduct any tree cutting, tree inundation (flooding), and prescribed burning between November 15 and March 31.
7. A cessation of activity for 4 days or longer requires temporary stabilization of the site.
8. All water pumped from work areas is to be treated for sediment removal prior to discharging to a surface water.
9. Begin sewer line construction. Place silt fence on the down slope side of the sewer line trench as per the plans and details. Place excavated material and topsoil in separate piles on the up slope side of the trench, as per plans and details.
10. The contractor shall not excavate more than 200 feet of trench at any time. No trench shall remain open overnight. The contractor shall stabilize the trench and other disturbed areas, as per the plans and details. Erosion control blankets are required where the surface is subject to immediate erosion.
11. Construction wastes such as used asphalt and concrete shall be disposed at a PA-DEP approved landfill. Refer to Appendix-K of the narrative for more information.
12. The contractor shall construct the stream crossings in accordance with the stream crossing plan and details.
13. The contractor shall construct the four pump station sites in accordance with the associated pump station plans, details, and the site specific construction sequence.
14. The contractor shall protect the exposed pipe end from debris and sediment. At no time may sediment or debris enter the exposed sewer line. If sediments or debris do enter the water line, the contractor shall immediately remove such items.
15. Disturbed roadways must have temporary paving installed immediately upon installation of water line. Driveways must be immediately stabilized with crushed stone. Temporary paving may be required at the direction of the Engineer or Resident Inspector.
16. The contractor shall install trench plugs, as required, as per details.
17. After each line segment is installed, the line shall be immediately tested, as per the authority specifications.
18. The contractor shall seed and mulch the disturbed area upon backfilling. Apply erosion control mat upon all seeded areas within 50 feet of all streams, and as per the plans and details.
19. Complete sewer line installation in accordance with the plans and specifications.
20. Restore all driveways and roadways in accordance with plans and specifications.
21. Replace any damaged or removed landscaping within project boundaries, as per plans and specifications.
22. Upon completion of the sewer line construction, the contractor shall hydrostatically test the water line, as per the authority specifications.
23. After the line is constructed and tested, the contractor shall begin installing service connections. Each service connection location, type, and size shall be coordinated with the Authority, Authority Engineer, and customer.
24. Each service connection shall be hydrostatically tested before backfilling.
25. The contractor shall seed and mulch the disturbed area upon backfilling each service connection.
26. The contractor shall evaluate the entire project area and re-establish any area that has not obtained a minimum uniform 70% perennial vegetative cover per square foot.
27. Upon achieving a minimum uniform 70% perennial vegetative cover per square foot over the entire project area, remove all remaining control devices.

CONTRACTOR'S MAINTENANCE PROCEDURES
(BEFORE, DURING AND AFTER SITE STABILIZATION)

1. Erosion control measures shall be implemented as outlined in the construction sequence notes.
2. During construction, the contractor shall make certain that all run-off is directed to the sedimentation control measures. Inspect and clean out all sedimentation control measures weekly and after each run-off event.
3. During construction activities, the smallest area poss ble shall be disturbed to accomplish the work to be executed. Disturbed areas that will not be constructed upon shall be immediately seeded with a perennial ground cover as specified.
4. The contractor shall inspect stormwater control measures on a weekly basis and after each runoff event. Make repairs as necessary within 24 hours of discovery of deficiencies.
5. All sedimentation control measures are to remain until disturbed areas are fully stabilized with a permanent uniform 70% vegetative cover, paved or riprapped where specified and detailed on the plans.
6. All soil stockpiles to remain more than 20 days shall be seeded with a grass cover (see seeding requirements).
7. During earthmoving activities silt barriers shall be securely staked in place and properly maintained until the disturbed area is satisfactorily stabilized with a uniform 70% vegetative cover or other stabilizing surfacing material specified.
8. During earth moving activities place excavated material upslope from construction areas. Stockpiles shall be set parallel to the contour of the land to reduce run-off.
9. Upon completion of earthmoving and construction activities, disturbed areas that are not to be paved shall be covered within 24 hours with topsoil to a depth of six inches. Final grading passes shall be made perpendicular to the direction of stormwater run-off and tracked to help hold soils in place.
10. Stone base shall be placed on roadbeds and driveways within 24 hours of establishing subgrade.
11. Stabilize by seeding, installing protection fabrics, and riprap, all permanent stormwater collection facilities within 24 hours of completion of construction/installation as detailed and specified.
12. Reseed and mulch barren areas not producing a uniform 70% vegetative cover in any given area within 24 hours of discovering deficiencies.
13. The owner will inspect disturbed areas that have been revegetated or stabilized and inform the contractor of any site stabilization and ground cover deficiencies prior to the removal of any erosion control measures.
14. Sediment removed from the erosion and sediment control measures shall be mixed in on the construction site as directed by the engineer and stabilized by seeding and mulching, or disposed at site that has an approved E&S plan. All materials not applicable to be placed as fill will be considered construction demolition debris and must be taken to a PA-DEP approved landfill.
15. Sediment traps installed shall be cleaned out at the required designed sediment collection limit elevation. The limit shall be marked with a clean out elevation stake installed 1/3 distance from the principal spillway within the trap's sediment collection area.
16. Should any additional erosion problems occur during construction, or any questions regarding the maintenance of control measures or facilities arise, contact the local county conservation district office and the engineer.

Measures for Recycling or Disposal of Materials

Description	Definition	Measures
Clean Fill	Uncontaminated, nonwater-soluble, nondecomposable inert solid material. Includes soil, rock, stone, dredged material, used asphalt, and brick, block, or concrete from construction and demolition activities that is separate from other waste and recognizable as such.	All cleaned fill should be hauled to an approved and permitted waste area.
Regulated Fill	Soil, rock, stone, dredged material, used asphalt, historic fill, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such that has been affected by a spill or release of a regulated substance and the concentrations of regulated substances.	All regulated fill shall be hauled to an approved and permitted waste area.
Building Materials	All materials used in the construction process. Including masonry, wood products, silt fences, super silt fences, all chemicals and resins, etc...	Contractor shall recycle all material if poss ble. If material is not recyclable, the remainder is to be hauled to an approved land fill.
Concrete Wash Water	Water used to clean all concrete machinery after use.	Contractor shall direct all waste water to an appropriate erosion control measure.
Sanitary Wastes	Sanitary material that shall be contained and disposed of on a regular basis.	Contractor shall be responsible for portable facilities on site. The facilities are to be inspected and cleaned as necessary.
Housekeeping	All construction waste material and litter to be picked up.	All waste from job vehicles, equipment, and trailers is to be removed and placed in appropriate waste containers.
Materials Management	Storage and maintaining of construction materials in a neat and organized matter.	Contractor shall store construction materials in an orderly fashion and meet all local and federal regulations.
Litter Control	A waste container to provide a source for disposing trash and construction waste.	Contractor is to provide waste bins on site. All waste is to be removed when necessary and hauled to an approved sanitary land fill.
Temporary Erosion Control	Temporary measures put in place to take the place of vegetation in order to preserve erosion control. Such as silt fences and ditches.	Upon 70% perennial vegetative cover all temporary erosion control measures are to be removed. Contractor shall recycle materials if able. All remaining materials shall be hauled to an approved land fill.

Best Management Practices Maintenance Schedule

BMP	Inspection Schedule	Required Maintenance
Straw Bale Barriers	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/3 the above ground height of the barrier. Any section which has been undermined or topped must be immediately replaced with a rock filter outlet.
Filter Fabric Fence	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/2 the above ground height of the fence. Any section which has been undermined or topped must be immediately replaced with a rock filter outlet.
Super Filter Fabric Fence	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/2 the above ground height of the fence. Any section which has been undermined or topped must be immediately replaced with a rock filter outlet.
Compost Filter Sock	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/2 the above ground height of the sock. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection. Biodegradable socks shall be replaced after 6 months; photodegradable socks after 1 year; polypropylene socks per manufacturer's guidelines.
Rock Filters	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/4 the depth of the channel. Immediately remove all debris and litter.
Sediment Trap	Inspect weekly and after every runoff event.	Sediment must be immediately removed where accumulations reach the clean-out mark on the clean-out stake. Immediately remove all debris and litter from the sediment trap. Immediately remove all debris, litter, and sediment from the sediment trap riser.
Sediment Basin	Inspect weekly and after every runoff event.	Sediment must be immediately removed where accumulations reach the clean-out mark on the clean-out stake. Immediately remove all debris and litter from the sediment basin. Immediately remove all debris, litter, and sediment from the sediment basin riser.
Channels	Inspect weekly and after every runoff event.	Sediment accumulations must be immediately removed from channels. Immediately remove all debris and litter from the channels. Immediately repair any channel lining not functioning properly.
Riprap Apron Outlet Protection	Inspect weekly and after every runoff event.	Sediment accumulations must be immediately removed from the outlet structure. Immediately remove all debris and litter from the outlet structure.
Benches	Inspect weekly and after every runoff event.	Benches should be maintained to design dimensions at all times. Needed repairs should be initiated immediately after the inspection.
Inlet Protection	Inspect weekly and after every runoff event.	Immediately remove all sediment, debris, and litter from the inlet protection.
Rock Construction Entrance	Inspect daily and after every runoff event.	Sediment deposited on the paved roadways shall be removed and returned to the construction site at the end of each day.
Vegetative Filter Strip	Inspect weekly and after every runoff event.	If the width of the filter strip has been reduced by sediment deposition to 1/2 its original width, suitable alternative BMPs should be installed immediately. Contact engineer immediately.
Erosion Control Blankets	Inspect weekly and after every runoff event.	Immediately repair any erosion control blanket that is not functioning properly.
Silt Fence In-Line Rock Filter Outlet	Inspect weekly and after every runoff event.	Sediment must be removed where accumulations reach 1/3 the height of the outlet. Immediately remove all debris and litter.
Temporary Slope Pipe	Inspect weekly and after every runoff event.	Any accumulated sediment should be removed from then entrance. Damaged pipe should be repaired or replaced. Needed repairs should be initiated immediately after inspection.

Note:
1. Sediment collected by erosion and sediment control BMPs shall be mixed into the soil fill areas. All materials not applicable to be placed as fill will be considered construction demolition debris and must be taken to a PA-DEP approved landfill.
2. A written report documenting each inspection and all BMP repairs and maintenance activities must be kept on site and available for review and inspection by DEP or the Conservation District. Use PADEP form 3800-FM-BCW0271d (5/2018).

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
EROSION CONTROL NOTES

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN JE	10/19/18	CHECKED JS	10/19/18
DESIGN JE	10/19/18	APPROVED TMJR	10/23/18
SCALE N.T.S.			
SHEET NUMBER CE113			

SOIL STOCKPILE AREA TEMPORARY SEED MIXTURE

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Annual Ryegrass (Lolium Multiflorum)	4.00	90%	98%	Anytime

LESS THAN 2:1 SLOPE PERMANENT SEED MIXTURE 1

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Kentucky Bluegrass Blend (3 to 5 varieties)	4.00	80%	98%	4/1 to 5/31 8/16 to 12/30
Perennial Ryegrass (Lolium Perenne)	2.00	90%	98%	4/1 to 5/31 8/16 to 12/30
Creeping Red Fescue	2.00	85%	98%	4/1 to 5/31 8/16 to 12/30

SLOPES 2:1 AND GREATER PERMANENT SEED MIXTURE 2

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Birdsfoot Trefoil (Lotus Cornicalatus)	0.20	90%	96%	4/1 to 5/31
Tall Fescue (Festuca Arundinacea)	1.00	90%	97%	4/1 to 5/31 8/16 to 10/15

Notes:
For planting use other than best seeding dates, use typical grass-lined channels seeding mixture.
Use Permanent Seed Mixture 2 (with temporary stabilizer fabric) in place of failed seed mixtures. If application does not catch within a three week period, utilize 2.7 lbs/1,000 square feet of Birdsfoot Trefoil for maximum stabilization.

TYPICAL GRASS-LINED CHANNELS PERMANENT SEED MIXTURE S1 (SM-S1)

(From PSU Agronomy Guide Tables 109 and 110 for roadsides and swales in shady areas and small flow grass-lined channels and basin areas)*

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Spring Oats (Avena Sativa) or Winter Rye	1.30	85%	98%	Early September to early October plus Spring
Tall Fescue (Festuca Arundinacea)	1.40	90%	97%	4/1 to 5/31 8/16 to 10/15
Fine Fescue	1.00	80%	95%	4/1 to 5/31 8/16 to 10/15

*For planting season other than that which is noted for the best seeding dates, use high volume channels seed mixture.

HIGH VOLUME CHANNELS PERMANENT SEED MIXTURE S2 (SM-S2)

For high volume channels where temporary or permanent stabilizer fabric is specified

Seed Mixture (Species)	Rate of Application	Seed Quality		Best Seeding Dates
	Lbs/1,000 square feet	Min % Germination	Min % Purity	
Birdsfoot Trefoil (Lotus Cornicalatus)	3.33	90%	96%	Anytime
Tall Fescue (Festuca Arundinatea)	3.10	90%	97%	Anytime
Crimson Clover	0.60	80%	95%	Anytime

Final Site Preparation For
Turfgrass Establishment

General Steps in Turfgrass Establishment
1Secure a soil test
2.Rough grade
3.Lime if needed
4.Apply basic fertilizer
5.Apply soil physical amendments if needed
6.Till above materials into 4 to 6 inch soil depth
7.Finish grade
8.Apply starter fertilizer and work into top inch of soil
9.Apply seed
10. Rake or drag to cover seed lightly
11. Roll lightly
12. Mulch

1.Soil Testing

A. Soil test to determine lime and fertilizer requirements is required to provide the best guide for proper establishment. Laboratory results of the test shall show the pH and lime requirements of the soil and the amounts of phosphorus, potassium and organic matter present in the soil. Soil shall maintain a pH of 6.0 to 7.0.Adjust soils to maintain the ideal pH prior to seeding.

2.Rough Grading

A. Remove all debris, including large stones, left by construction work.
B. Till soil and bring area to rough grade prior to liming or fertilization.
C. Where topsoil is to be replaced or brought in, first rough grade the area to the contour of the finished grade to facilitate uniform distribution of topsoil.

3.Agricultural Lime
(Permanent Seeding: Apply at a min. rate of 6 tons per acre, or per soils test, and adjust pH Level to 6.5)
(Temporary Seeding: Apply at a min. rate of 1 tons per acre, or per soils test, and adjust pH Level to 6.5)

A. Proper liming is essential to derive maximum benefits from fertilizer applications. Dolomitic lime shall be used in all situations with undesirable pH levels. If the soil analysis shows deficiencies in magnesium and calcium, a high-magnesium lime or high-calcium lime shall be used.
B. When the lime requirement has been determined, broadcast and work into a 4 to 6 inch soil depth enough ground limestone to meet fully the requirement shown by the test. Limestone shall be fine-sized whereby 95% passes through a 20-mesh screen, 60% passes through a 60-mesh screen, and 50% passes through a 100-mesh screen.
C. Where lime requirement exceeds 200 pounds per 1,000 square feet, apply one half the total requirement, till, apply the remaining one half, and retill.

4.Fertilization
(Permanent Seeding Application Rate: 10-10-20 at 1,000 lbs per acre, or per soils test)
(Temporary Seeding Application Rate: 10-10-10 at 500 lbs per acre, or per soils test)

A.Basic Fertilization
Broadcast the required amount of recommended fertilizer from the soils report and work into the soil to a 4 to 6 inch depth as determined by the soil test. If the report form does not address a basic fertilization rate, use 10-10-20 fertilizer at a rate of 25 pounds per 1,000 square feet.
B.Starter Fertilization
Immediately before an August, September, or October seeding, broadcast and rake into a soil depth of 1 inch, 25 pounds of a 10-5-5 fertilizer or 140 pounds of a 10-20-20 analysis commercial fertilizer per 1000 square feet. For a February, March, April, May, June, July, or November seeding, use a fertilizer having an approximate 2-1-1 ratio and containing 35% or more of the total nitrogen as water insoluble nitrogen. Use no starter nitrogen with clover, trefoil, and crownvetch families. Broadcast and work into the top inch of soil 40 pounds of a 10-5-5 or 33 pounds of a 12-6-6 or the equivalent per 1,000 square feet. Do not use a starter fertilizer which uses urea and/or diammonium phosphate as ingredients.

5.Soil Amendments

A. Where a soil test indicates a low organic matter content of the soil, work the recommended amounts of organic matter from the soils report form into the soil to a 2 to 4 inch depth before applying the starter fertilizer.
B. Reed sedge peat, moss peat, or a combination of the two materials is recommended as a source of organic matter. Well-rotted sawdust or well-rotted manure may be used as a source of organic matter although these decompose quite rapidly and maintain desirable soil physical conditions for a shorter period of time than do reed sedge or moss peat.

6.Finish grading

Rake area to finish grade just prior to seeding.
Light rolling will indicate any low spot or other irregularities of the area.

7.Seeding (by mechanical or hand broadcast)

A. Late summer to early fall is the best time for seeding permanent turfgrass. See seed mixtures for best seeding times.
B.Sow recommended seed mixtures as noted.
C. Divide total seed quantity in two equal lots, sowing one lot in one direction and the second lot at right angles to the first with a mechanical seeder or spreader (hand broadcasting).
D. Rake lightly or drag seeded areas to cover seed no deeper than 1/4 inch.
E.Roll lightly to firm soil around seed.

8.Mulching (Apply at a min. rate of 3 tons per acre)

A. Mulch seeded area with clean straw or marsh hay. Clean straw shall be either wheat or oat straw, free of viable seed, and well-cured to less than 20% moisture content by weight. Hay shall be Timothy hay, mixed clover or other acceptable native or forage grasses accepted by the engineer as equivalent. Light mulches (some soil showing through mulch) may be left on area to decompose. Heavy mulches (complete soil coverage) should be removed from the area within a few days after seed germination.

B. Anchor mulch with emulsified asphalt, as per manufacturer's recommendations, at a rate of 31 gallons for 1000 square yards.

C. Properly maintain mulched areas until the entire project has been completed. Promptly reapply mulch (and seed) materials which become dislodged or lost due to wind, rain, or other causes.

Notes:

1. The contractor shall be required to provide to McMillen Engineering proof of soil testing by a professional testing laboratory and rates of lime and fertilizer required prior to application.
2. The contractor shall be required to provide to McMillen Engineering the seed tags of seed to be used to determine if the seed mixtures are compatible to the mixtures specified prior to application.
3. See E&S control plans for control measure locations and for specific stabilizer requirements for problem areas and channels.

Turfgrass Establishment Methods (Hydroseeding)

The contractor shall have the option of applying the required amounts of lime and starter fertilizers at time of seeding if the method of hydroseeding is used in lieu of the site preparations described in Sections 3, 4-B, and 7 of the final site preparation for turfgrass establishment. The required amounts of basic soil amendments, if needed, and basic fertilizers shall be mixed into the topsoil at time of placement.

Topsoil Collection Procedures for Testing

Topsoil stockpile areas to be used for in-place final cover soil will need to be tested to determine the pH, amount of organic matter, and basic fertilizer application rates required to establish an acceptable groundcover.

Soil samples will be needed for testing. The following procedure shall be implemented in gathering the soil and preparing it for analysis at a laboratory:

1. To get reliable soils test results, take representative soil samples.
2. Soil shall be collected from at least 10 spots for every acre of area to be tested.
3. Soil samples should not be taken any closer than 50 feet to another sampling spot, if possible.
4. Soil samples shall be taken to a depth of 6 or 7 inches with a soil sampling tube or any other acceptable soils collection device. The topsoil stockpiles should also be probed and sampled at the core.
5. All soil samples collected from a particular sampling area shall be mixed together thoroughly in a clean, non-metallic bucket and allowed to dry.
6. A pint of this mixed dry soil shall be placed in a sturdy carton or plastic bag, labeled, and shipped to a private lab for analysis.
7. Each sample shall be documented and its place or origin recorded.
8. Additional information pertaining to the history of the soil analyzed shall also be provided.

Soil sample kits may be obtained from the Penn State Cooperative Extension Service or arranged through an independent testing lab.

Prior to spreading final soil cover, stockpiles shall be identified for use. Soil stockpile shall be tested at varying depths for consistency. A surface test, five foot depth test, shall be performed on the stockpile. If the soil stockpile is deeper, additional testing shall be done when the amount of soil removed reaches two feet below the previous lowest testing strata. All tests shall be verified for location and depth of test. A soil test log shall be kept on site.

Soil Classification and Types

Symbol	Soil type	Slope	Limitations	Meets USDA Hydric Criteria	Hydrologic Soil Group
CIB	Clarksburg silt loam	3 to 8%	1. Cutbanks Cave 2. Easily Erod ble 3. Depth to Saturated zone 4. Hydric/Hyrdric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Potential Pothole 13. Wetness	No	C
CIC	Clarksburg silt loam	8 to 15%	1. Cutbanks Cave 2. Easily Erodible 3. Depth to Saturated zone 4. Hydric/Hyrdric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Potential Pothole 13. Wetness	No	C
CuB	Culleoka channery silt loam	3 to 8%	1. Cutbanks Cave 2. Easily Erodible 3. Low Strength/Landslide Prone 4. Slow Percolation 5. Piping 6. Poor Source of Topsoil 7. Corrosive to Concrete 8. Frost Action	No	B
CuC	Culleoka channery silt loam	8 to 15%	1. Cutbanks Cave 2. Easily Erodible 3. Low Strength/Landslide Prone 4. Slow Percolation 5. Piping 6. Poor Source of Topsoil 7. Corrosive to Concrete 8. Frost Action	No	B
DoB	Dormont silt loam	3 to 8%	1. Cutbanks Cave 2. Easily Erodible 3. Depth to Saturated zone 4. Hydric/Hyrdric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Potential Pothole 13. Wetness	No	D
DoC	Dormont silt loam	8 to 15%	1. Cutbanks Cave 2. Easily Erod ble 3. Depth to Saturated zone 4. Hydric/Hyrdric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Potential Pothole 13. Wetness	No	D
DoD	Dormont silt loam	15 to 25%	1. Cutbanks Cave 2. Easily Erod ble 3. Depth to Saturated zone 4. Hydric/Hyrdric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Potential Pothole 13. Wetness	No	D
ErB	Ernest silt loam	3 to 8%	1. Cutbanks Cave 2. Easily Erodible 3. Depth to Saturated zone 4. Hydric/Hyrdric Inclusions 5. Low Strength/Landslide Prone 6. Slow Percolation 7. Piping 8. Poor Source of Topsoil 9. Corrosive to Concrete/Steel 10. Frost Action 11. Shrink-Swell 12. Wetness	No	D
ItD	Itmann extremely channery loam	8 to 25%	1. Cutbanks Cave 2. Low Strength/Landslide Prone 3. Slow Percolation 4. Poor Source of Topsoil 5. Frost Action 6. Droughty 7. Corrosive to Concrete/Steel	No	C
MeB	Matewan channery loam	3 to 8%	1. Cutbanks Cave 2. Slow Percolation 3. Poor Source of Topsoil 4. Corrosive to Concrete 5. Droughty	No	C
MeF	Matewan channery loam	25 to 50%	1. Cutbanks Cave 2. Slow Percolation 3. Poor Source of Topsoil 4. Corrosive to Concrete 5. Droughty	No	C

On Site Pollution

Remedy	Description	Remedy	Description
Excavation and Hauling	Allows containmenated soil to be taken off site and disposed at an approved hazardous waste facility.	Excavation and Hauling	Allows containmenated soil to be taken off site and disposed at an approved hazardous waste facility.
Isolation of Contaminants	This is done through appropriate capping and/or engineering controls. Capping can include a soil in-situ or an impervious surface such as a pavement or building. Caps are generally constructed of clean sediment, sand, or gravel, but can also include geotextiles, liners, or the addition of material such as organic carbon, to attenuate the flux of contaminants in to the overlying water. Thickness of the cap will typically depend on the exposure and risk determinations of the regulated substance, which would rely partly on the proposed use of the site.	Monitored Natural Attenuation	This remedy typically uses known, ongoing, naturally occurring processes to contain, destroy, or otherwise reduce the bioavailability or toxicity of contaminants in soil. Although burial by clean sediment is often the dominant process relied upon for natural recovery, multiple physical, biological, and chemical mechanisms frequently act together to reduce risk.
Vapor Barriers	For occupied buildings, vapor intrusion may also become an issue, which is the movement of contaminant vapors, typically located in subsurface soil or ground water, into a building. Contaminant sources can be from man-made sources, such as chemical leaks or spills, or can be naturally occurring, such as radon gas. if vapor intrusion is an issue, then occupied buildings will require vapor barriers.	Pump and Treat	This is for groundwater contamination requiring active treatment for areas of higher chemical concentration. This is most common for plumes of non-aqueous phase liquids (NAPL) or other chemical contaminants that can be separated from water, such as petroleum-based substances.
Blending of Soil	This option is most commonly used for agricultural lands that were contaminated with pesticides or other chemicals. Blending of soil typically involves stripping the approximately 6 inches of topsoil, where many contaminants are often captured, and blending these stripped soils with the cleaner underlying soils to bring the site within an acceptable health standard or to achieve background standard.	Note: All soil types are suscept ble to pollution.	

Soil Limitations and Solutions

Limitation	Solution
Cutbanks Cave	Appropriate precautions must be taken to safeguard workers during all trenching and excavation operations.
Corrosive to Concrete/Steel	In general the use of protective coatings such as bituminous and epoxy can be applied for prevention. For below ground concrete and steel pipes type two cement and cathodic protection methods are applicable alternative options
Drought	The proper amount of irrigation should be used in accordance with the soil type and location.
Easily Erodible	For easily erod ble soils minimize the area of disturbance, avoid disturbance on steep slopes, and inspect and maintain E&S BMP's.
Flooding	The proper amount of drainage should be used in accordance with the soil type and location.
Depth to Saturated Zone/Seasonal High Water table	Perform work during periods of low water table if water is encountered during trenching, a pumped water filter bag shall be used for dewatering.
Hydric/Hydric Inclusions	If soil meets USDA hydric criteria, obtain a wetland delineation report and avoid earthwork within designated wetland areas. If unavailable, obtain proper permit from DEP.
Low Strength/Landslide Prone	Avoid creation and saturation of steep slopes to prevent low strength or landslide prone situations, also do not use for road fill
Slow Percolation	Soil infiltration testing should be conducted if stormwater infiltration BMP's are to be constructed.
Piping	Install anti-seep collars on basin discharge pipes. Install pipe anchors on storm sewers and sanitary sewer lines that are located on steep slopes.
Poor Source of Topsoil	Utilize topsoils from other areas that are considered fair or good for restoration. Conduct soil tests to determine proper application of soil amendments to improve soil quality.
Frost Action	Ensure that foundation level is beyond the depth of expected maximum frost penetration . If applicable remove frost susceptible soil and replace it with course granular material that provides a barrier to unsaturated flow.
Shrink-Swell	For prevention the removal of susceptible shrink-swell soils done prior to construction. If this isn't possible the use of impermeable vertical barriers can be provided to control a moisture equil brium.
Potential Sinkhole	If possible avoid locations with open or active sinkholes. If not the use of both grouting and densification are effective techniques for prevention.
Ponding	The use of trenches and channels can redirect water from the ponding area.
Wetness	The proper amount of drainage should be used in accordance with the soil type and location.
On Site Pollution	Solutions for on site pollution include numerous remedies such as excavation and hauling, blending of soils, isolation of contaminants, pump and treat, monitored natural attenuation, and vapor barriers.

Topsoil Application

TABLE 11.1
CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS

DEPTH (in)	PER 1,000 SQUARE FEET	PER ACRE
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1074

Notes:

1. Graded areas should be scarified or otherwise loosened to a depth of 3 to 5 inches to permit bonding of the topsoil to the surface areas and to provided a roughened surface to prevent topsoil from sliding down slope.
2. Topsoil should be uniformly distributed across the disturbed area to a depth of 4 to 8 inches minimum - 2 inches on fill outslopes. Spreading should be done in such a manner that sodding or seeding can proceed with a minimum of additional preparation or tillage. Irregularities in the surface resulting from topsoil placement should be corrected in order to prevent formation of depressions unless such depressions are part of the PCSM plan.
3. Topsoil should not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. Compacted soils should be scarified 5 to 12 inches along contour wherever possible prior to seeding.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON

REVISIONS

NO.	DESCRIPTION	DATE	BY

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CONTRACT 2019-02
PREPARED FOR
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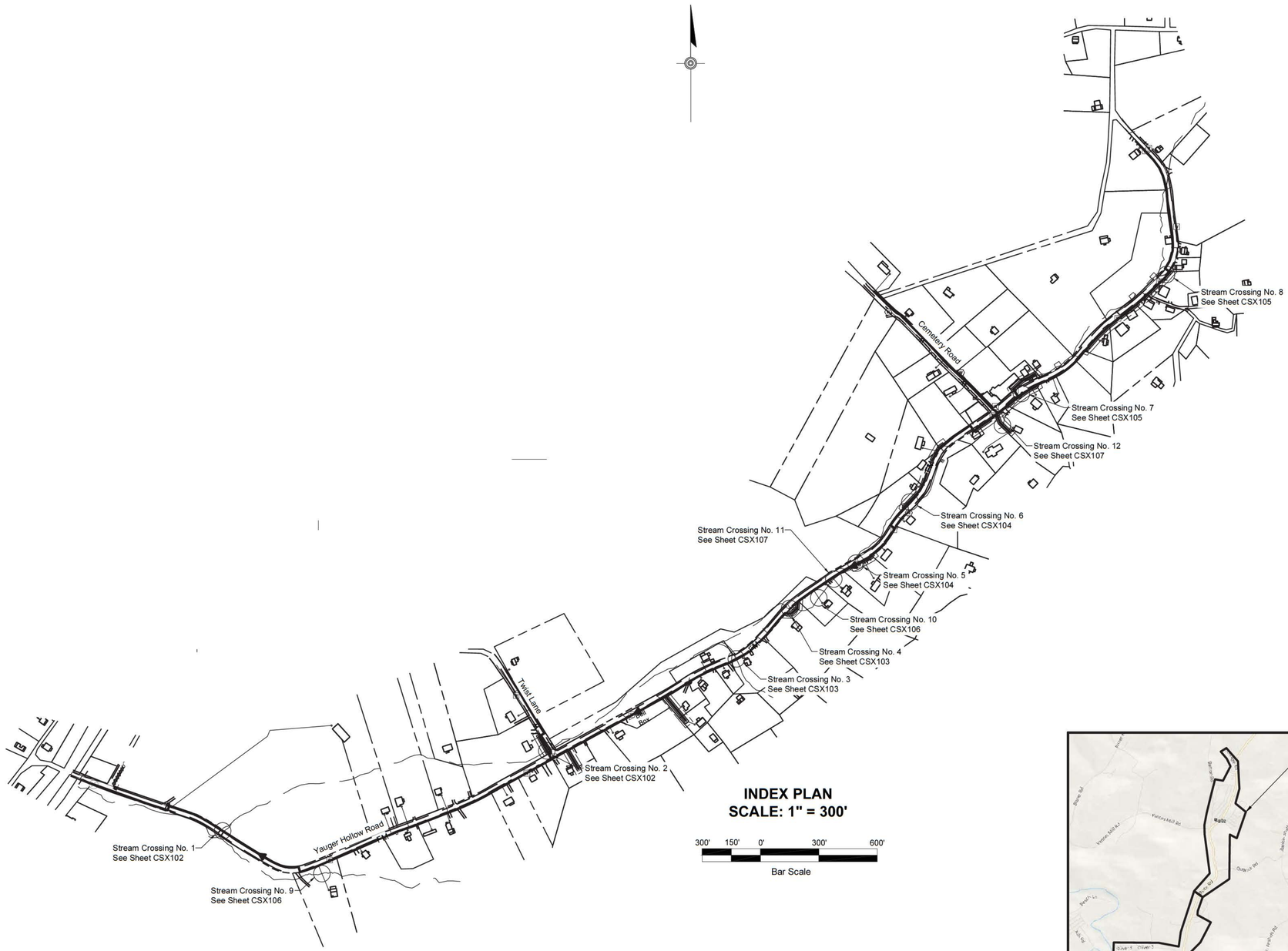

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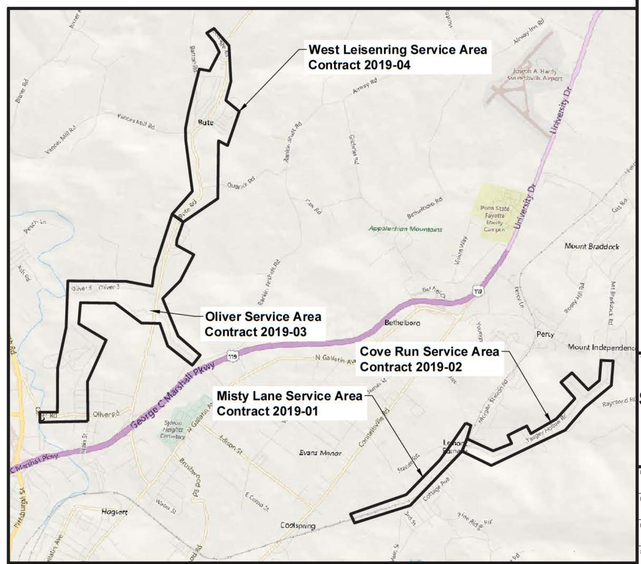
NOTE:
The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.



PROJECT AREA MAP

SCALE: 1" = 3,000'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

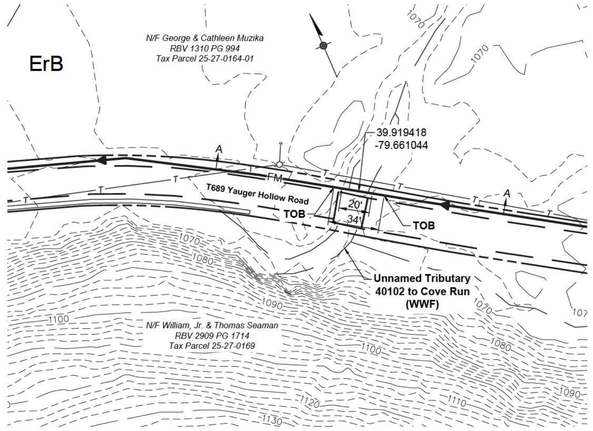
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
STREAM CROSSING INDEX PLAN

BOOK NO.	ME 293	JOB NO.	2017-68
DRAWN	JE 10/19/18	CHECKED	JS 10/19/18
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18
SCALE	AS NOTED		

SHEET NUMBER
CSX101

SITE PLAN
UTILITY LINE STREAM CROSSING 1
Unnamed Tributary 40102 to Cove Run

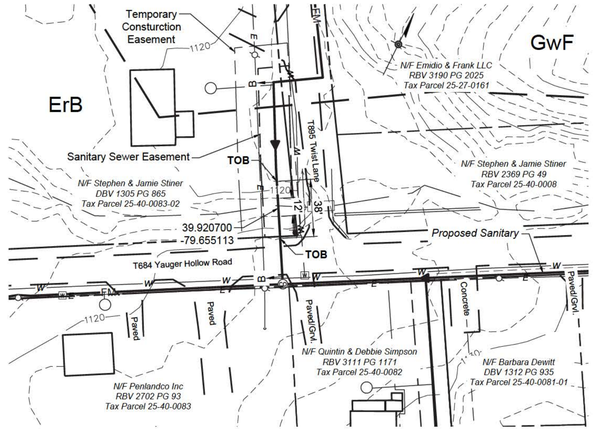


Method: Boring

Total Impact: Length: 34 L.F. Area: 340 Sq. Ft.

0' 50' 100' 150'

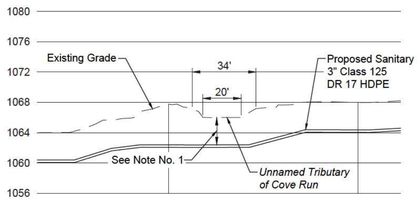
SITE PLAN
UTILITY LINE STREAM CROSSING 2
Unnamed Tributary 40102 to Cove Run



Method: Boring

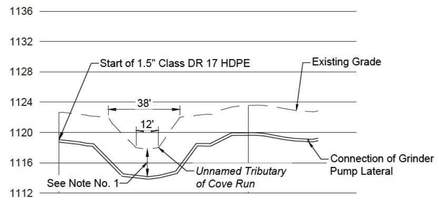
Total Impact: Length: 38 L.F. Area: 380 Sq. Ft.

0' 50' 100' 150'



CROSS SECTION A-A

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'



CROSS SECTION B-B

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'

Notes:

1. Minimum of 3' of cover over utility line or encasement/sleeve/conduit except in rock where 1' of cover shall be provided.
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INDEX KEY

SCALE: 1" = 2000'

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REVISIONS

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CONTRACT 2019-02
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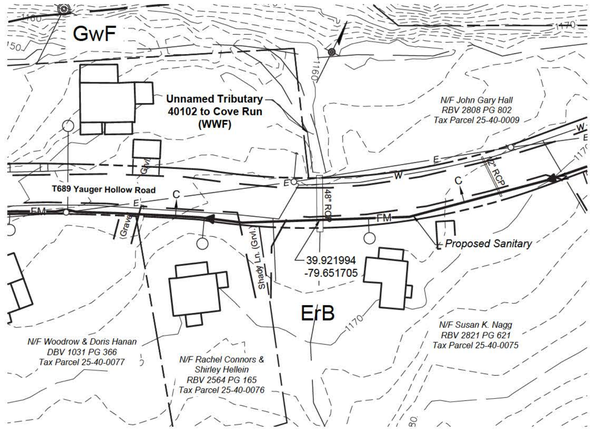
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
STREAM CROSSING PLAN AND CROSS SECTION

BOOK NO.	ME 293	JOB NO.	2017-68
DRAWN	JE 10/19/18	CHECKED	JS 10/19/18
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18
SCALE	AS NOTED		

SHEET NUMBER
CSX102

SITE PLAN
UTILITY LINE STREAM CROSSING 3
Unnamed Tributary 40102 to Cove Run

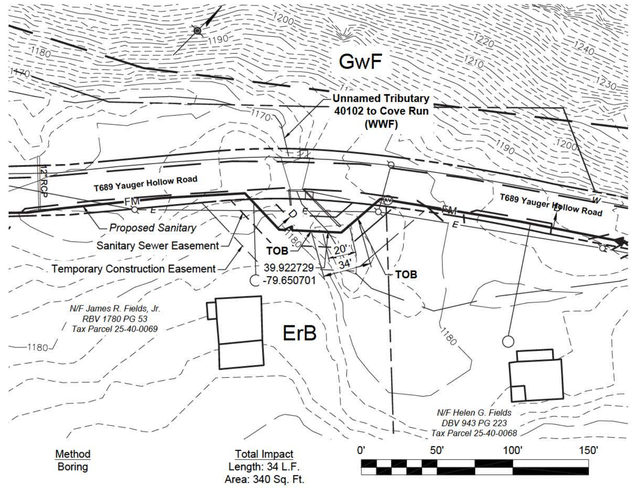


Method: Boring

Total Impact: Length: 4 L.F. Area: 40 Sq. Ft.

0' 50' 100' 150'

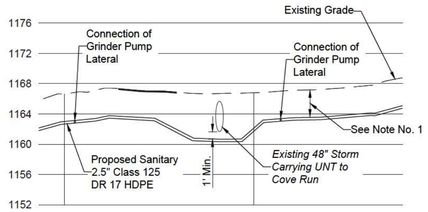
SITE PLAN
UTILITY LINE STREAM CROSSING 4
Unnamed Tributary 40102 to Cove Run



Method: Boring

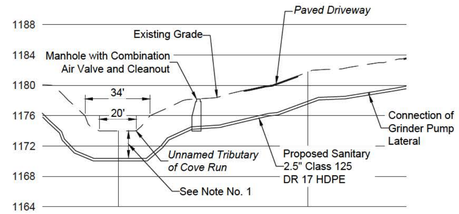
Total Impact: Length: 34 L.F. Area: 340 Sq. Ft.

0' 50' 100' 150'



CROSS SECTION C-C

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'



CROSS SECTION D-D

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'

Notes:

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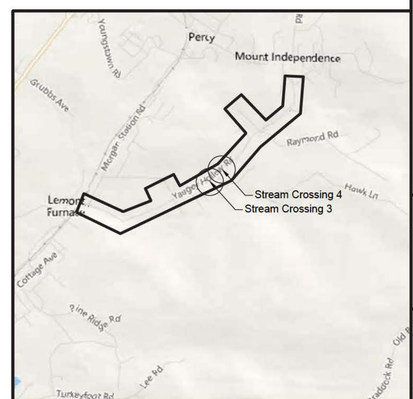

INDEX KEY

SCALE: 1" = 2000'

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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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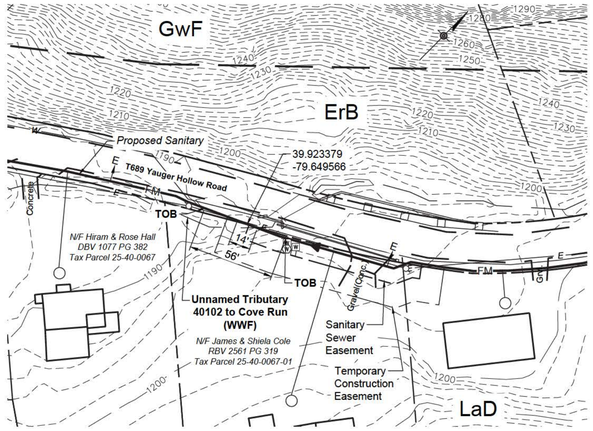
TITLE
STREAM CROSSING PLAN AND CROSS SECTION

BOOK NO.	ME 293	JOB NO.	2017-68
DRAWN	JE 10/19/18	CHECKED	JS 10/19/18
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18
SCALE	AS NOTED		

SHEET NUMBER
CSX103

SITE PLAN
UTILITY LINE STREAM CROSSING 5
Unnamed Tributary 40102 to Cove Run

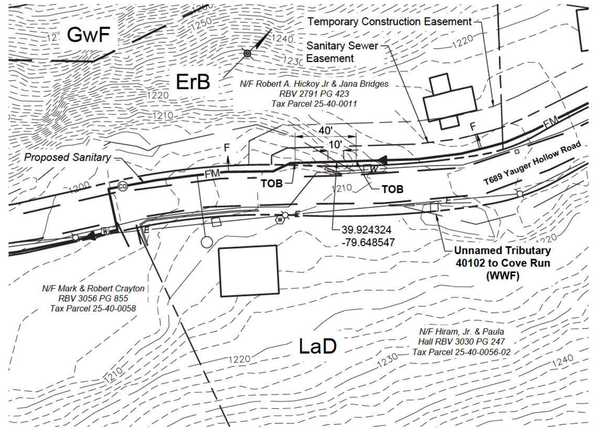


Method: Boring

Total Impact: Length: 56 L.F. Area: 560 Sq. Ft.

0' 50' 100' 150'

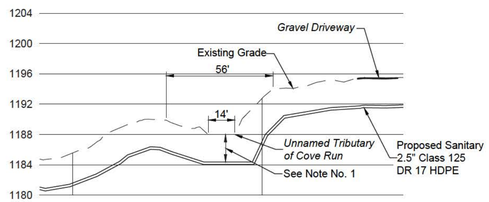
SITE PLAN
UTILITY LINE STREAM CROSSING 6
Unnamed Tributary 40102 to Cove Run



Method: Boring

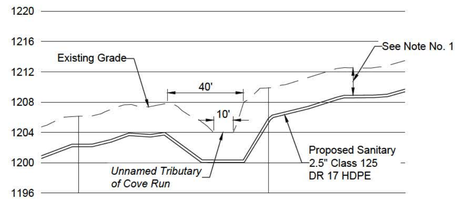
Total Impact: Length: 40 L.F. Area: 400 Sq. Ft.

0' 50' 100' 150'



CROSS SECTION E-E

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'



CROSS SECTION F-F

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'

Notes:

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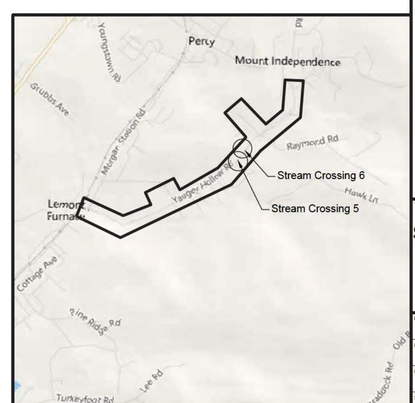

INDEX KEY

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PE-057459

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NORTH UNION TOWNSHIP, FAYETTE COUNTY
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TITLE
STREAM CROSSING PLAN AND CROSS SECTION

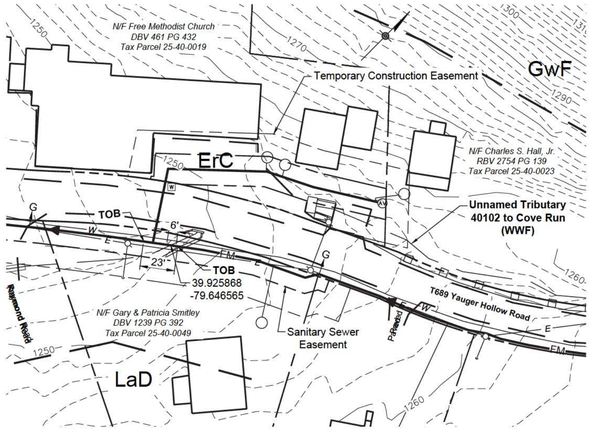
BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN	JE	10/19/18	
CHECKED	JS	10/19/18	
DESIGN	JE	10/19/18	
APPROVED	TMJR	10/23/18	

SCALE: AS NOTED

SHEET NUMBER
CSX104

SITE PLAN
UTILITY LINE STREAM CROSSING 7
Unnamed Tributary 40102 to Cove Run

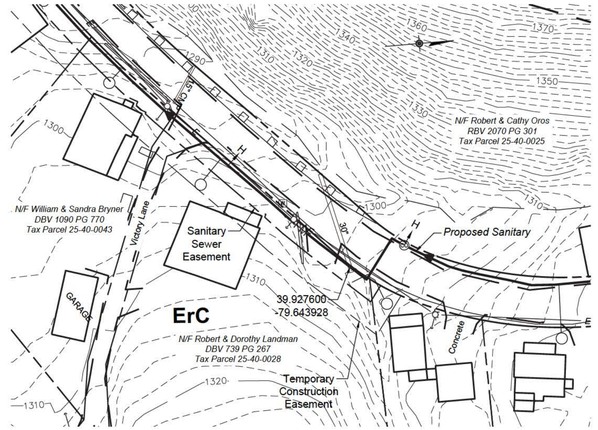


Method: Boring

Total Impact: Length: 23 L.F. Area: 230 Sq. Ft.

0' 50' 100' 150'

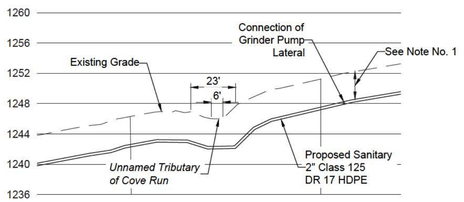
SITE PLAN
UTILITY LINE STREAM CROSSING 8
Unnamed Tributary 40102 to Cove Run



Method: Boring

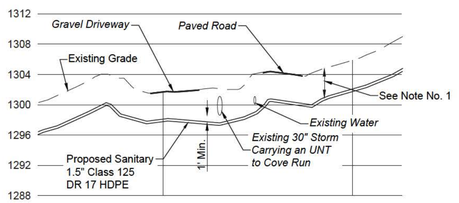
Total Impact: Length: 2.5 L.F. Area: 25 Sq. Ft.

0' 50' 100' 150'



CROSS SECTION G-G

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'



CROSS SECTION H-H

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'

Notes:

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BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN	JE	10/19/18	
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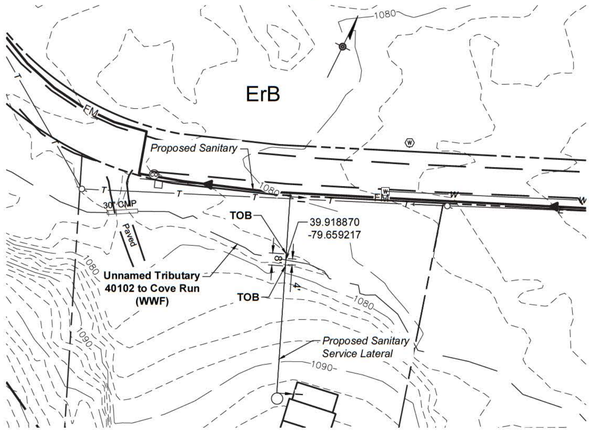
CHECKED	JS	10/19/18	
APPROVED	TMJR	10/23/18	

SCALE: AS NOTED

SHEET NUMBER
CSX105

SITE PLAN
UTILITY LINE STREAM CROSSING 9
Unnamed Tributary 40102 to Cove Run

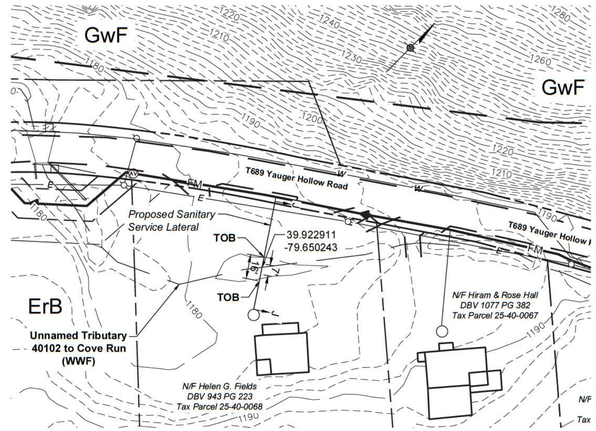


Method: Boring

Total Impact: Length: 8 L.F. Area: 140 Sq. Ft.

0' 50' 100' 150'

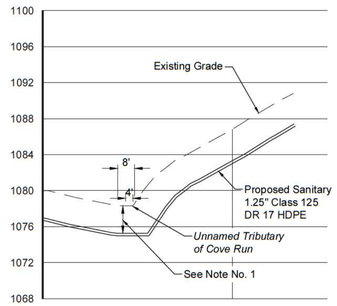
SITE PLAN
UTILITY LINE STREAM CROSSING 10
Unnamed Tributary 40102 to Cove Run



Method: Boring

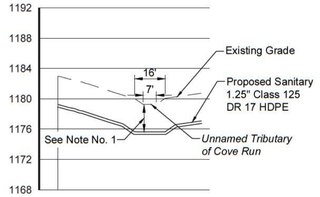
Total Impact: Length: 16 L.F. Area: 160 Sq. Ft.

0' 50' 100' 150'



CROSS SECTION I-I

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'



CROSS SECTION J-J

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'

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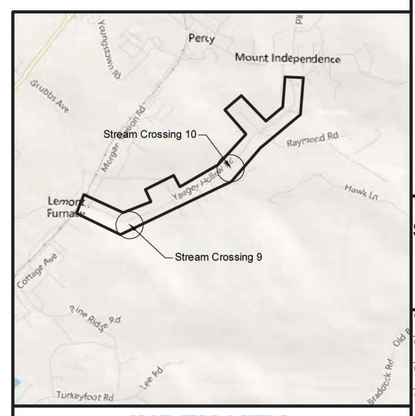

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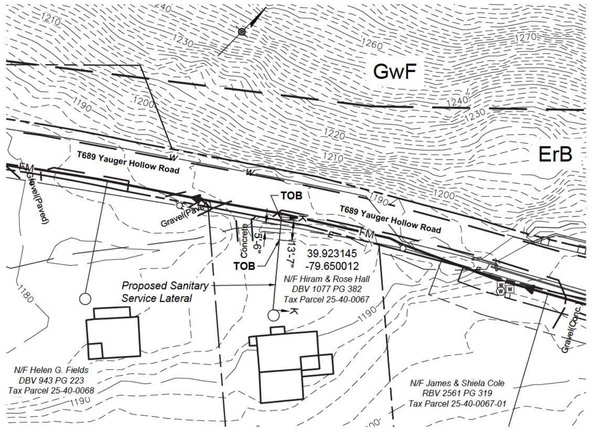
DRAWN	JE 10/19/18	CHECKED	JS 10/19/18
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18
SCALE	AS NOTED		

SHEET NUMBER
CSX106

SITE PLAN
UTILITY LINE STREAM CROSSING 11
Unnamed Tributary 40102 to Cove Run

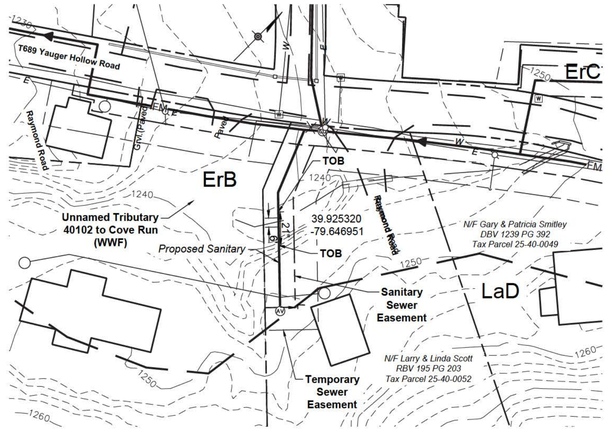


Method: Boring

Total Impact: Length: 13.6 L.F. Area: 136 Sq. Ft.

0' 50' 100' 150'

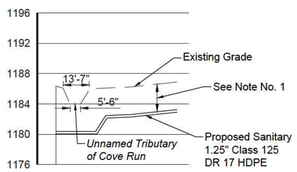
SITE PLAN
UTILITY LINE STREAM CROSSING 12
Unnamed Tributary 40102 to Cove Run



Method: Boring

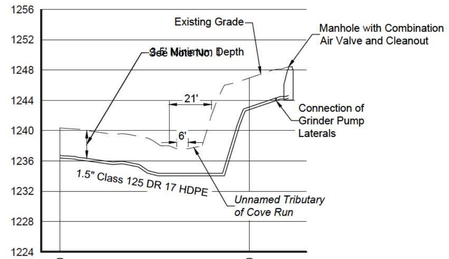
Total Impact: Length: 21 L.F. Area: 210 Sq. Ft.

0' 50' 100' 150'



CROSS SECTION K-K

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'



CROSS SECTION L-L

Vertical Scale 1" = 10'
Horizontal Scale 1" = 40'

Notes:

1. Minimum of 3' of cover over utility line or encasement/sleeve/conduit except in rock where 1' of cover shall be provided.
2. Utility line encasement/sleeve/conduit shall be installed with sufficient horizontal length to allow for future channel expansion.
3. Manholes may not be constructed within the channel.
4. Declaration is made to original purchaser of the plan. It is not transferable to additional institutions or subsequent owners.
5. Surveyor has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
6. This drawing is based upon tax mapping, Penn DOT mapping, LiDAR imaging and deeds of record. This Plan is not based upon an actual field survey and does not constitute a survey of any kind for the property shown hereon.
7. The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.

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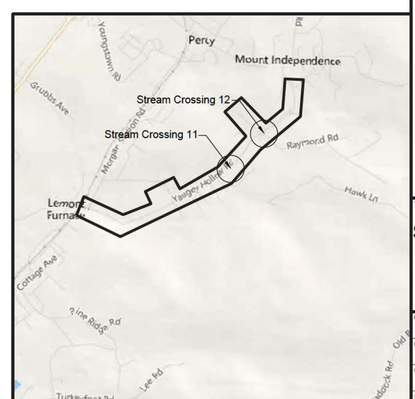


INDEX KEY

SCALE: 1" = 2000'

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY

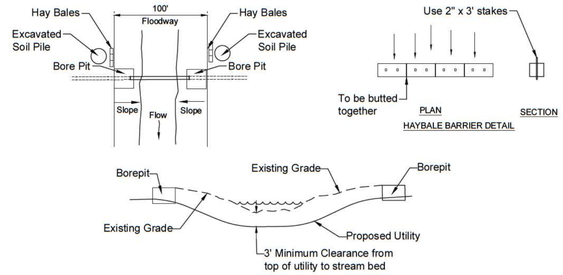
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
STREAM CROSSING PLAN AND CROSS SECTION

BOOK NO.	JOB NO.		
ME 293	2017-68		
DRAWN: JE	10/19/18	CHECKED: JS	10/19/18
DESIGN: JE	10/19/18	APPROVED: TMJR	10/23/18
SCALE: AS NOTED			

SHEET NUMBER
CSX107

Stream Crossing Details



Revegetation Measures
All disturbed areas preceding construction activities shall be seeded as follows:

Limestone Type MO - 3 ton / acre.
Fertilizer 5-10-10 - 500 lbs / acre
Seeding - Reed Canarygrass - 25 lbs. / acre Redtop 6 lbs. / acre
Birdsfoot Trefoil w/inoculant - 7 lbs / acre
Mulch - Clean straw - 115 lbs / 1000 S.F. Anchoring Material - Asphalt Emulsion - 150 gal/acre

Limestone and fertilizer can be applied at the same time. Seeding above shall only be applied in the Spring or Fall. Temporary seeding shall be applied at those times when the above cannot be applied. Temporary seeding consist of Ryegrass at 48 lbs. / acre, all other quantities listed above shall remain the same.

Notes:

1. Stream crossing operations shall not commence until the permit is issued from the PA DEP.
2. Work to be done at any stream crossing shall not exceed two consecutive days.
3. Borepits shall be dug with a backhoe from the stream bank.
4. Haybale barriers shall be placed so as to protect the stream from contamination by the material excavated from the borepit.
5. All disturbed areas shall have a minimum uniform 70% perennial vegetative cover per square foot before haybale barriers are removed.
6. 100' Floodway is the DEP standard floodway unless otherwise determined by FEMA or a Certified Flood Study.

STREAM CROSSING
CONTRACTOR'S MAINTENANCE PROCEDURES
(BEFORE, DURING AND AFTER SITE STABILIZATION)

1. Erosion control measures shall be implemented as outlined in the construction sequence notes.
2. During construction, the contractor shall make certain that all run-off is directed to the sedimentation control measures. Inspect and clean out all sedimentation control measures after every rainfall/storm water run-off occurrence/storm event.
3. During construction activities, the smallest area possible shall be disturbed to accomplish the work to be executed. Disturbed areas that will not be constructed upon shall be immediately seeded with a perennial ground cover as specified.
4. The contractor shall inspect stormwater control measures on a daily basis and make repairs as necessary within 24 hours of discovery of deficiencies.
5. All sedimentation control measures are to remain until disturbed areas are fully stabilized with a permanent minimum uniform perennial 70% vegetative cover per square foot, paved or riprapped where specified and detailed on the plans.
6. All soil stockpiles to remain more than 20 days shall be seeded with a grass cover (see seeding requirements).
7. During earthmoving activities silt barriers shall be securely staked in place and properly maintained until the disturbed area is satisfactorily stabilized with a minimum uniform perennial 70% vegetative cover per square foot or other stabilizing surfacing material specified.
8. During earth moving activities place excavated material upslope from construction areas. Stockpiles shall be set parallel to the contour of the land to reduce run-off.
9. Upon completion of earthmoving and construction activities, disturbed areas that are not to be paved shall be covered within 24 hours with topsoil to a depth of six inches. Final grading passes shall be made perpendicular to the direction of stormwater run-off and tracked to help hold soils in place.
10. Stone base shall be placed on roadbeds and driveways within 24 hours of establishing subgrade.
11. Stabilize by seeding, installing protection fabrics, and riprap, all permanent stormwater collection facilities within 24 hours of completion of construction/installation as detailed and specified.
12. Reseed and mulch barren areas not producing a minimum uniform perennial 70% vegetative cover per square foot cover in any given area within 24 hours of discovering deficiencies.
13. The owner will inspect disturbed areas that have been revegetated or stabilized and inform the contractor of any site stabilization and ground cover deficiencies prior to the removal of any erosion control measures.
14. Sediment removed from the erosion and sediment control measures shall be mixed in on the construction site as directed by the engineer and stabilized by seeding and mulching, or disposed at site that has an approved E&S plan. All materials not applicable to be placed as fill will be considered construction demolition debris and must be taken to a PA-DEP approved landfill.
15. Sediment traps installed shall be cleaned out at the required designed sediment collection limit elevation. The limit shall be marked with a clean out elevation stake installed 1/3 distance from the principal spillway within the trap's sediment collection area.
16. Should any additional erosion problems occur during construction, or any questions regarding the maintenance of control measures or facilities arise, contact the local county conservation district office and the engineer.

STREAM CROSSING
GENERAL INSTALLATION NOTES

1. The maximum size utility line is 12" diameter pipe with 20" steel casing.
2. All utility lines under stream beds shall be located such that there will be a minimum of three (3) feet of cover between the top of the utility line or encasement and the lowest point in the natural contour of the streambed, unless the utility line is in rock, where a minimum cover of one (1) foot shall be provided.
3. Borepits excavated for the installation of utility lines shall be the minimum size necessary. As soon as the utility line is installed and tested to ascertain no leakage, appropriate new or previously excavated backfill material shall be placed in the borepit and the area restored to its original condition and elevation and stabilized. Backfill material stored in connection with the installation must be properly retained out of the floodway so as to prevent its discharge, washings or runoff from entering the waterway prior to its placement as backfill.
4. Adequate measures shall be used to prevent sedimentation from the borepits from entering the stream.
5. During construction activities, all public and private property including existing vegetation, landscape features and monuments within, along and adjacent to the work area, shall be protected and preserved to the maximum degree possible. This shall include, but not be limited to, precautions taken to minimize damage, erosion, injury or destruction; prevent pollution; provide protection of all trees and other woody plants; special care being taken to protect the natural vegetation and surroundings to include all natural drainage ways, ponds, lakes, swamps, woods and fields, and storage of materials in such manner to prevent leaching which would be injurious to soils and to plants. Precautions should be taken to prevent damage to pipes, conduits and other underground structures.
6. Archaeological artifacts discovered during the performance of work authorized under this general permit must be adequately protected and their discovery promptly reported to the Director, Bureau of Historic Preservation, Historical and Museum Commission, P.O. Box 1025, Harrisburg, Pa.17120.
7. Owners shall investigate for drinking water intakes or reservoirs for public and private water supplies within five (5) miles downstream of the crossing and written notice shall be given at least ten (10) days prior to construction to operators of any such intakes or reservoirs. Owners must notify public and private water supply operators immediately and no longer than one (1) hour after an occurrence at the crossing site which results in the release of suspended solids and turbidity to the stream.
8. Mats, pads, or other similar devices shall be used where crossings of wetland areas by construction equipment cannot be avoided. Original grades through wetlands must be restored after trenching and backfilling. Any excess fill material must be removed from the wetland and not spread on-site. Mounding of fill material to allow for settlement in the trench will be permitted in accordance with best construction methods.
9. Deposition of dredged or excavated materials and all earthwork operations will be carried out in such a way as to minimize erosion of the material and preclude its entering into any wetland adjacent to the utility line crossing.
10. Utility line crossings of streams should be accomplished so that the line is at a right angle to the stream where possible, unless the crossing is installed on an existing bridge.

STREAM CROSSING
CONTRACTOR'S CONSTRUCTION SEQUENCE

1. Construct temporary erosion and sedimentation perimeter control devices including the rock construction entrance, existing stream and bank stabilization protection, the temporary rock filter, the haybale barriers, the sediment traps, and silt fencing for the utility construction. Install all perimeter control devices in accordance with the plan and details.
2. Borepit excavation for utility line crossings should be undertaken from the top of banks whenever possible.
3. All excavated borepit materials that will be subsequently used as backfill will be placed in a temporary stockpile located outside of the channel. These storage areas must be encircled with a barrier or sediment removal structure to prevent sediment laden runoff from reentering the channel. All excavated materials that will not be used on the site must be immediately hauled to a disposal site located outside of the floodplain.
4. Temporary access roads, crossings where repeated traffic is planned, and any other form of temporary fill or ballast located within the channel, will be constructed with clean rock fill. For major causeways, fill materials will be stabilized at all locations subject to wash by stream/river flows.
5. Disturbed bank areas should be stabilized immediately upon completion of the crossing.
6. All work, including stabilization, should be planned for periods of low stream/river flows and scheduled for completion in sufficient time to allow for the establishment of an erosion resistant vegetative cover on disturbed areas before the start of the dormant season.
7. Evaluate the entire site and re-establish any area that has not obtained a minimum uniform perennial 70% vegetative cover per square foot.
8. Upon achieving a minimum uniform perennial 70% vegetative cover per square foot over the entire disturbed site, remove all remaining temporary control devices.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

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REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459

REVISIONS

NO.	DESCRIPTION	DATE	BY
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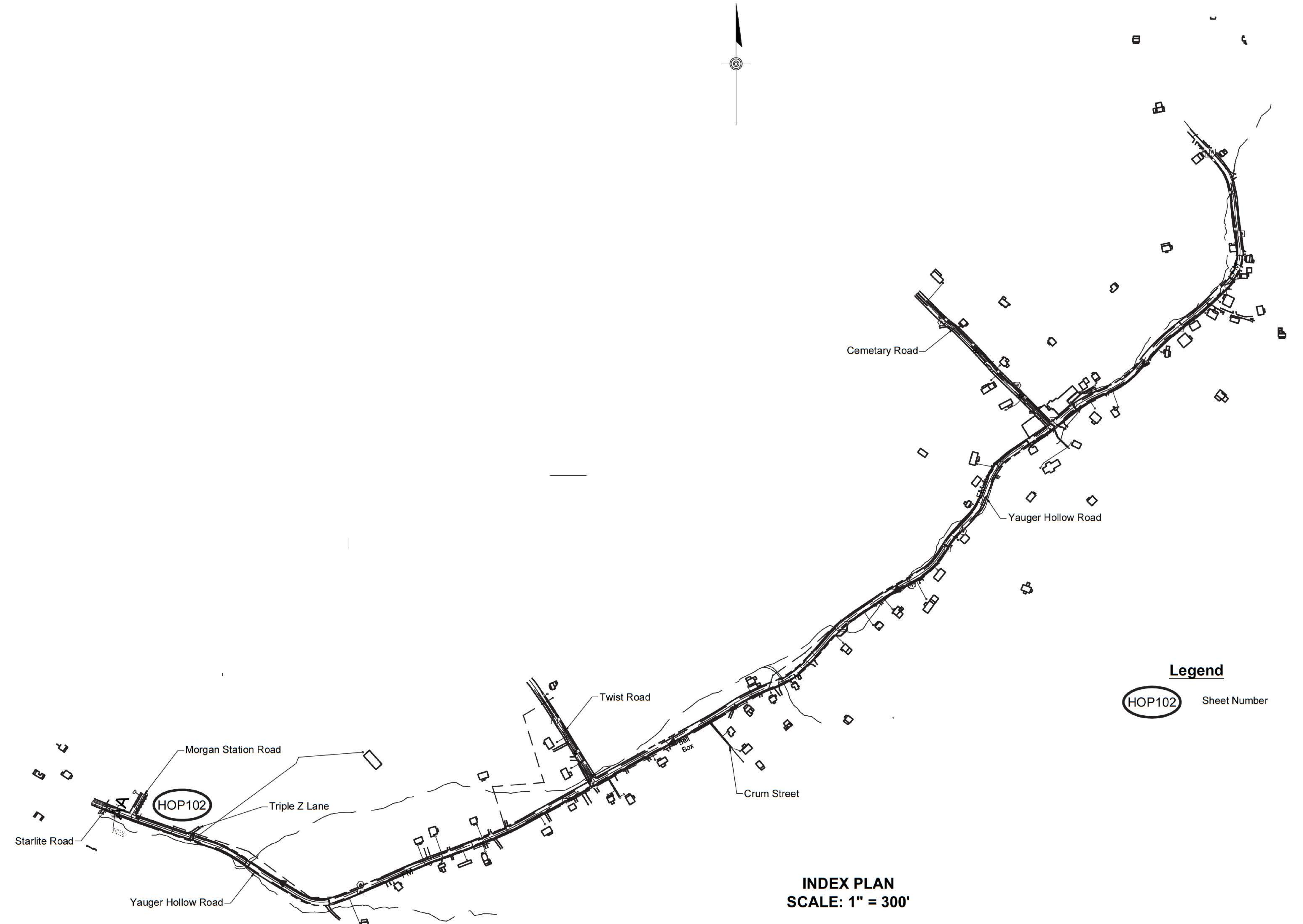
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
STREAM CROSSING DETAILS AND NOTES

BOOK NO.	ME 293	JOB NO.	2017-68
DRAWN	JE 10/19/18	CHECKED	JS 10/19/18
DESIGN	JE 10/19/18	APPROVED	TMJR 10/23/18
SCALE	AS NOTED		
SHEET NUMBER	**CSX108**		



Legend

HOP102 — Sheet Number

INDEX PLAN
SCALE: 1" = 300'

300' 150' 0' 300' 600'

Bar Scale

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PA Act 287 (1974) Requires 3 Working Days Notice

NOTE:
The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES LINDEN STANTON — PE-057459

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 156791

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE

HIGHWAY OCCUPANCY PERMIT INDEX PLAN

BOOK NO.	JOB NO.
ME 293	2017-68

DRAWN		CHECKED	
MV	2-19-18	JS	2-20-18
DESIGN		APPROVED	
JE	2-19-18	TMJR	3-26-18

SCALE: AS NOTED

SHEET NUMBER: **HOP101**

TABULATION OF OVERALL LENGTH - S.R. 1055
SEGMENT 0320 OFFSET 0909 TO OFFSET 1004 - 95 FT.

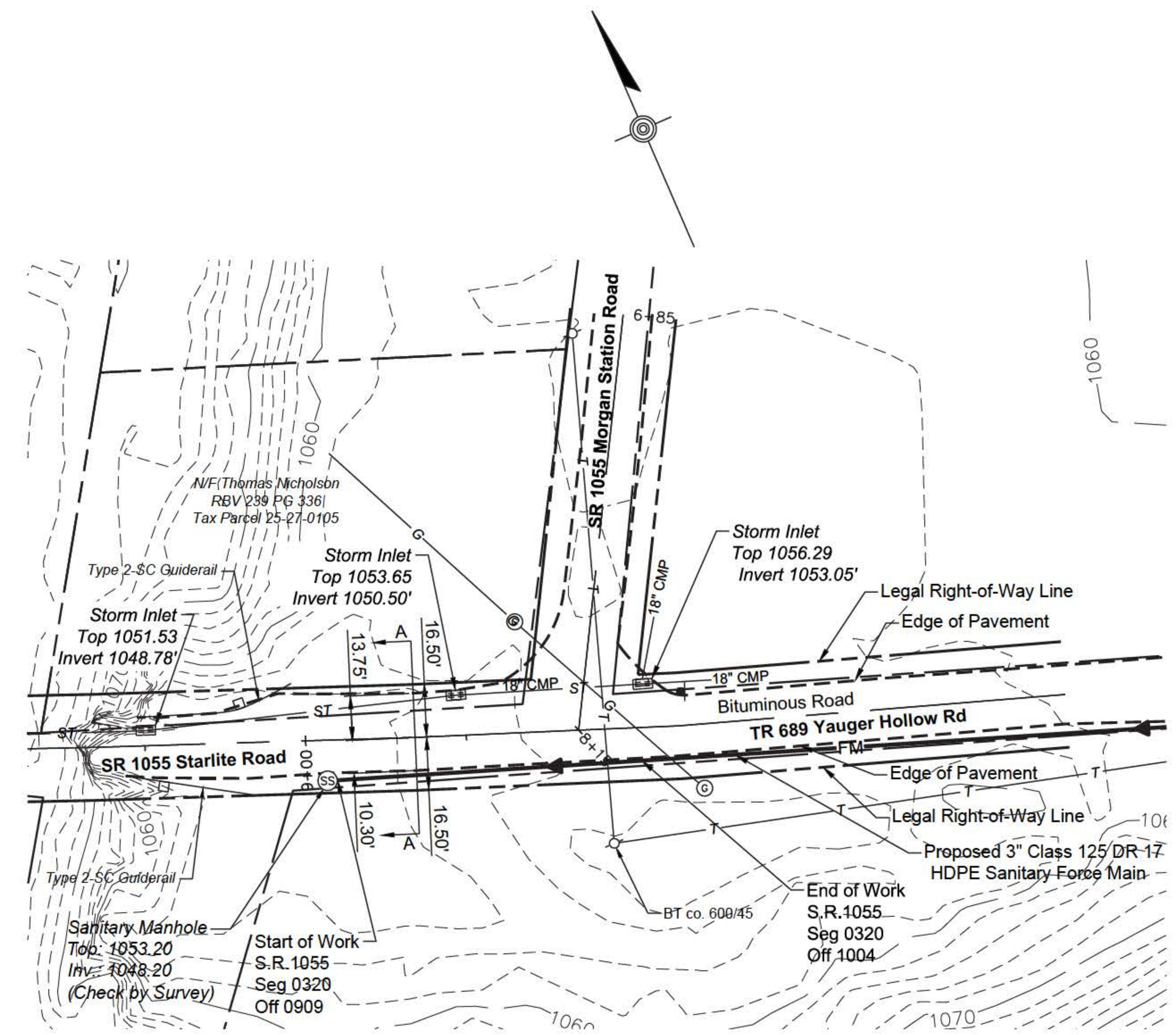
RECORD OF EXISTING ROAD TYPES
County: 26
Route: S.R. 1055
Seg/Off Begin: 0320/0909
Seg/Off End: 0320/1004
Layer Width: 21 (ft.)
SURFACE TREATMENT- SEAL COAT / DEPTH: .25 (in.) / Year: 2016
SURFACE TREATMENT- SEAL COAT / DEPTH: .25 (in.) / Year: 2010
BITUMINOUS WEARING CRSE ID-2 / DEPTH: 1 (in.) / Year: 2001
LEVEL BITUM WEARING CRSE ID-2 / DEPTH: 1 (in.) / Year: 2001
BITUMINOUS WEARING CRSE ID-2 / DEPTH: 1 (in.) / Year: 1982
BITUMINOUS WEARING CRSE ID-2 / DEPTH: 2.25 (in.) / Year: 1982

SCOPE OF WORK
This is a utility project to install a sanitary force main along the southern westbound lane of S.R. 1055 (Starlite Rd.) near the intersection of Morgan Station Rd. within the Township of North Union, Fayette County, Pennsylvania.

MAINTENANCE AND PROTECTION OF TRAFFIC
This project shall require the closure of the eastern eastbound lane of S.R. 1055 (Starlite Rd.) for a distance necessary to accommodate the installation of 3" Class 125 DR 17 HDPE sanitary force main, and then the closure of the western eastbound lane of S.R. 1055 (Starlite Rd.) for a distance necessary to accommodate the installation of 3" Class 125 DR 17 HDPE sanitary force main. Preliminary maintenance and protection of traffic accommodations to be considered within the construction area. Traffic control shall be in accordance with the guidelines specified in PennDOT Publication 213.

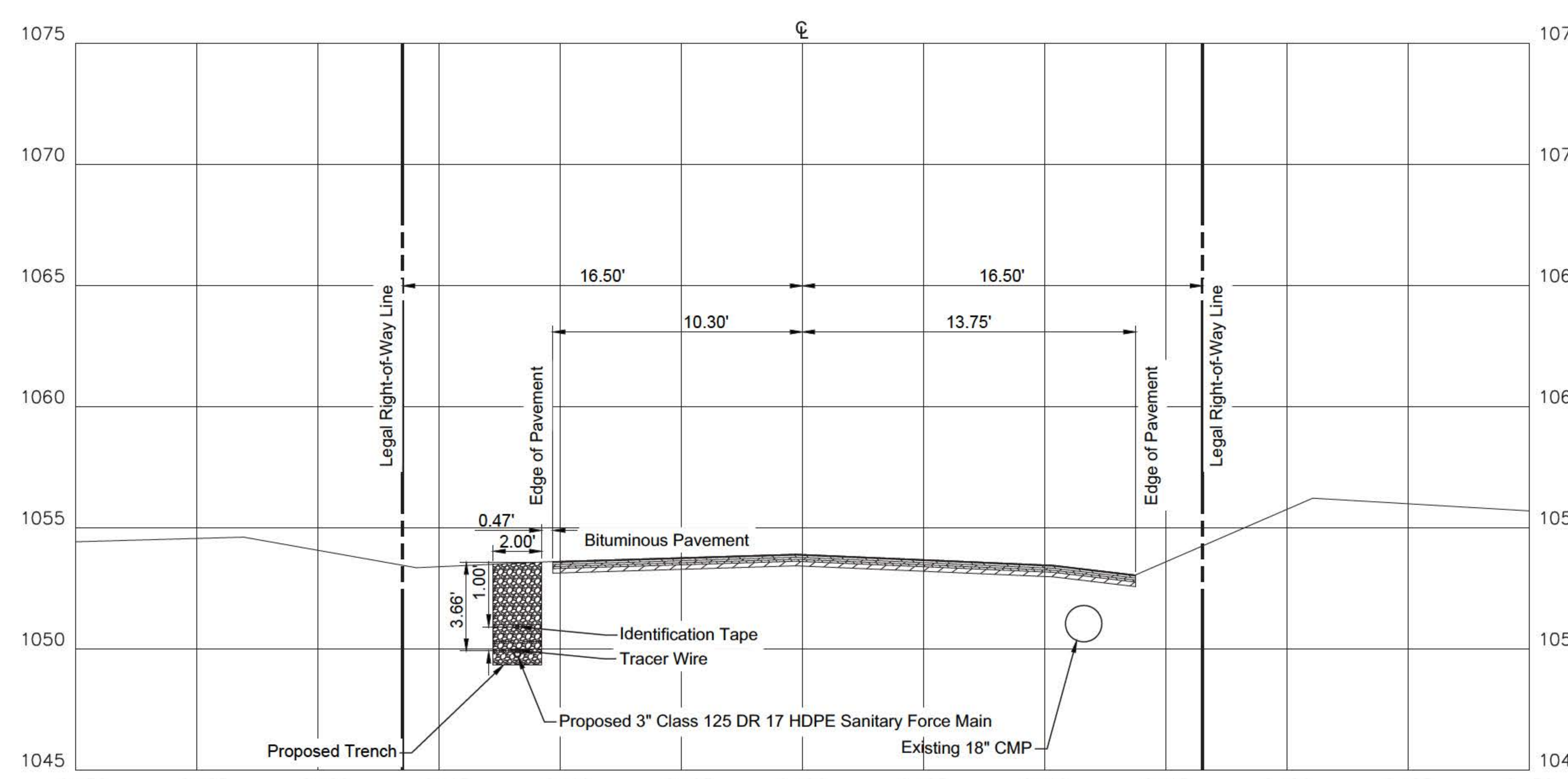
PAVEMENT MARKINGS
1. Apply pavement markings at the width indicated.
2. Use waterborne paint for all longitudinal lines. On final bituminous wearing course or concrete surface, apply two applications of paint. Apply the second application after the first is dry, within 24 hours.
3. Apply all pavement markings in accordance with the manufacturer's recommendations.
4. The contractor shall reapply any pavement marking that is damaged beyond the start/stop of work due to construction activity at no additional cost to the department.
5. Stopline shall be replaced if disturbed or damaged during construction.

GENERAL NOTES
1. The legal right-of-way for S.R. 1055 (Starlite Road) is 24.05 feet in width as provided by PennDOT 12-0. See plan for details.
2. This is a utility installation project.
3. There are no navigable streams on this project.
4. Do not interfere with the operation of any fire hydrant, fire box or police call box.
5. The horizontal alignment is based on pre-construction plans as surveyed by McMillen Engineering, Inc.
6. Areas filled with other than flowable backfill shall be backfilled with maximum 4" lifts, compacted to 100% and shall be tested and verified by a qualified third party.
7. Trenches that settle shall be replaced at the utility owners expense.
8. Road centerline stations refer to segment offsets in feet.
9. Declaration is made to original purchaser of the plan. It is not transferable to additional institutions or subsequent owners.
10. This drawing is based upon tax mapping, Penn DOT mapping, and deeds of record. This plan does not constitute a survey of any kind for the property shown hereon.
11. McMillen Engineering, Inc. has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
12. The underground utilities, if shown, have been located from existing drawings. McMillen Engineering, Inc. makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. McMillen Engineering, Inc. further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. McMillen Engineering, Inc. has not physically located the underground utilities.
13. A ten foot travel lane must be maintained at all times.



PLAN
SCALE 1" = 40'

0' 40' 80' 120'



SECTION A-A
S.R. 1055
SEG 0320 OFFSET 0934
SCALE 1" = 5'

0' 5' 10' 15'

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Serial No. 20172830925

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115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON
PE-057459

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 156791

REVISIONS

NO.	DESCRIPTION	DATE	BY
1.	PADOT comments	5/9/18	RH

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
HIGHWAY OCCUPANCY PERMIT PLAN

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN MV	2-19-18	CHECKED JS	3-20-18
DESIGN JE	2-19-18	APPROVED TMJR	3-26-18
SCALE AS NOTED			

SHEET NUMBER
HOP102

TRAFFIC CONTROL NOTES

1. All distances may be adjusted slightly to fit field conditions.
2. All signs shall be 36" x 36" for conventional roadways and 48" x 48" for expressways and freeways unless otherwise noted.
3. Traffic Control Plans may deviate from the typical applications shown in this publication to allow for conditions and requirements of a particular site or jurisdiction.
4. The three categories for work duration of temporary traffic control are:
   a. Short-Term Stationary Operation - Work that occupies a location up to 24 hours.
   b. Long-Term Stationary Operation - Work that occupies a location more than 24 hours.
   c. Mobile Operation - Work that moves intermittently or continuously.
5. The INCIDENT AHEAD (W25-101), SURVEY CREW (W21-6), MOWING NEXT (_) MILES (W21-14) and BRIDGE INSPECTION AHEAD (W2l-ll) signs may be used as an alternate to the ROAD WORK AHEAD sign (W20- 1) or ROAD WORK NEXT (_) MILES (G20- 1) where appropriate.
6. The needs and control of all road users through the work zone (including motorists, bicyclists, pedestrians and persons with disabilities in accordance with the Americans With Disabilities Act of 1990) shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.
7. Sign sheeting shall be of an approved type and listed in Publication 35 (Bulletin 15). Sheeting for freeways and expressways shall be fluorescent orange.
8. All warning sign colors shall have orange background and black border and legends unless otherwise specified.
9. All workers including flaggers shall wear a high-visibility fluorescent orange or yellow-green apparel with retroreflective material that meets the latest ANSI/ISEA publication entitled American National Standard for High-Visibility Safety Apparel and Headwear for Class 2 risk exposure anytime day or night. Class 3 high-visibility apparel should be considered for additional flagger visibility at night. During inclement weather, high-visibility fluorescent rain gear may be used. If FHWA amends or modifies their regulation, the amendment will take effect on the date specified by FHWA.
   Worker - A person on foot whose duties place him or her within the right-of-way of a street or highway, such as highway construction and maintenance forces, survey crews, utility crews, responders to incidents within the street or highway right-of-way, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a street or highway.
   Emergency and incident responders and law enforcement personnel within the TTC zone may wear High-Visibility Public Safety Vests that meets the performance requirements of the ANSI/SEA 207-2006 (see Section 1A. 11), or equivalent revisions, and labeled as ANSI 207-2006, in Lieu of ANS/ISEA 107-2004 apparel.
10. All flaggers at minimum shall have training as per the most current version of Publication 408, Section 901.3 Flagger Training.
11. For guiderail deflection distances refer to PUB 13M (DM-2) Design Manual 2 in Chapter 12, Table 12.3 (English) Guiderail and Median Barrier Systems page 12-10 and for temporary barrier see Appendix B.
12. A second shadow vehicle with a truck mounted attenuator shall be used when directed by the Assistant District Executive for Maintenance for bridge inspection teams while on limited access highway bridges.
13. Orange flags or flashing warning lights may be used in conjunction with signs.
14. Traffic Cones shall only be used during short term operations.
15. Definitions:
   a. Urban Street - A type of street normally characterized by relatively low speeds, wide ranges of traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian traffic, and more businesses and houses.
   b. Expressway - A divided arterial highway for through traffic with partial control of access and generally with grade separations at major intersections.
   c. Freeway - A limited access highway to which the only means of ingress and egress is by interchange ramps.
   d. Buffer Space - A space clear of equipment, vehicles, workers or materials as shown on figures as distance E.
   e. Roll Ahead Space - Provide a 100' to 250' space between the shadow vehicle and the work space in a closed lane. This space shall be clear of equipment, vehicles, materials or workers.
   f. Shadow vehicle - A vehicle positioned in the activity area in the advance of a work vehicle to provide advance information to approaching drivers or protection for the workers or work vehicle.
16. Equipment, vehicle and material storage.
   a. Except as indicated in paragraph (2), at the end of the workday, and whenever practical during the workday, based on actual site conditions, equipment, vehicles and material shall be stored a minimum of 30 feet from the edge of the nearest open travel lane or they shall be adequately stored behind a longitudinal including guiderail) barrier, or more than 2 feet behind the curb. Design Manual 2, Chapter 12, Table 12.3 presents minimum unobstructed distances that shall be maintained behind various guiderail systems and refer to Appendix B for temporary barrier deflection distances.
   b. (2) If site conditions prevent equipment, vehicles and material from being stored as indicated in paragraph (1), or if these items are placed for use or operation on or near the highway surface within the work zone, then barricades, drums or other protective devices shall be placed around the equipment, vehicles and material storage site, to warn and protect the traveling public consistent with this publication.
   c. (3) Workers are not permitted to park their vehicles within the highway right-of-way in a manner that compromises the safety of workers, pedestrians or the traveling public.
17. Neither work activity nor storage of equipment, vehicles, or material should occur within a buffer space.
18. Guidelines for installation and removal of traffic control setups.
   a. Required advance warning signs should be installed first so that protection is provided when channelizing devices are installed near the work area. If work zone signing is necessary for both directions of travel, sign installation should begin with the advance warning sign located furthermost from the work area and on the side of the roadway opposite the work area, sign installation should proceed down the roadway toward the work area. After the necessary signs are erected on the side of the roadway opposite the work area, sign installation may begin for the other direction of travel, beginning with the sign furthermost from the work area. In the process of installing the work zone signing, existing signs with conflicting messages shall be completely covered, removed or modified.
   b. If the work area is such that flagging operations are necessary, the flaggers may begin flagging operations after the advance warning signs are in place. Otherwise, the installation of channelizing devices at the work area can begin after the placement of the advance warning signs. These devices should also be installed in the direction of travel.
   c. If available, a shadow vehicle may be placed between approaching traffic and the workers who are installing channelizing devices around the work area. After channelizing devices are installed, the vehicle may be removed or moved inside the work area and work may begin.
   d. After work is completed, the work zone traffic control scheme may be dismantled. The channelizing devices which surround the work site should be removed first, in reverse order as it was installed (opposite the flow of traffic), followed by flaggers which may have been used. The work area signing may then be removed and normal traffic patterns restored.
19. As a general rule, signs shall be located on the right-hand side of the roadway. On divided highways and one-way highways where it is physically possible, signs should also be placed on the left-hand side of the roadway. (See PATA Sign Layout Figure)
20. Please refer to Publication 408, Section 901.3 (j) for traffic control requirements adjacent to pavement edge or shoulder drop-offs during construction.
21. Portable Sign Stands should not be used for a duration of more than 3 days.
22. A three cone advance setup may be used to alert oncoming traffic of a flagger during a flagging operation. This three cone advance setup, when used, is in addition to the traffic control setup being used at the time. The three cone advance setup is located in the center of the roadway. The three cone advance setup should be located at a distance from 150 feet in advance of the flagger or a distance no greater than the W20-7A sign. Each cone in the 3-cone setup shall be spaced between 10 to 50 feet apart.
23. When used with a truck-mounted attenuator (TMA), the shadow vehicle must be loaded to the weight recommended by the manufacturer of the TMA.
24. Shadow vehicles for mowing operations are optional.
25. Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:
   a. Ability to receive and communicate specific instructions clearly, firmly, and courteously.
   b. Ability to move and maneuver quickly In order to avoid danger from errant vehicles, this means a flagger shall not be in a sitting position and no vehicles around the flagger station.
   c. Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations.
26. Except in emergency situations, each flagger station shall be illuminated at night with an overhead lighting source having 30,000 to 40,000 lumens minimum of light output for an area of not less than 7,500 square feet. The lighting source shall have a minimum color temperature of 3,000 degrees and a maximum of 4,000 degrees. Position the light so the flaggers can be seen and not cause excessive glare to motorists traveling through the work zone.
27. A red flag shall only be used in an emergency when a Stop/Slow Paddle is not available or at intersections where a single flagger is used within the intersection. Additional flaggers shall be used to help control traffic movements at all times. When flagging at a signalized intersection, the signal should be placed in flash mode. If necessary, provide additional flaggers to properly control all movements of the intersection. In locations where multiple signalized intersections are located in close proximity, multiple intersections may be placed in flash mode to control the traffic flow through the work zone. Additional flaggers shall be used to control the traffic movements through each intersection.
28. See MUTCD chapter 6 and Publication 212 for additional guidelines and requirements.
29. Provisions and guidelines governing temporary traffic control for emergency work and incident management are given in Title 67 Pa. Code Chapter 212, Official Traffic Control Devices, §212.414 and in Chapter 6I in the MUTCD.
30. Consider using temporary longitudinal barrier to protect workers in all freeway and multi-lane work zones if the speed limit is 45 mph or greater, workers are present within one lane width of an active travel lane and a lane or shoulder is closed 24 hours per day for more than 2 weeks.
31. On roadways where the normal posted speed is greater than 50 mph and has more than one lane of traffic in the same direction approaching the work zone, install additional signing when traffic queues go beyond the advance signing. As needed, install additional signing such as but not limited to Road Work, xxxx Lane Closed, Work Zone Speed Limit and/or portable changeable message boards.

CONSTRUCTION NOTES

IN PAVED AREA:
1. 2a coarse aggregate backfill is required as per the district geotechnical engineer and under Section 459.8(g)(2) and Section 703.2 of Publication 408.
2. Shoulders to be restored in accordance with appropriate section of Publication 408 and roadway construction standards RC-25.
3. All trench and pit openings in the roadway or shoulder to be vibratory compacted in 8" maximum lifts such that the Publication 408 section 206.3(b) placement and compaction is satisfied by the following:
   a. Adjacent compactor passes do not leave a groove or dent in the 2a in the adjacent pass in the same lift.
   b. Compaction effort is at least 100% of the required dry weight density as determined according to PTM No. 106, Method B.

IN R/W BUT OUTSIDE OF PAVEMENT OR SHOULDER:
1. All disturbed areas outside of pavement or shoulder but in PennDOT right-of-way shall be restored to a condition at least equal to that which existed prior to the start of work and to 95% of the Dry Weight Density according to PTM No. 106, Method B. All trench and pit openings to be vibratory tamped in 8" maximum lifts.
2. The explicit restriction on the use of excavator-mounted hydraulic plate compactors has been removed. The maximum backfill layer thickness will remain at 4 to 8 inches at this time.
3. Note that an authorized inspector must be present for trench backfill work conducted in accordance with Section 601.3(f) & (q). The inspection form CS-6, must be submitted to the department representative promptly after installation. Permittee must provide an authorized inspector for all trench backfill within Department legal right-of-way in accordance with Section 601 in Publication 408.
4. On roadways where the normal posted speed is greater than 50 mph and has more than one lane of traffic in the same direction approaching the work zone, install additional signing when traffic queues go beyond the advance signing. As needed, install additional signing such as but not limited to Road Work, xxxx Lane Closed, Work Zone Speed Limit and/or portable changeable message boards.

GENERAL TRAFFIC NOTES

This work consists of the maintenance of traffic and the protection of the traveling public approaching the construction area and within the limits of construction and on approved detours.

Furnish, erect, place and maintain traffic control signs and devices and maintain traffic during hours of construction and at all other times in accordance with the methods indicated on these drawings, and,
1.) The special provisions of the contract.
2.) PDT Publication No. 212, Official Traffic Control Devices.
3.) PDT Publication No. 213, Temporary Traffic Control Guidelines.
4.) PDT Publication No. 35, Approved Construction Materials (Bulletin 15).
5.) PDT Publication No. 408/2016, Specifications.
6.) Manual on Uniform Traffic Control Devices (MUTCD).
7.) PDT Publication No. 236, Handbook of Approved Signs, November 19, 2013 Change 1 Edition.
8.) PDT Publication No. 111, Traffic Control - Pavement Markings and Signing Standards TC-8600 and TC-8700.

Immediately upon completion of the work remove and retain the devices unless otherwise specified in the special provisions. PENNDOT will remove any traffic control devices erected by department forces.

The contractor is responsible for contacting the Pennsylvania One Call System, Inc. at 1-800-242-1776 at least 3 full working days before digging. PA One Call shall be contacted before any sign post anchor is driven into the ground for temporary and permanent signing.

All traffic control devices shall be in place and inspected by the project inspector daily prior to the start of work.

Notify the District Traffic Engineer in writing two weeks prior to making any traffic pattern changes and when project is complete.

No roadway is permitted to have a lane closure or road closure starting November 01, and ending April 01, without an approved revised traffic control plan addressing winter operations.

Inspector-In-Charge shall report all traffic incidents to the district Traffic Engineer by copy of the traffic accident report from the Pennsylvania State Police.

All signs not in use shall be either covered or removed from sight. The contractor is to reinstall all signs that were removed for the construction project. Do not place any adhesive on the face of the sign.

All existing signage with conflicting messages shall be covered or removed and reinstalled when the project is complete.

All signs and devices are to be new at the beginning of the project and are to be maintained to PENNDOT's satisfaction throughout the project duration.

The contractor is responsible for maintenance and protection of pedestrians within the work area, principally adjacent to excavation areas.

All signs shall be reflectorized with material that meets PENNDOT specifications for sheet reflective material, Type III or Type VII fluorescent.

All channelizing devices must have reflective sheeting on both sides a minimum of 150 square inches for short term operations and 270 square inches for long term operations.

The reflective material for channelizing devices shall be a material that meets PENNDOT current specifications for sheet reflective material, barricade rails and vertical panels which will require Type III or Type VII.

This traffic control plan does not relieve the contractor of his responsibility as specified in Section 901.3 of Publication No. 408.

Adjust all distances slightly to fit field conditions.

Do not park, stop or store any equipment which is not being used for the current work operation, adjacent to an active travel lane. Store all equipment outside of the work area in a clear zone suitably protected staging area.

The traffic control devices shown do not necessarily depict the actual number of devices required.

Mount all signs on Type III barricades (see PUB 213 PATA sign layout and TC-8716 & TC-8717) unless otherwise shown or directed.

Erect all post mounted signs in accordance with TC-8716 & TC-8717.

Any special signs are to be fabricated in accordance with TC Standards 8700 series.

Attach Type C Lights to all drums or channeling devices used to protect open excavations adjacent to roadway.

Attach Type C Light on every third device in the longitudinal and every device in taper.

Provide new reflective sheeting for all signs and devices, i.e. supports, sign blanks, drums, vertical panels, etc. Shall be clean and free from all defects.

The contractor is responsible for maintaining access to all businesses and dwellings during all phases of construction.

Provide adequate number of Type III barricades and channeling devices at road closure locations to completely close the roadway.

Contractor shall notify local emergency authorities (E.G. Police, Fire, Medical), affected post office(s), businesses, school district(s).

Contractor is to notify the Assistant Construction Engineer he shall notify the Apras Coordinator at least fourteen days, prior to any significant traffic impacts (E.G. lateral width restrictions less than 12 feet.).

Control traffic in work areas in accordance with Pub. 213 for stationary short term operation if not addressed in the traffic control plan (TCP).

Flag persons are to be in radio communications at all times during working hours.

For short term operations - and for ingress, egress of construction deliveries and employees; use short term flagging operations and during hours of darkness, all signs shall be reflectorized or illuminated, and each advance warning sign shall have a Type B light mounted on top.

All short term operation lead in signs should be mounted on portable sign stands only as stated in Bulletin 15.

All changes to this traffic control plan must be approved, signed and dated by the traffic unit.

When removing guiderail, the guiderail section shall be reinstalled before the adjacent lane is reopened.

GENERAL NOTES

1. The contractor and all subcontractors shall comply with all Federal, State, and Local laws pertaining to Construction Safety and Health. The contractor and all subcontractors shall meet the requirements of the Federal Register XVII, Part 1926 of Title 29, the Federal Construction Safety Act, the OSHA Regulations, and all publications that update these publications. The owner is not responsible or liable for payment of any citations received by the contractor or subcontractor for failure to comply with the OSHA standards.
2. The underground utilities shown have been located from field survey information and existing drawings. The Surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The Surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The Surveyor has not physically located the underground utilities.
3. Project Agent shall ensure the installing contractor is alert for the unearthing of potential Archaeological Artifacts.
4. Upon the discovery of items with potential Archaeological value, the installing contractors supervisor shall notify the Project Agent.
5. The Project Agent shall notify PaDEP at (412) 442-4000 and PHMC at (717) 783-8497 by Phone and registered mail upon discovery of potential Archaeological Artifacts. PHMC shall proceed with an expedited review process. No work will be undertaken during this fifteen day, maximum, time period. Further work shall commence in accordance with the orders of PHMC.
6. Work on this project shall be performed by PennDot approved Companies only. All work and materials must comply with PennDot specifications.
7. Road centerline stations refer to segment offsets in feet.
8. This drawing is based upon tax mapping, and deeds of record. This Plan is not based upon an actual field survey and does not constitute a survey of any kind for the property shown hereon.
9. Utility Companies shall register with Pennsylvania One Call System, Inc. for all new Utility lines.
10. Areas backfilled with other than flowable backfill shall backfilled with maximum 4 inch lifts, compacted to 100% and shall be tested and verified by a qualified third party. Trenches that settle shall be replaced at the utility owners expense.
11. Contractor shall assure that in areas filled with material other than flowable back-fill that adjacent compactor passes do not leave a groove or dent in the 2A in the adjacent pass in the same lift.
12. Contractor shall assure that compaction effort is at least 100% of the required dry weight density as determined according to PTM No. 106, method B.
13. At the end of each work day all trenches must be backfilled and brought to grade with temporary pavement.
14. Historical research not withstanding, if road materials or construction is found to be different than that indicated, the contractor shall restore to match existing type, materials, thickness, etc, IAW applicable PennDot Standards.
15. An authorized inspector must be present for trench backfill work conducted in accordance with Section 601.3(f) & (q). The inspection form CS-6, must be submitted to the Department Representative promptly after installation. Permittee must provide an authorized inspector for all trench backfill within department legal right-of-way in accordance to Section 601 in Publication 408. The contractor performing the trench backfilling work is to print their name, title, signature, and date the bottom of the second page of form CS-6. The inspectors signature and date is just above the contractors portion also on this second page of form CS-6. Both the contractor and the inspector must sign form. The explicit restriction on the use of excavator-mounted hydraulic plate compactors has been removed. The maximum backfill layer thickness will remain at 4 to 8 inches at this time if excavator-mounted plate compactors are used as per Strike Off letter 481-13-03 dated: November 22, 2013. Authorized inspector must complete form CS-6(11-13) [must note on form: the permittee name and highway occupancy permit number] as indicated on the form and turn in completed forms to the district office for permit records.
16. Trenches in R/W but outside of pavement or shoulder: All disturbed areas outside of pavement or shoulder but in PennDot right-of-way shall be restored to a condition at least equal to that which existed prior to the start of work and to 95% of the dry weight density according to PTM no. 106, method B. All trench and pit openings to be vibratory tamped in 8" maximum lifts.
17. 2A coarse aggregate backfill is required as per the district geotechnical engineer and under section 459.8 (G)(2) and section 703.2 of publication 408.
18. Shoulders to be restored in accordance with appropriate section of publication 408 and roadway construction standards RC-25. All trench and pit openings in the roadway or shoulder to be vibratory compacted in 8" maximum lifts such that the publication 408 section 206.3 (b) placement and compaction is satisfied by the following.
19. Adjacent compactor passes do not leave a groove or dent in the 2A in the adjacent pass in the same lift.
20. Compaction effort is at least 100% of the required dry weight density as determined according to PTM No. 106, method B.
21. No openings for the purpose of placing utility facilities or other structures under the improved area by drilling, boring, driving or tunneling may be made closer than 3 feet to the edge of the shoulder, unless the permit authorizes a lesser clearance. (67 Pa. Code, Chapter 459.8 (a)(2)).
22. No parallel opening may be made for more than 200 linear feet at one time, unless authorized by the permit, unless authorized by the permit. (67 Pa. Code, Chapter 459.8 (c)(4)).
23. An opening shall be backfilled by the permittee in accordance with the Departments standard specifications and details. (67 Pa. Code, Chapter 459.8(g)).
24. All open pits and excavations must be backfilled with suitable material at the end of each work day.

TRACER WIRE NOTE

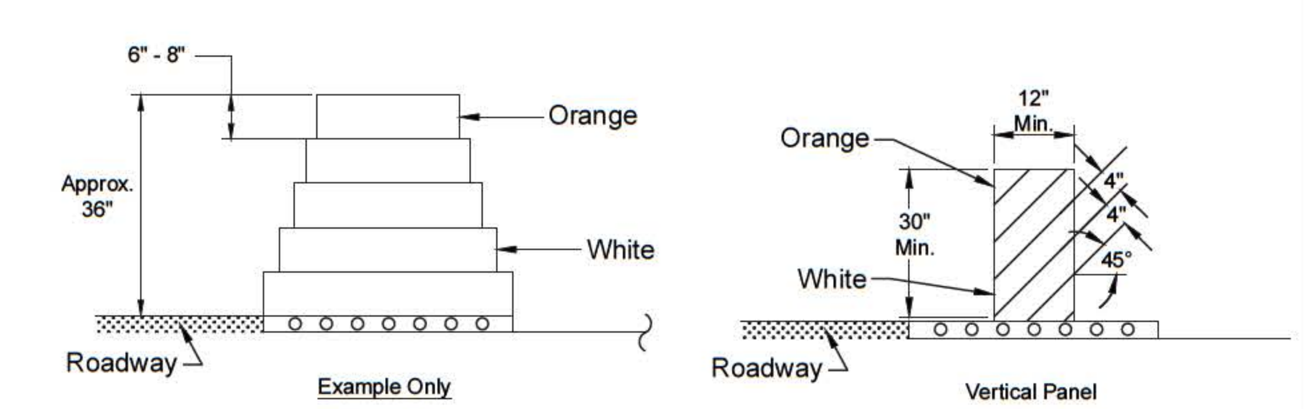
Tracer wire for directional drilling/boring shall be No. 12 AWG hard drawn, solid extra-high-strength copper-clad steel conductor, insulated with a 45 mil, high density, high weight molecular weight polyethylene insulation, and rated for direct burial use at 30 volts. Insulation color shall meet APWA color code standard for identification. Copperhead Soloshot or equivalent with a minimum of 5 years underground testing, or 5 year warranty shall be used.

SIGNING NOTES:

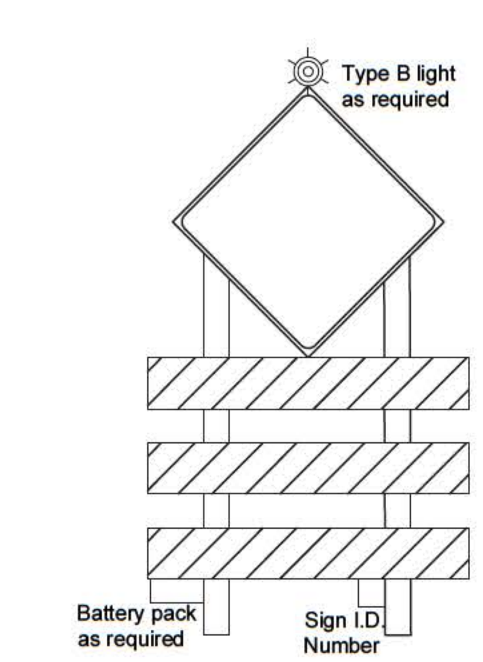
1. Install signs, pavement markings, and delineation in accordance with the most current version of PennDOT Publication 111M Traffic Control, TC-8600 and TC-8700 series including Change 1, 2, and 3, PennDOT Publication 46, the Federal Highway Administration Manual on Uniform Traffic Control (2009 Edition), PennDOT Publication 212, Official Traffic Control Devices, or as directed by the PennDOT District 12-0 representative.
2. Details other than those indicated are on the following standard drawings:
   a. TC-8600 13 Sheets June 13, 2013
   b. TC-8602 4 Sheets June 13, 2013
   c. TC-8702B 9 Sheets June 13, 2013
   d. TC-8702C 2 Sheets June 13, 2013
   e. TC-8702E 5 Sheets June 13, 2013
3. Any legal or private sign that is to be removed for construction that is within the project limits but is not included in the project sign tabulations shall be reinstalled at or nearest its original location. If sign is determined unnecessary, it shall be returned to its owner.
4. Any sign that is to remain or be reinstalled, that becomes damaged in any way during construction or during removal, storage, or reinstallation, shall be replaced in kind with a new sign at no additional cost to the Department.
5. Place all Signs entirely within the legal Right-of-Way.
6. For fabrication of all standard signs, refer to Pennsylvania Department of Transportation Publication 236.
7. All Type B post mounted signs are to be installed using square channel posts and anchors of the appropriate size. Anchors shall not extend more than 1 inch above the ground line.
8. Do not remove existing signs until the new signs are installed. If existing signs conflict with construction, install temporary signs as directed by a PennDOT District 12-0 representative. Do not remove the temporary signs until the new signs are installed.
9. Apply an installation date permanently to the back side of each sign installed within the projects limit of work.
10. Contractor shall call PA One Call System, inc at 1-800-242-1776 prior to digging for all signs.
11. Apply pavement markings at the width indicated.
12. Use waterborne paint for all longitudinal lines. On final bituminous wearing course or concrete surface, apply two applications of paint. apply the second application after the first is dry, within 24 hours.
13. For all transverse applications, use epoxy (on concrete) and hot thermoplastic (on asphalt).
14. Apply all pavement markings in accordance with the manufacturer's recommendations.
15. The contractor shall reapply any pavement marking that is damaged beyond the start/stop of work due to construction activity at no additional cost to the department.
16. Install guide rail delineators as per TC-8604, or as directed by PA Dept. of Trans.
17. Install Raised Pavement Markers in accordance with the PennDOT Publication 111M Traffic Control.

WINTER OPERATION NOTES

1. The contractor shall contact the county maintenance office one day prior to starting work. Approval must be given by the county maintenance manager or the assistant county maintenance manager for the area in question before work can begin.
2. All traffic control devices (including signs) shall be removed from the legal right-of-way at the end of each work shift.
3. All long term stationary work zone signs shall be post mounted from November 01 to April 01.
4. No grates are permitted in travel lanes for drainage and water.
5. All open excavations shall be brought up to the existing grade with acceptable aggregate (or temporary cold mix, where applicable) and maintained to provide a smooth pavement surface, suitable for driving, until permanent restoration can be matched with pavement structure approved by the county inspector.
6. No steel plates within the state right-of-way are permitted.
7. There is no guarantee implied that county maintenance will allow work to take place. Work will be weather dependent.
8. If the contractor is using the travel lanes during the winter shutdown, they must keep the travel lanes clear from mud and snow during working hours. Freeze and thaw snow shall drain away from travel lanes into the drainage system.
9. If weather changes, all devices must be removed immediately for winter operations.
10. If weather changes, all lanes shall be cleared and material put down on the road surface before lanes are open to traffic.



TYPICAL CLOSURE PROTECTION
VARIABLE LENGTH
N.T.S.



TYPE III BARRICADE FOR ADVANCE WORK SIGNS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JAMES LINDEN STANTON

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 156791

REVISIONS

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

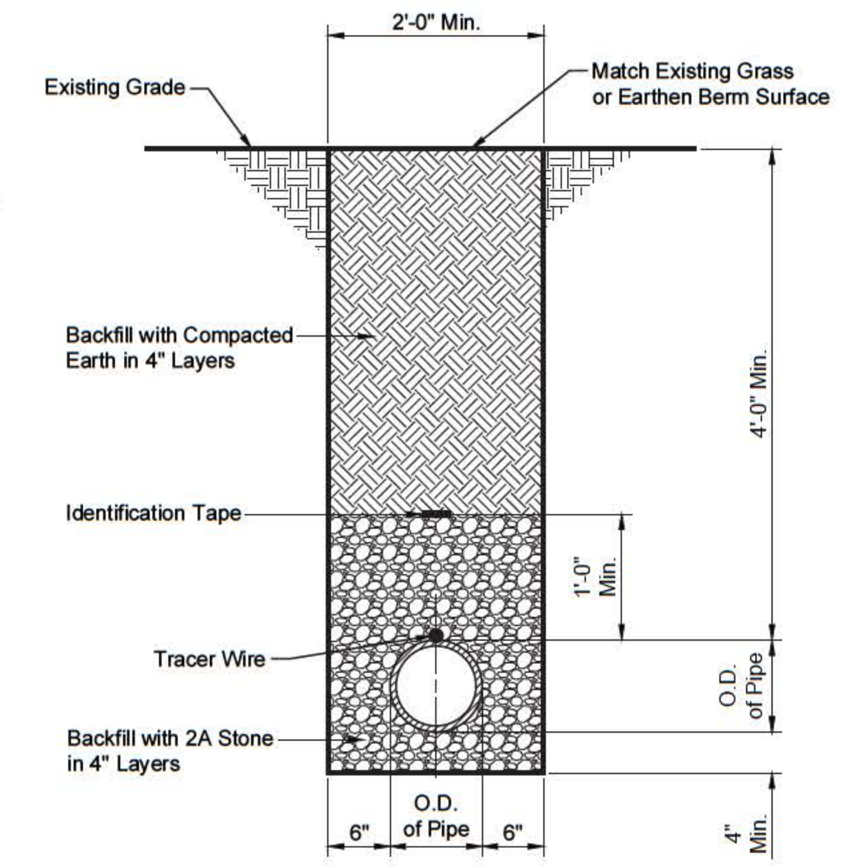
TITLE
TRAFFIC AND CONSTRUCTION NOTES

BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN MV	2-19-18	CHECKED JS	3-20-18
DESIGN JE	2-19-18	APPROVED TMJR	3-26-18

SCALE AS NOTED

SHEET NUMBER HOP 103

Notes:
1. Select Backfill is defined as native soil excavated from the trench, free of rocks, foreign materials, and frozen earth.
2. For trenches closer than 3' to the edge of the pavement along roadways, backfill the entire trench with compacted 2A modified crushed stone.
3. Tracer wire required only for force mains.

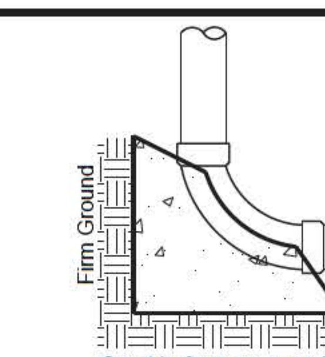


TRENCH OUTSIDE OF IMPROVED BERM

N.T.S.

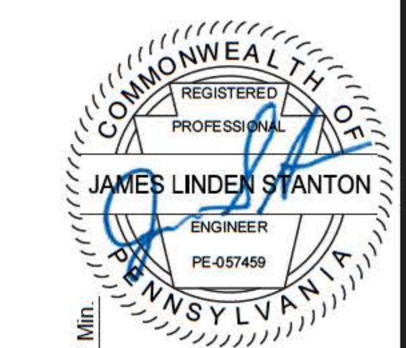
BLOCKING TABLE							
Pipe Size	Area Sq. In.	Total Press. in Lbs.	Area of Block in Square Feet				
			Tees & Plugs	90° Bends	45° Bends	22.5° Bends	11.5° Bends
2"	12"	2,700	0.7	1.0	0.5	0.5	0.5
4"	26"	5,800	1.5	2.1	1.1	1.0	1.1
6"	48"	10,800	2.7	3.8	2.1	1.0	1.0
8"	79"	17,800	4.5	6.4	3.5	2.0	1.0
10"	114"	25,700	6.4	9.0	4.9	2.5	1.25
12"	154"	34,700	8.8	12.9	6.9	3.9	1.7

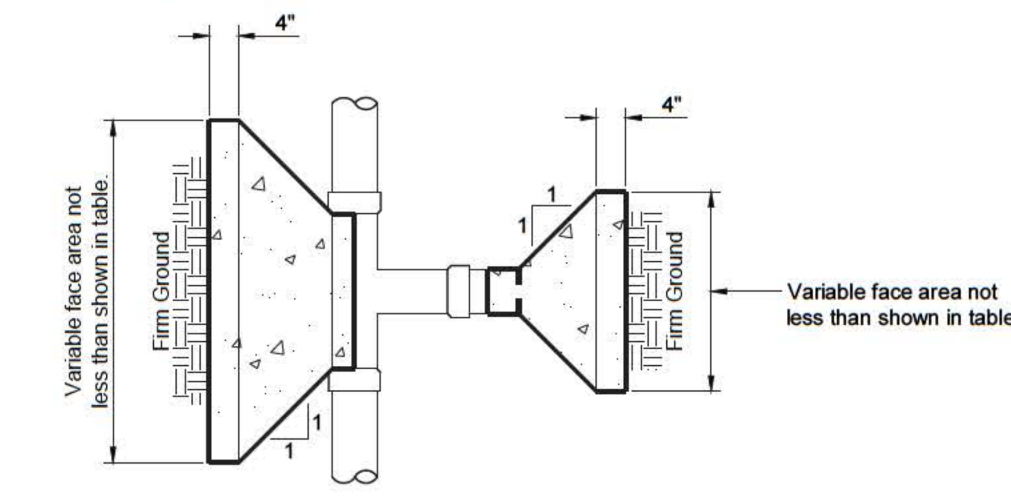
Note:
Method of blocking is to be used for all fittings and bends in excess of ten degrees except as otherwise specified.



BLOCKING FOR BENDS

N.T.S.





BLOCKING FOR TEES AND PLUGS

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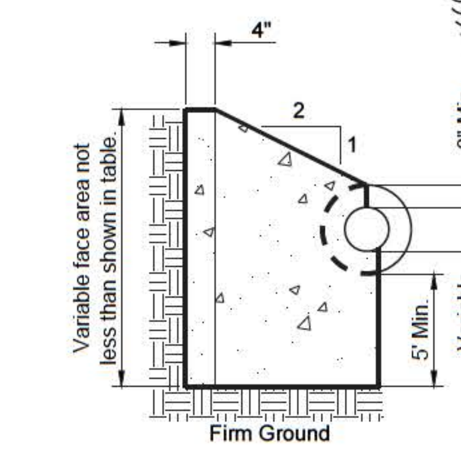
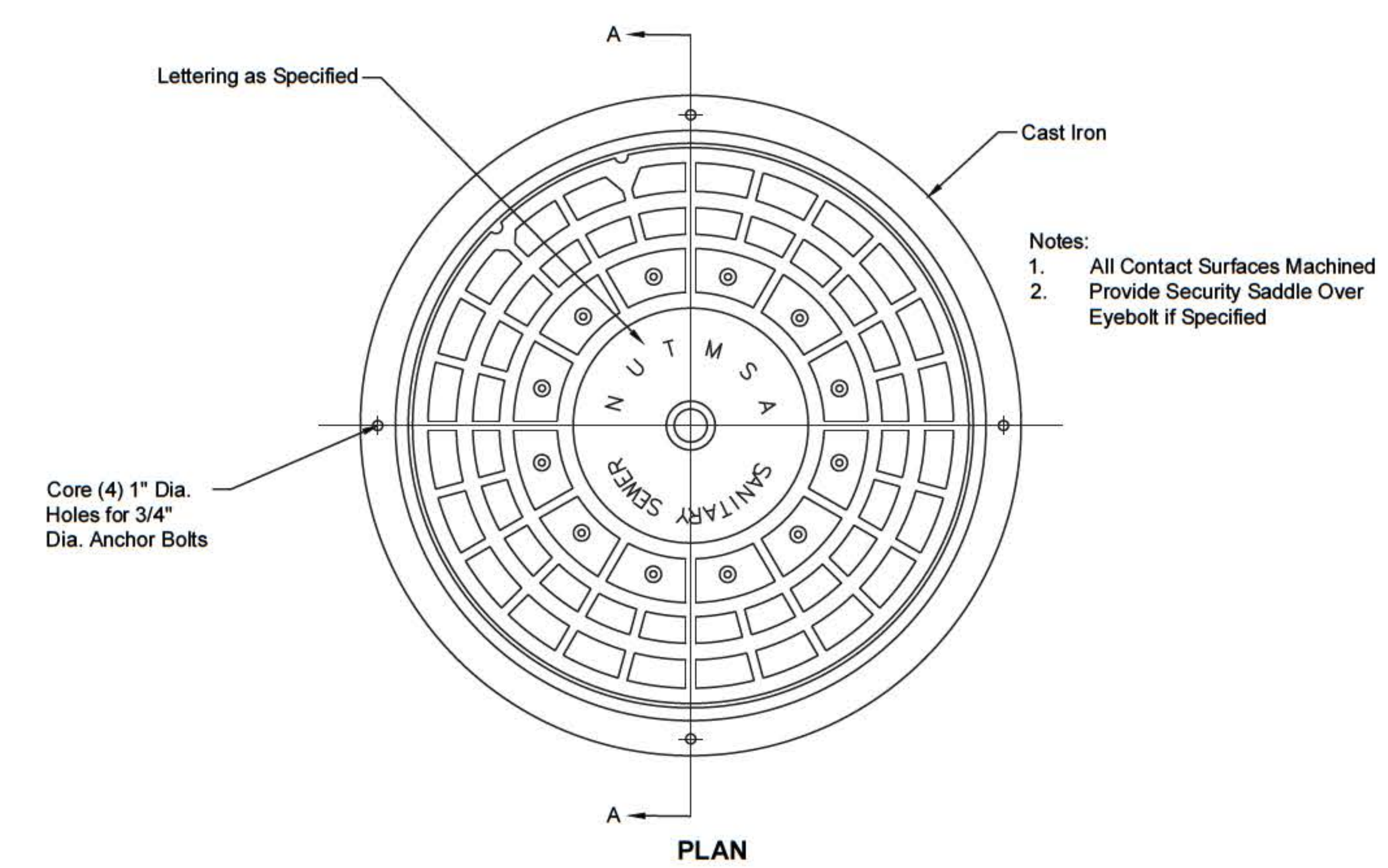


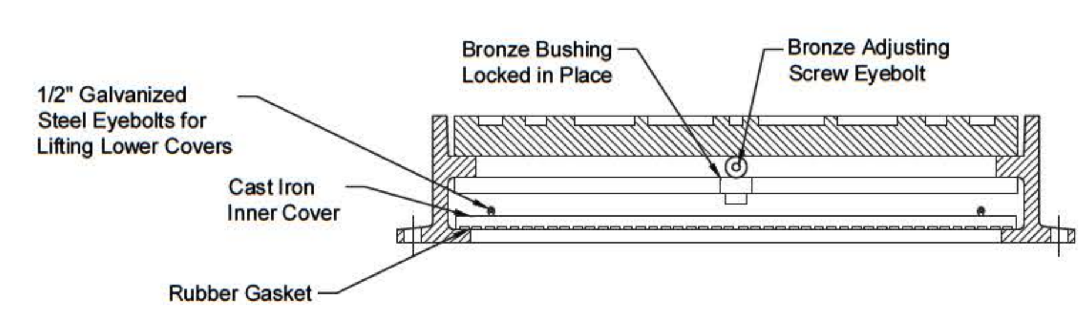
APPLICABLE TO TEES, WYES AND BENDS

N.T.S.



Notes:
1. All Contact Surfaces Machined
2. Provide Security Saddle Over Eyebolt if Specified

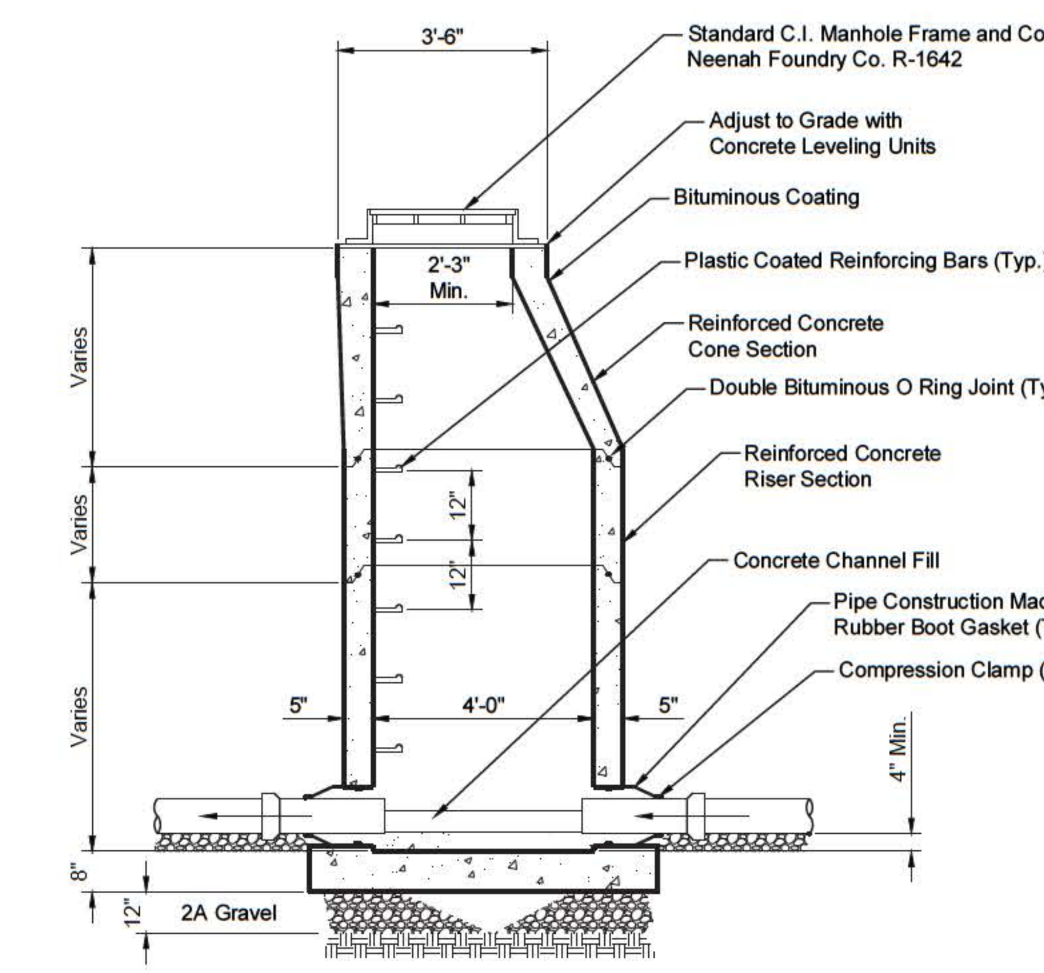
PLAN



SECTION A-A

WATERTIGHT MANHOLE FRAME AND COVER

N.T.S.



Note:
1. All precast concrete products shall be inspected at the plant prior to delivery to the project site to ensure compliance with PADOT specifications.

STANDARD MANHOLE WITH PRECAST BASE

N.T.S.

CONNECTION TO EXISTING FACILITIES

A. General Requirements - The contractor shall make all required connection of the proposed sanitary sewer into existing sewer facilities, where are as shown on the drawings.

B. The cost of making connections shall be included with the unit price bid for the pipe, complete in place.

SERVICE LINES

A. The contractor shall install 45° wye branches in the sanitary sewer mains in all locations where building sewer service line connections are shown on the drawings directly entering the sewer main. Connection of the sanitary sewer service lines shall be made into the wye branches by means of 45° bends. The connection shall be made thoroughly watertight, and Class C concrete shall be placed under each connection to bear on undisturbed earth to firmly support the connection. At least 2 ft. of the lateral pipe with a cap shall be placed beyond a wye branch on the main line.

B. The contractor shall mark the location of each "Y" branch with a hardwood stake extending from the sewer to the surface of the ground.

C. The contractor shall locate and keep a record of all openings and "Y" branches as located by measurement to the nearest downstream manhole. Such records shall be delivered to the engineer during the progress of the work.

TESTS

A. General Requirements - The contractor shall test the completed sewers, including manholes for leakage, compaction and deflection as specified herein after the trench backfill is completed. The tests will be conducted as approved by the township engineer.The contractor shall furnish all necessary equipment, materials and labor for performing the tests as specified.

The contractor shall notify the township engineer and municipal authority at least 48 hours prior to the start of testing. Testing shall only be performed in the presence of the township engineer and municipal authority representative. Sections of pipe tested prior to completion of the project shall be subject to additional leakage tests, if warranted in the opinion of the township engineer prior to acceptance of the project.

B. Procedure and Method of Testing - All sewer lines shall be thoroughly flushed with water to obtain free flow through the lines. All obstructions shall be removed and all defects corrected prior to testing. The sewer lines shall be given the following tests:

Air Testing - All gravity sewers shall be subject to a low pressure air test. The contractor shall furnish all necessary labor, equipment and material to perform the test. After flushing and removal of all obstruction, the sections of sewer line shall be tested from manhole to manhole. All openings, laterals, stubs, branches, wyes, tees and pipe ends shall be securely capped or plugged and adequately braced. Air testing may be dangerous if, because of carelessness, a line is improperly prepared for testing. An improperly installed plug could cause a sudden explosion. No one shall be allowed in the manholes during testing. The air test should consist of inflating the system to 5 psi and maintaining the pressure for 5 minutes without any pressure drop.

Deflection Tests - After installation and final backfill, all pipelines constructed of flexible materials shall be measured for vertical ring deflection by passing a test ball or "go no go" gauge through them to demonstrate that the deflection is less than 3-1/2% of the diameter of the pipe.

Weir Test - The sanitary sewer may also be required to be checked for actual infiltration by installation of a V-notch weir at the lower terminus of the new work or each section of new work. Measurements shall be made immediately following periods of extended rain or when the ground is saturated with water. The maximum infiltration permitted for the system shall be 100 gallons per inch of pipe diameter per mile of pipe per day. The sources of any infiltration shall be determined and corrected.

C. Correction of Defective Work - If leakage exceeds the specified amount, the contractor shall, at his own expense, make the necessary repairs or replacements required to permanently reduce the leakage to within the specified limit, and the tests shall be repeated until the leakage requirement is met.

Any defects found in the system are to be repaired at the expense of the contractor so as to conform strictly to the specifications. All repairs shown necessary by the tests are to be made, broken or cracked pipe replaced, all deposits removed, and sanitary sewer left true to line and grade and entirely clean, free from lumps of cement, protruding gaskets, bu kheads, etc., and ready for use before final acceptance by the owner.

CLEANING AND REPAIR

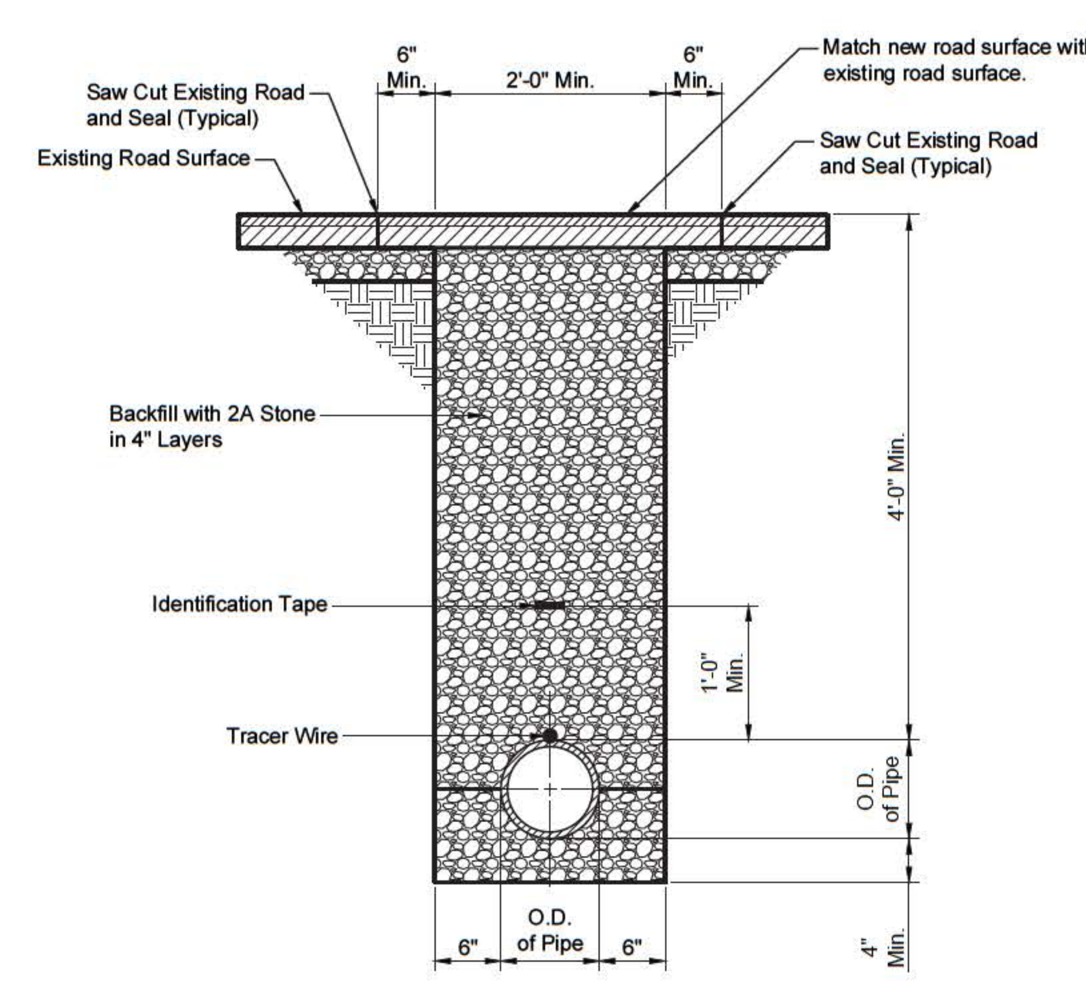
A. The contractor will be required to clean the entire sanitary sewer system of all debris and obstructions. This shall include, but is not limited to removal of all form work from structures, concrete and mortar droppings, construction debris and dirt. The system shall be thoroughly flushed clean and the contractor shall furnish all necessary hose, pumps, pipe and other equipment that may be required for this purpose. No debris shall be flushed into existing sanitary sewers. All debris shall be removed from the system.

B. After the system has been cleaned, the contractor shall thoroughly inspect the system, and all repairs shown to be necessary shall be properly performed by the contractor. All work of cleaning and repair as specified herein shall be performed at the contractor's expense.

FINAL INSPECTION

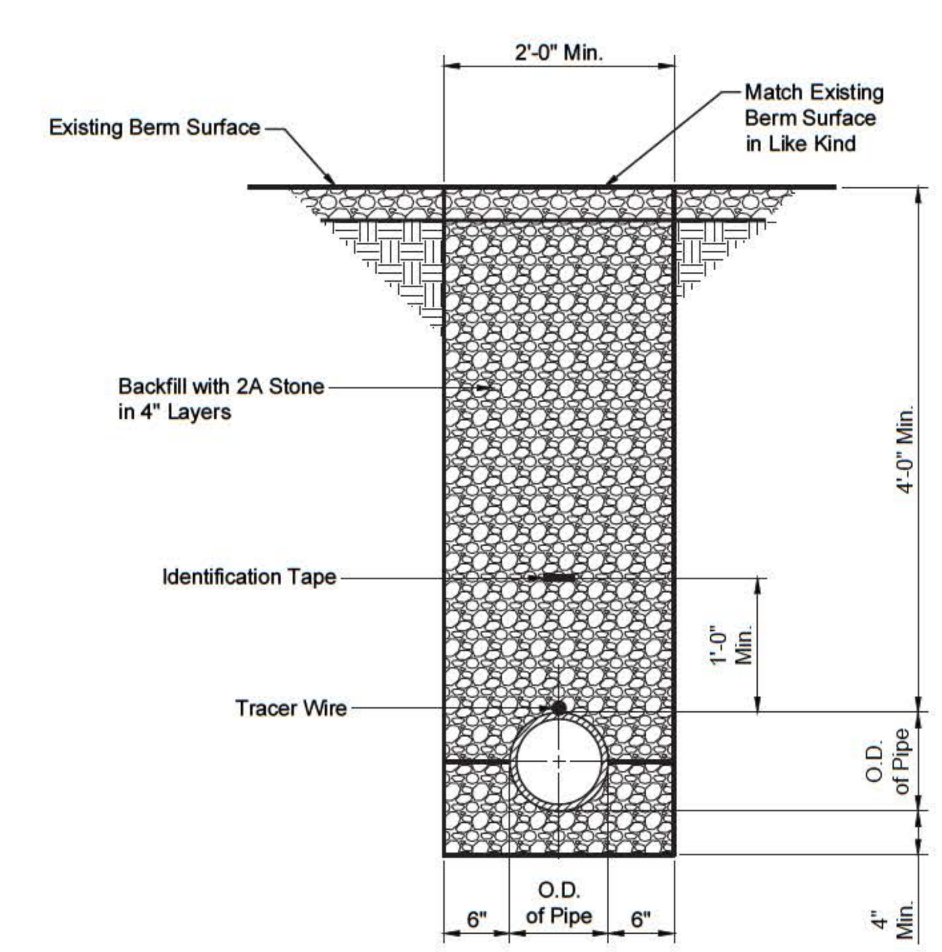
Upon completion of the work and before final acceptance by the owner, the entire sanitary sewer system shall be subject to a final inspection in the presence of the township engineer and/or owner's representative. The work shall not be considered complete until all requirements for line, grade, cleanliness, leakage, tests, restoration, and workmanship have been met.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS FOR CONSTRUCTION PREPARED FOR THE NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY.



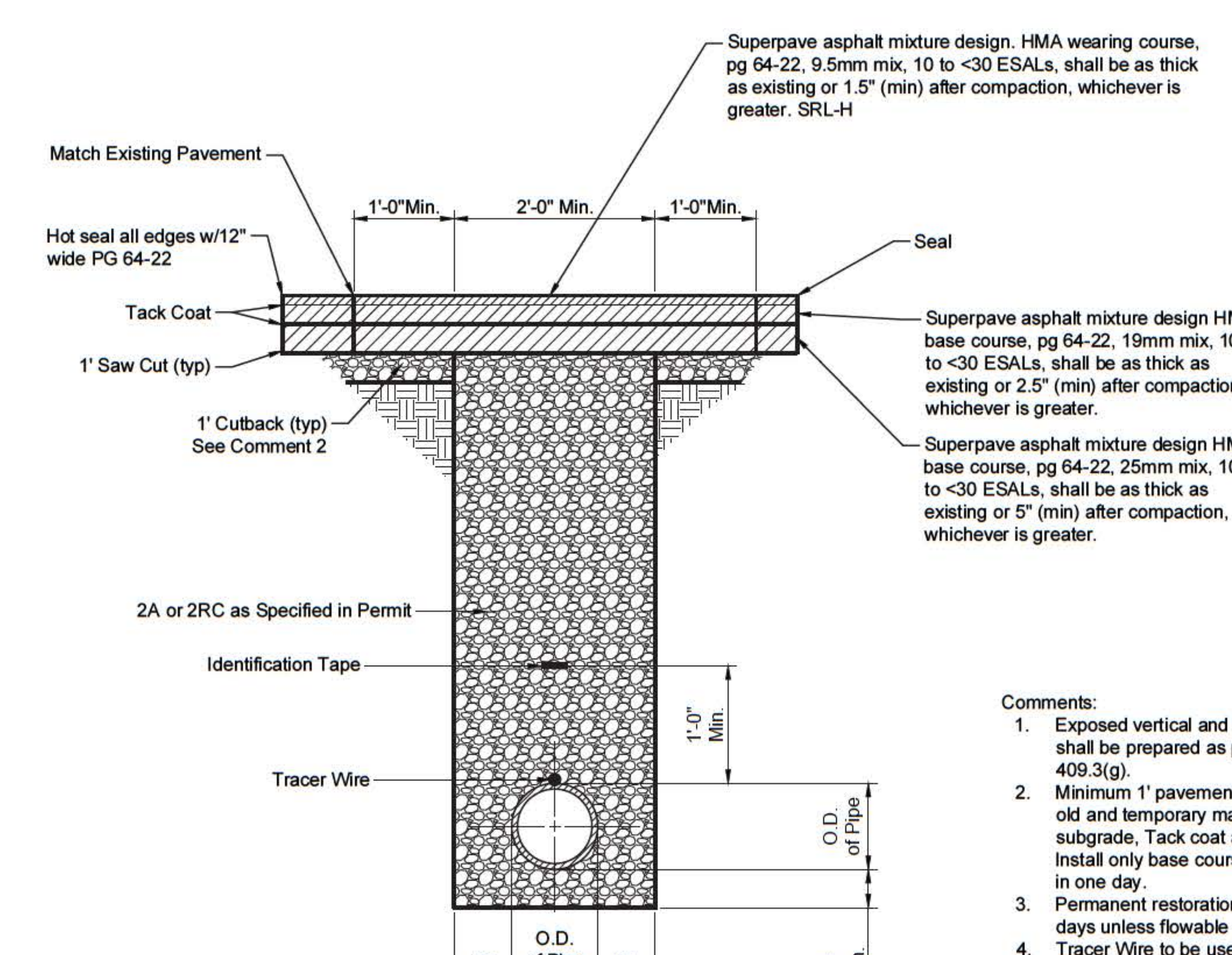
DRIVEWAY CROSSING

N.T.S.



TRENCH IN GRAVEL BERM

N.T.S.



Comments:
1. Exposed vertical and horizontal surfaces shall be prepared as per pub. 408, section 409.3(g).
2. Minimum 1' pavement cutback, Excavate old and temporary material. Re-compact subgrade, Tack coat all vertical edges. Install only base course and binder course in one day.
3. Permanent restoration to be minimum 90 days unless flowable fill is used.
4. Tracer Wire to be used on force main lines only

Note: Match Existing Depths if Greater.

SANITARY SEWER TRENCH UNDER ROAD SURFACE OR PAVED BERM

N.T.S.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 156791

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1.	PADOT comments	5/9/18	RH

FILE
O:\2017\2017-68\Site\Cove Run\HOP\2017-68-CR-HOP.dwg

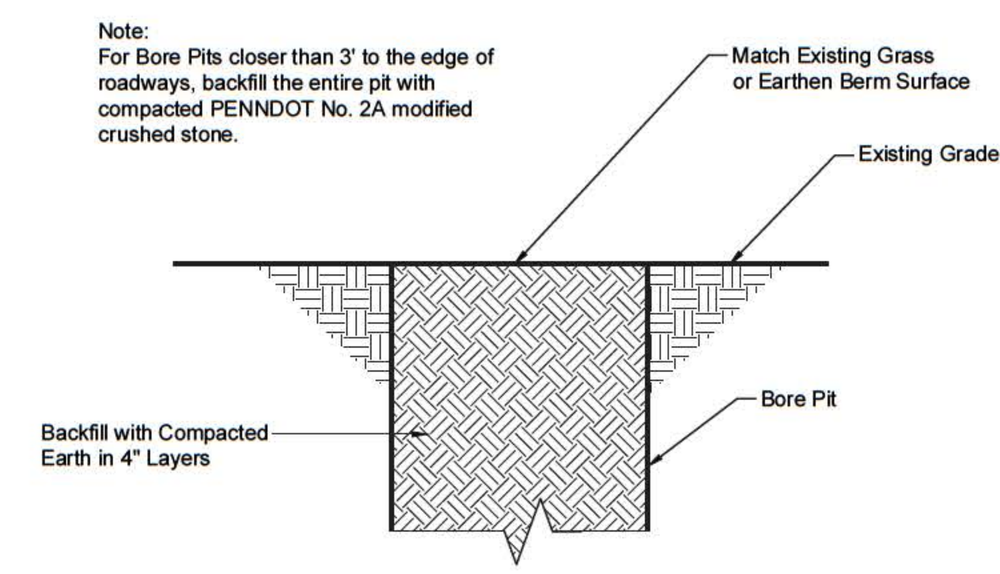
SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

TITLE
CONSTRUCTION DETAILS

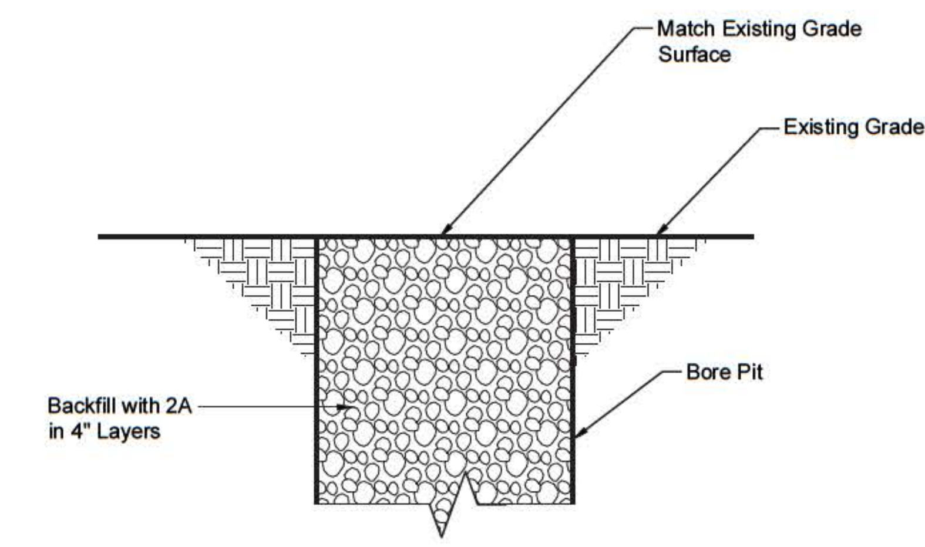
BOOK NO. ME 293		JOB NO. 2017-68	
DRAWN MV	2-19-18	CHECKED JS	3-20-18
DESIGN JE	2-19-18	APPROVED TMJR	3-26-18
SCALE AS NOTED			

SHEET NUMBER
HOP104

Note:
For Bore Pits closer than 3' to the edge of roadways, backfill the entire pit with compacted PENNDOT No. 2A modified crushed stone.

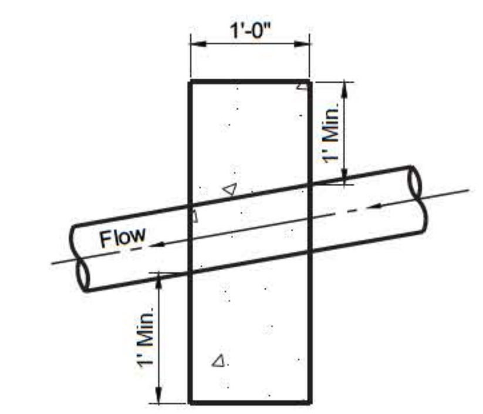


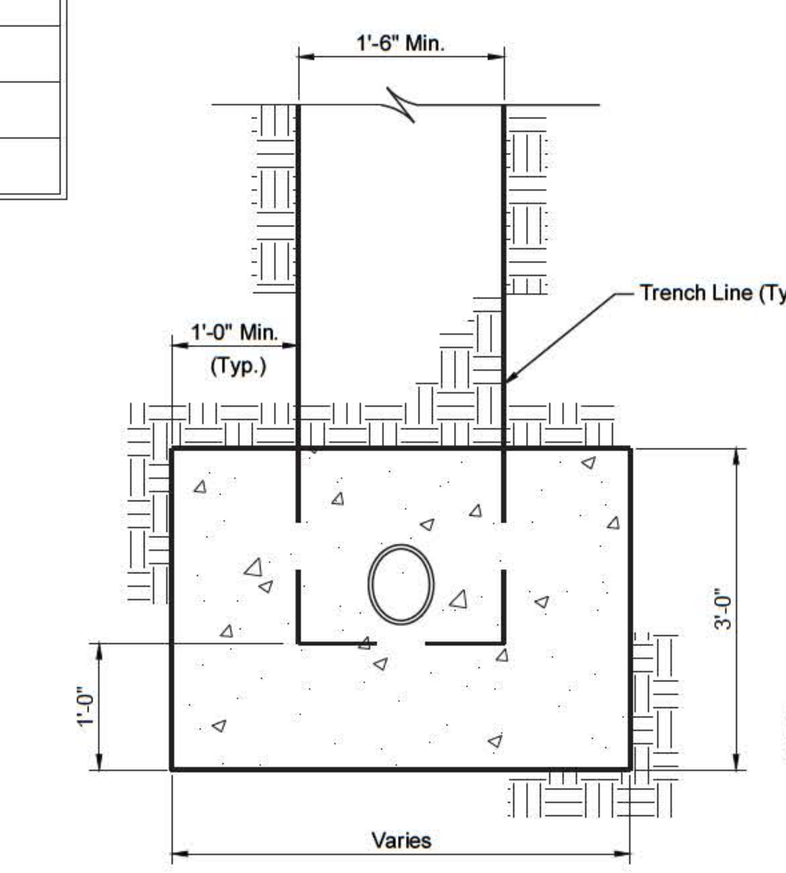
PIT RESTORATION OUTSIDE OF IMPROVED SURFACE
N.T.S.



PIT RESTORATION WITHIN PAVED OR GRAVEL AREA
N.T.S.

Anchor Placement Schedule	
Slope	Spacing
20%-30%	36' C.C.
35%-50%	24' C.C.
50% and Over	16' C.C.

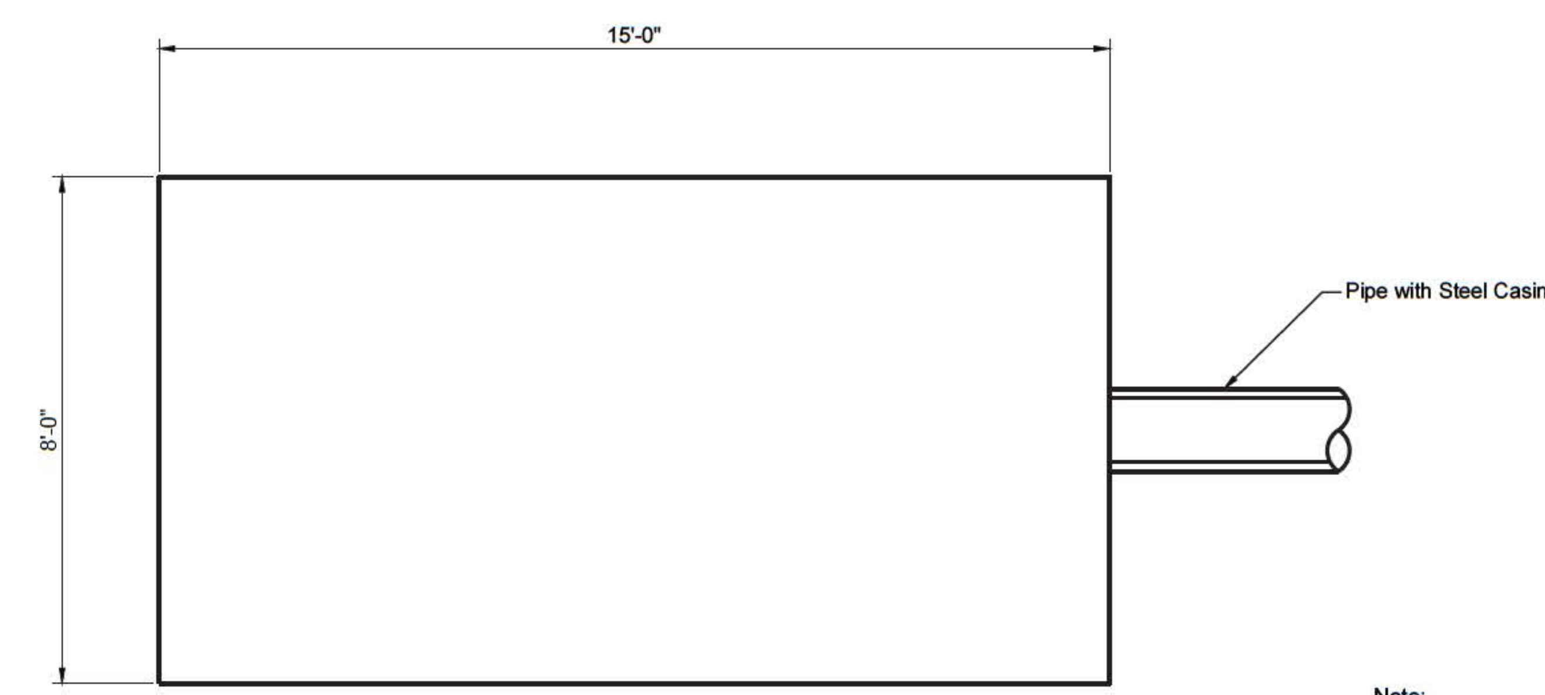




CONCRETE ANCHOR FOR STORM SEWERS ON STEEP GRADES
N.T.S.

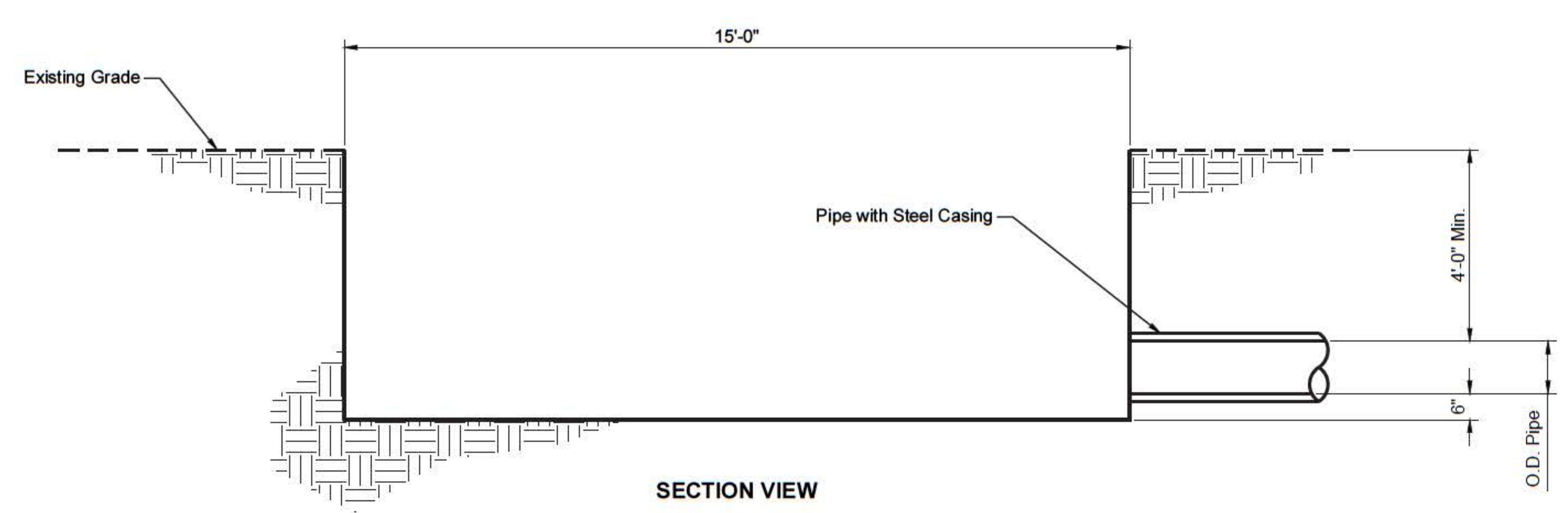
Note:
Installation of an 8"x8"x6" wye branch shall be made with the use of a repair coupling (O-ring type).

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JAMES LINDEN STANTON
ENGINEER
PE-057459



PLAN VIEW

Note:
Detail is typical for Bore Pit and Receiving Pit.

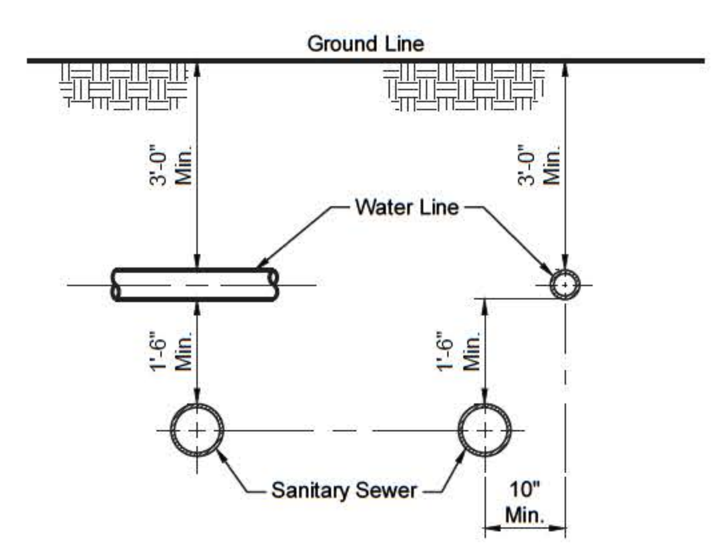


SECTION VIEW

BORE PIT
N.T.S.

Notes:

1. Concrete encasement of the sanitary sewer is required for any crossing of 12" or less with a storm sewer or collector line.
2. Construct the sanitary sewer first during all new construction.



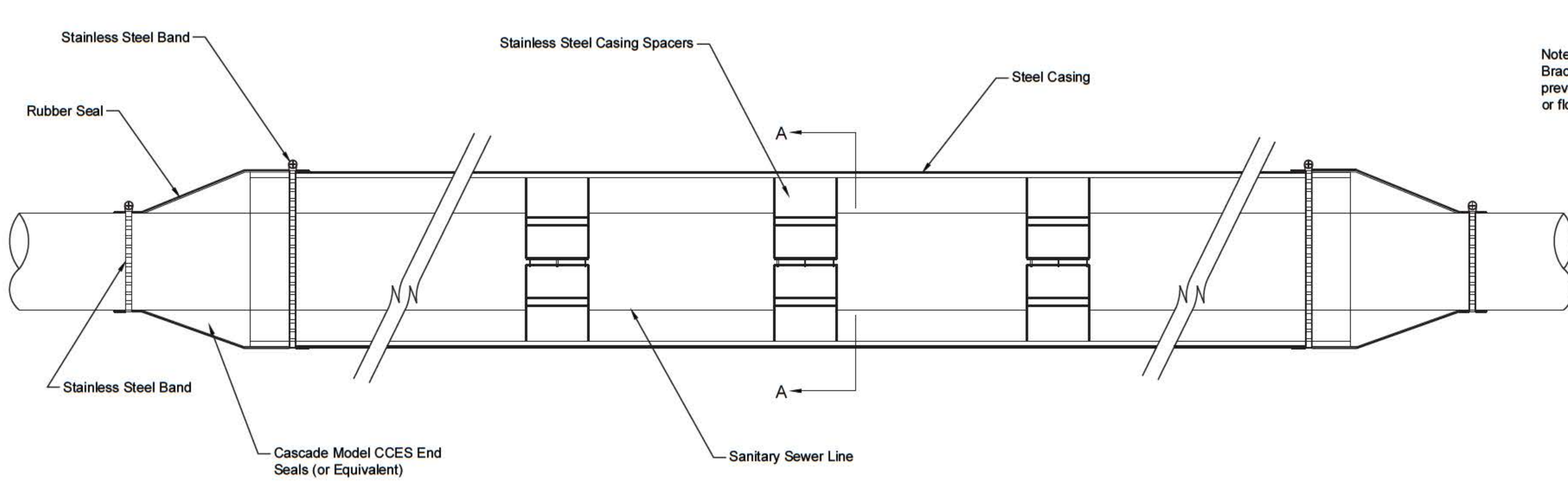
TRANSVERSE CROSSING

PARALLEL UTILITIES

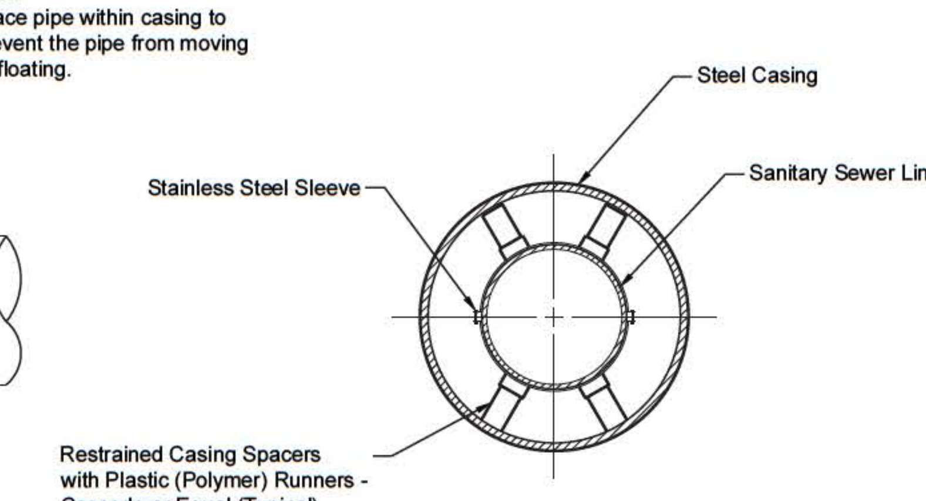
SANITARY SEWER PLACEMENT ADJACENT TO WATER LINE
N.T.S.

Pipe Size	Casing Size	Maximum Casing Support Spacing	No. of Runners
6"	12"	6'-3"	4
8"	12"	7'-4"	4

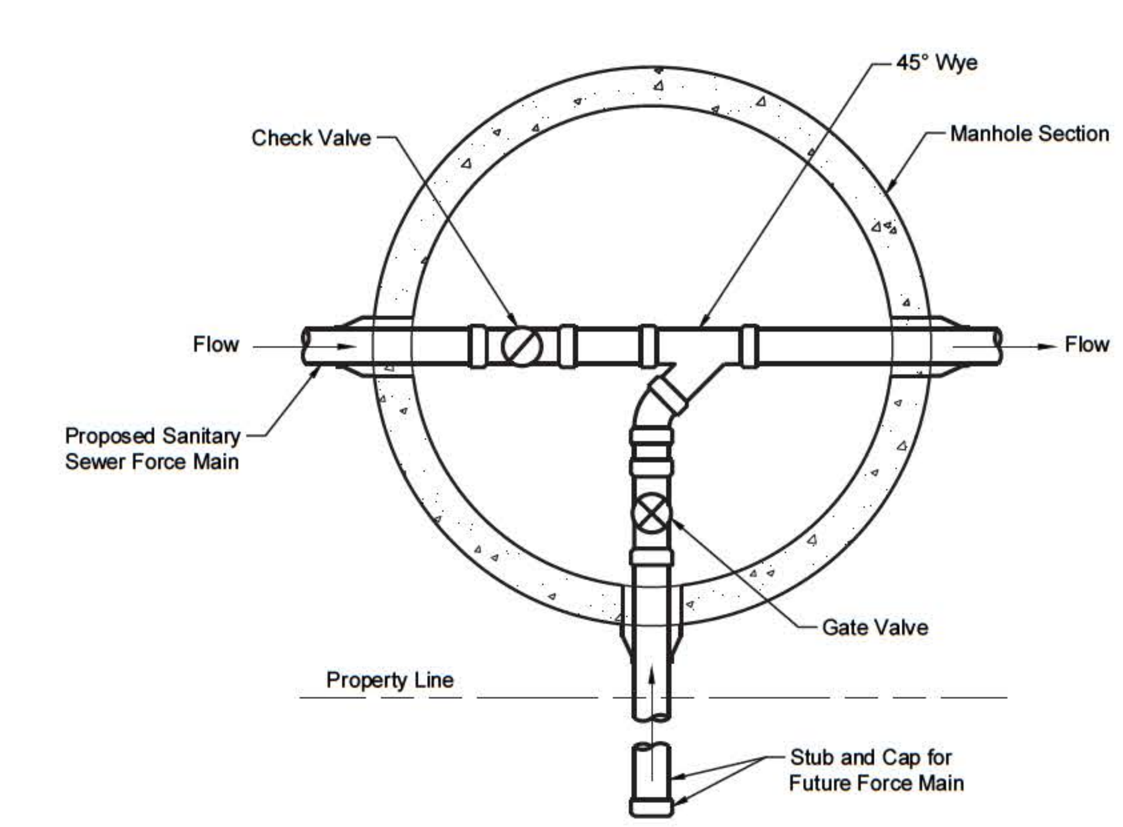
Note:
Brace pipe within casing to prevent the pipe from moving or floating.



PUNCH BORING
N.T.S.



SECTION A-A
FOR BORINGS WITHOUT FIBER OPTIC CABLE



SANITARY SEWER FORCE MAIN CONNECTION
N.T.S.

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

HIGHWAY OCCUPANCY PERMIT PLAN APPLICATION NO. 156791

REVISIONS

NO.	DESCRIPTION	DATE	BY

SANITARY SEWER EXTENSION
COVE RUN SERVICE AREA
CONTRACT 2019-02
PREPARED FOR
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY
NORTH UNION TOWNSHIP, FAYETTE COUNTY
PENNSYLVANIA

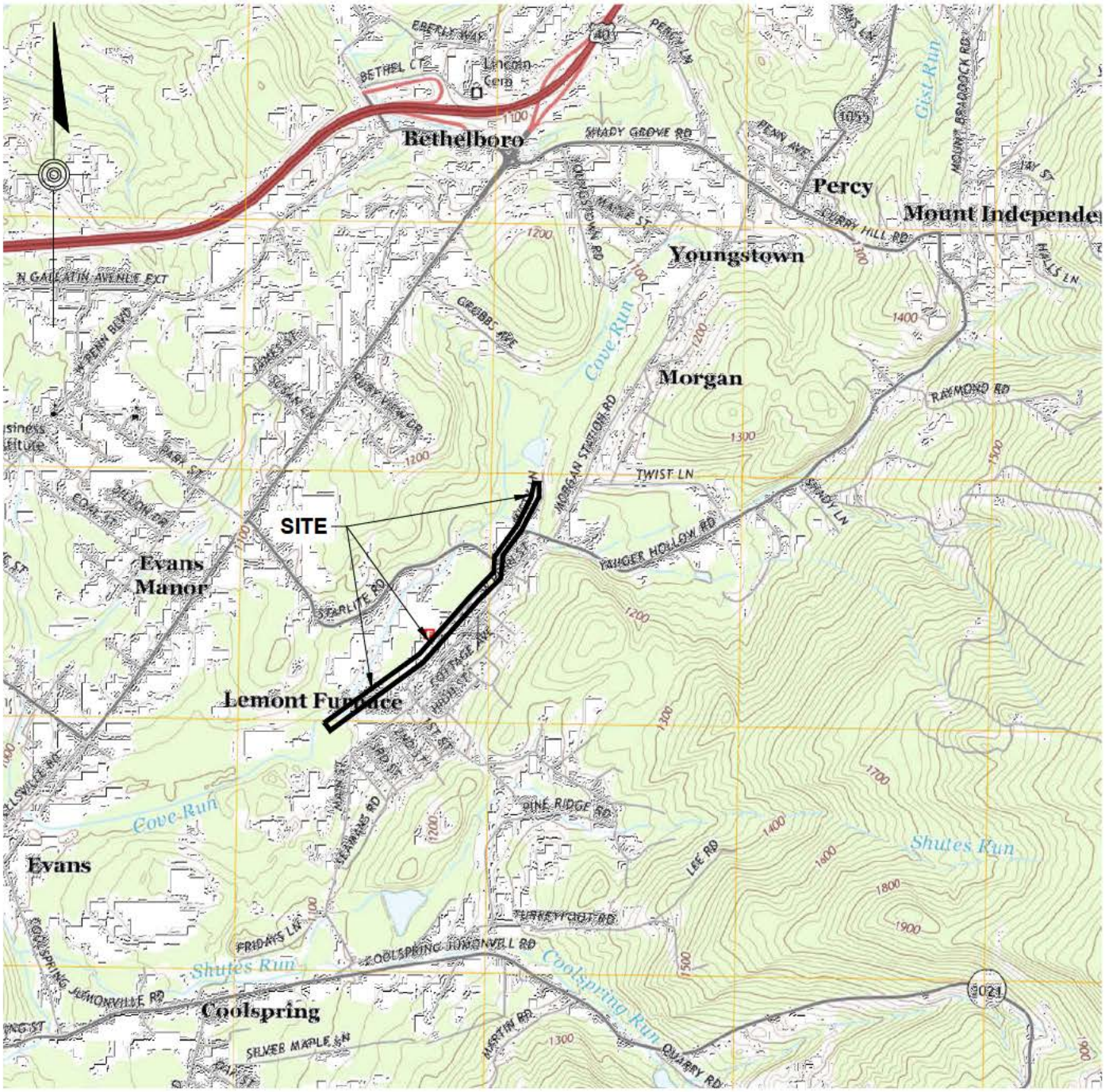
TITLE
CONSTRUCTION DETAILS

BOOK NO.	JOB NO.
ME 293	2017-68
DRAWN MV 2-19-18	CHECKED JS 3-20-18
DESIGN JE 2-19-18	APPROVED TMJR 3-26-18

SCALE
AS NOTED

SHEET NUMBER
HOP105

APPENDIX B
USGS LOCATION MAP



USGS - LOCATION MAP

PREPARED FOR

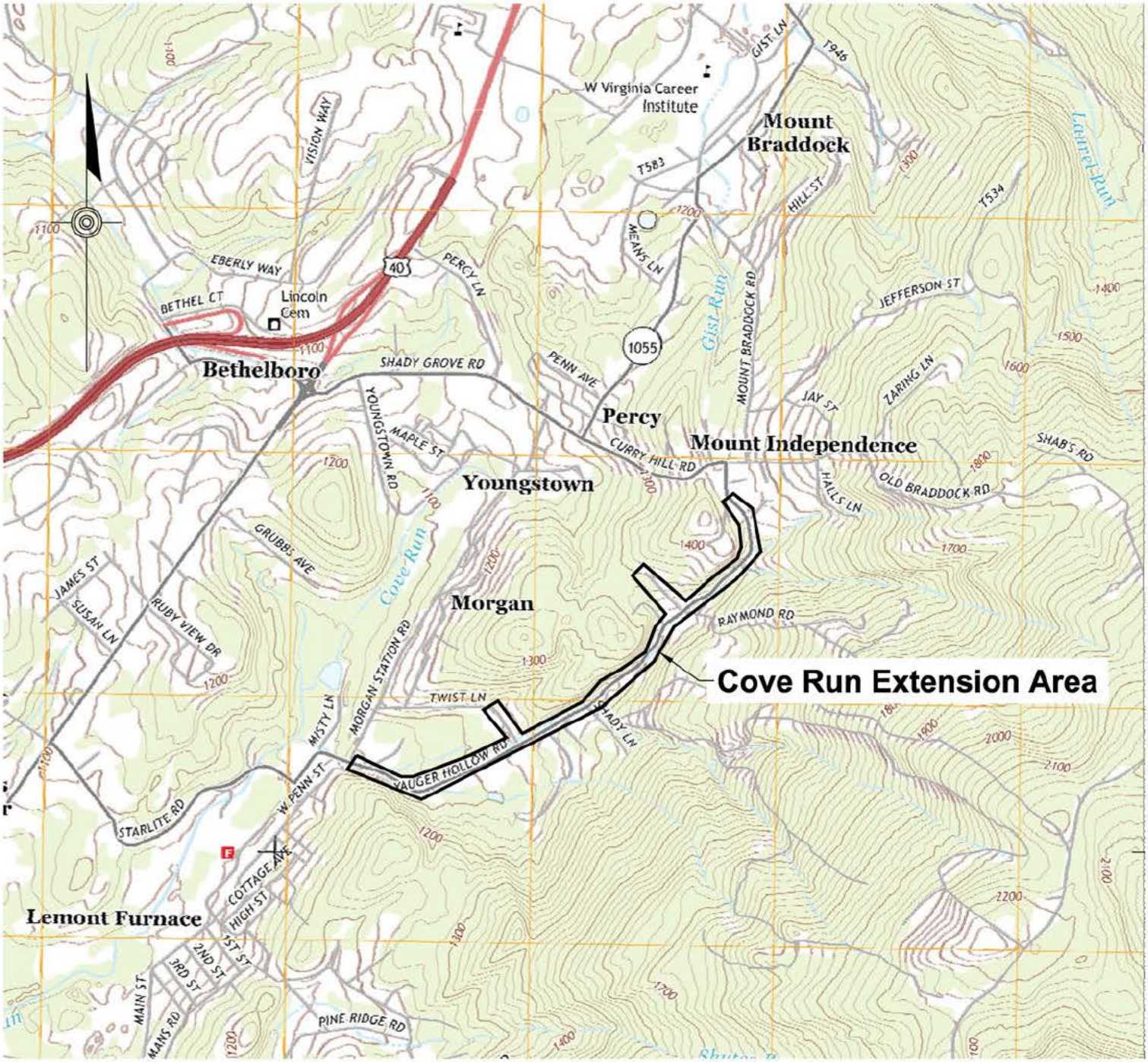
MISTY LANE SERVICE AREA
NORTH UNION TOWNSHIP
MUNICIPAL SERVICES AUTHORITY

NORTH UNION TOWNSHIP, FAYETTE COUNTY, PA

PREPARED BY

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

Date: 02/2021 Job: 2017-68 Scale: 1"=2,000'
DB: KK CHK: TMJR
Quadrangle: Uniontown, PA



USGS - LOCATION MAP

PREPARED FOR

NORTH UNION TOWNSHIP MUNICIPAL SERVICES AUTHORITY

NORTH UNION TOWNSHIP, FAYETTE COUNTY, PA

PREPARED BY

McMILLEN ENGINEERING INC
civil engineers • land surveyors
115 Wayland Smith Drive, Uniontown, PA 15401
Phone: 724-439-8110
Email: info@mcmilleng.com

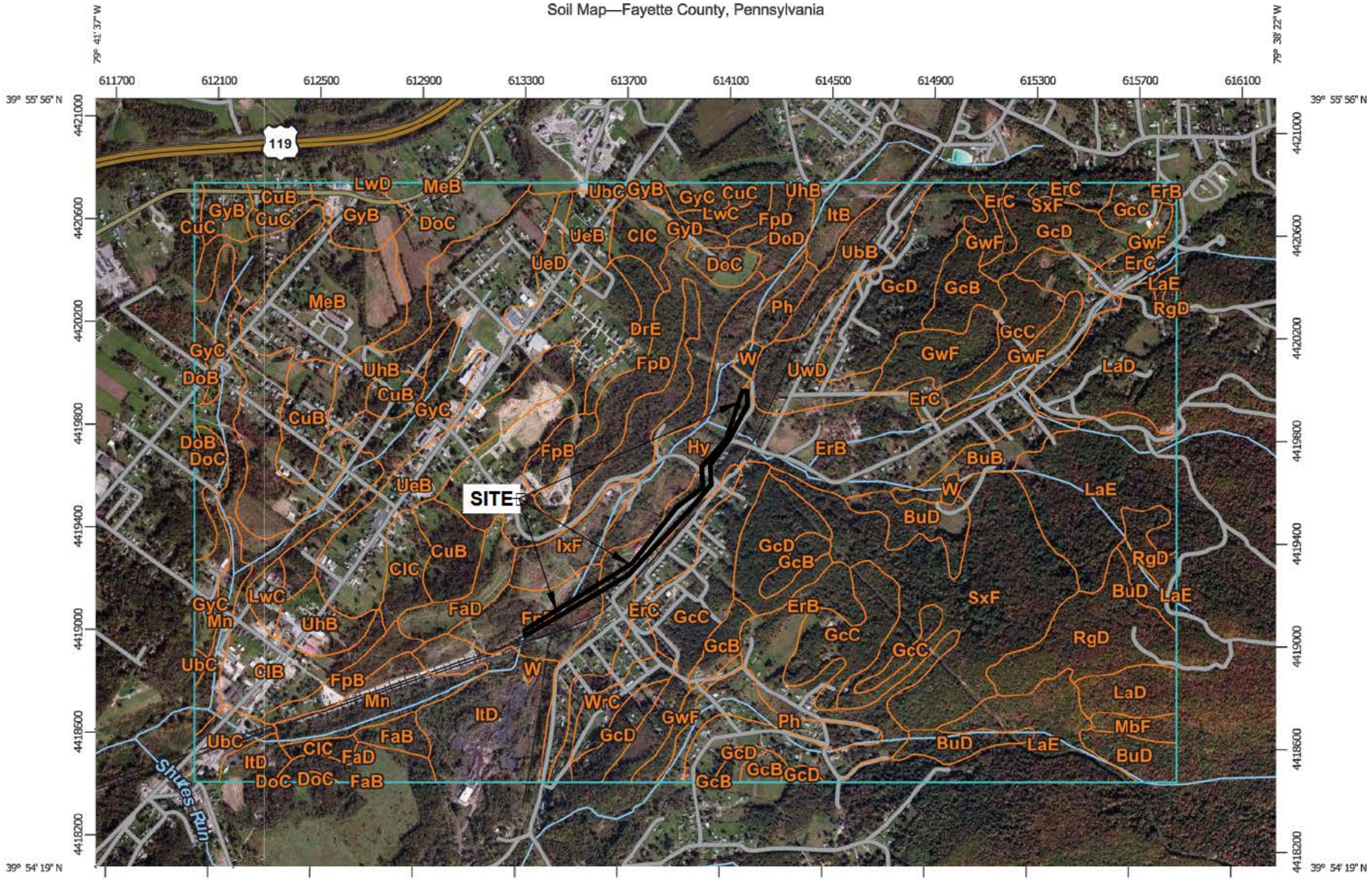
2000' 1000' 0' 2000' 4000'

Bar Scale

Date: 11/14/2017 Job: 2017-68 Scale: 1"=2,000'
DB: KK CHK: JS
Quadrangle: Uniontown, PA

APPENDIX C
SOIL MAP

Soil Map—Fayette County, Pennsylvania



Map Scale: 1:21,100 if printed on A landscape (11" x 8.5") sheet.

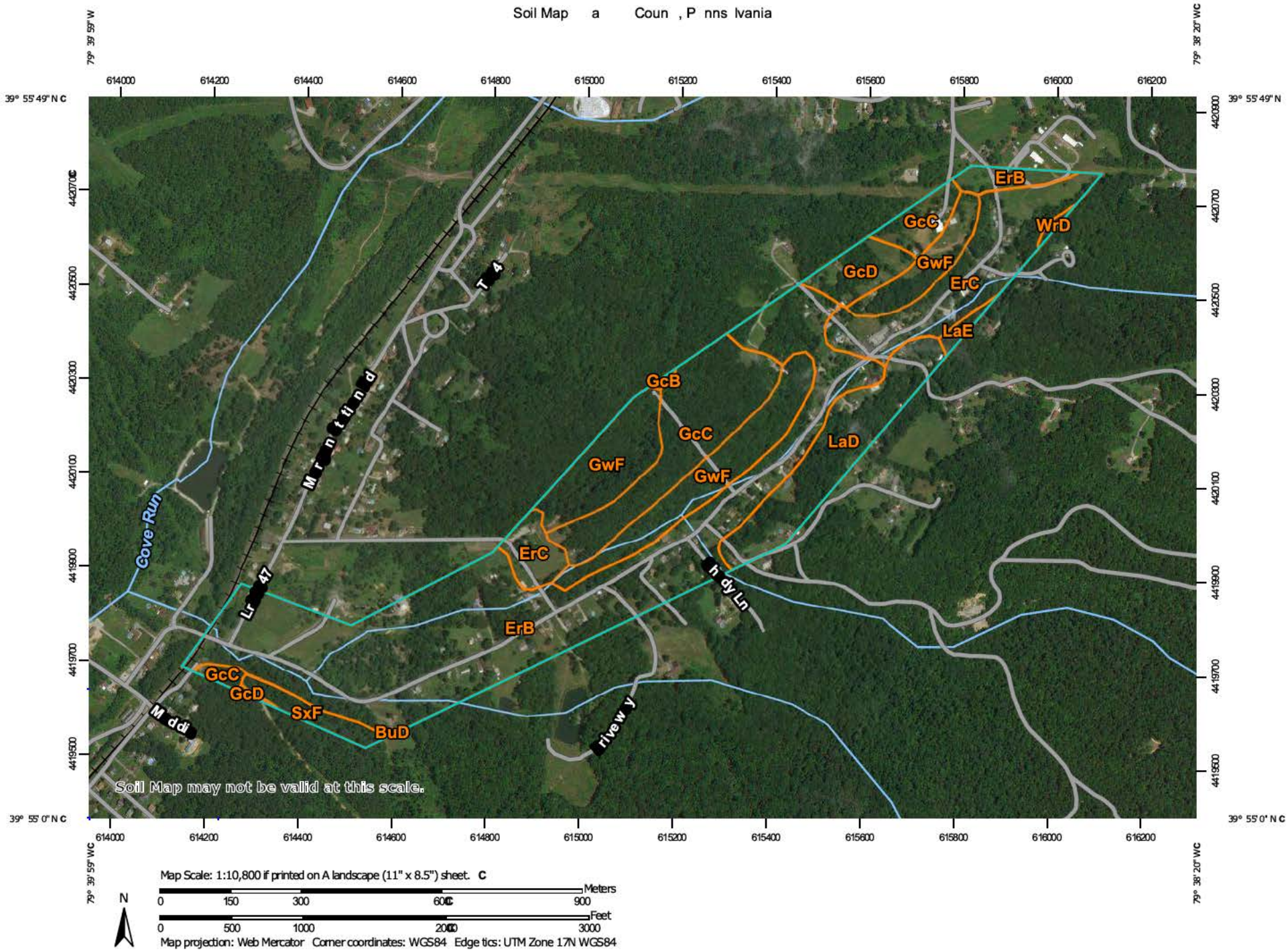
N

Meters: 0 300 600 1200 1800

Feet: 0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Soil Map a Coun , P nns lvania



USDA **Natural Resources onservation Service C**

Web Soil Surv
Na iona Coop ra iv Soil Surv C

12/4/2017
Pag 1 of 3

MAP LEGEN

Area of nterest (A)

Area of I terest (AOI)

Soils n

Soil Map U it Polygo s

Soil Map U it Li es

Soil Map U it Poi ts

Special Point eatures

Blowout

Borrow Pit

Clay Spot

Closed Depressio n

Gravel Pit

Gravelly Spot n

La dfill

Lava Flow n

Marsh or swamp

Mi e or Quarry

Miscella eous Water

Pere ial Water

Rock Outcrop

Sali e Spot

Sa dy Spot

Severely Eroded Spot n

Si khole

Slide or Slip

Sodic Spot

Spoil Area

Sto y Spot

Very Sto y Spot

Wet Spot

Other

Special Li e Features n

Water eatures

Streams a d Ca als

Transportation

Rails

I terstate Highways n

US Routes

Major Roads n

Local Roads n

Background

Aerial Photography

AP N MAT N

The soil surveys that comprise your AOI were mapped at 1:24,000.

War i g: Soil Map may ot be valid at this scale.

E largeme t of maps beyo d the scale of mappi g ca cause misu dersta di g of the detail of mappi g a d accuracy of soil li e placeme t. The maps do ot show the small areas of co trasti g soils that could have bee show at a more detailed scale.

Please rely o the bar scale o each map sheet for map measureme ts.

Source of Map: Natural Resources Co servatio Service
Web Soil Survey URL:
Coordi ate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based o the Web Mercator projectio , which preserves directio a d shape but distorts dista ce a d area. A projectio that preserves area, such as the Albers equal-area co ic projectio , should be used if more accurate calculatio s of dista ce or area are required.

This product is ge erated from the USDA-NRCS certified data as of the versio date(s) listed below.

Soil Survey Area: Fayette Cou ty, Pe sylva ia
Survey Area Data: Versio 12, Nov 27, 2017

Soil map u its are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 7, 2012—Mar 23, 2017

The orthophoto or other base map o which the soil li es were compiled a d digitized probably differs from the backgrou d imagery displayed o these maps. As a result, some mi or shifti g of map u it bou daries may be evide t. n

Map Unit n

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuD	Buchanan loam, 8 to 25 percent slopes, extremely stony	0.1	0.1%
ErB	Erie silt loam, 3 to 8 percent slopes	70.7	43.6%
ErC	Erie silt loam, 8 to 15 percent slopes	20.4	12.6%
GcB	Gilpin channery silt loam, 3 to 8 percent slopes	0.2	0.1%
GcC	Gilpin channery silt loam, 8 to 15 percent slopes	21.2	13.1%
GcD	Gilpin channery silt loam, 15 to 25 percent slopes	4.7	2.9%
GwF	Gilpin-Weikert channery silt loams, 25 to 70 percent slopes	26.0	16.0%
LaD	Laidig gravelly loam, 8 to 25 percent slopes, extremely stony	14.5	9.0%
LaE	Laidig gravelly loam, 25 to 35 percent slopes, extremely stony	0.8	0.5%
SxF	Shelocta-Gilpin channery silt loams, 25 to 75 percent slopes, very stony	2.9	1.8%
WhD	Wharton silt loam, 15 to 25 percent slopes	0.4	0.2%
Totals for Area of Interest		162.0	100.0%

APPENDIX D
NATIONAL WETLAND INVENTORY MAP

U.S. Fish and Wildlife Service

National Wetlands Inventory

Jul 17, 2015

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

U.S. Fish and Wildlife Service

National Wetlands Inventory

Cove Run e v e ea @

De embe 4, 2017

Wetla ds @

- Estua ne and Ma ne Deepwate @ @
- Estua ne and Ma ne Wetland
- F eshwate Eme gent Wetland
- F eshwate Fo ested/ h ub Wetland @
- F eshwate Pond
- Lake
- Othe
- R ve ne @

Th s map s fo gene al efe en e only. The U F sh and Wildl fe e v e s not espons ble fo the a u a y o u entness of the base data shown on th s map. ll wetlands elated data should be used n a o dan e w th the laye metadata found on the Wetlands Mappe web s te.

Nat onal Wetlands Invento y (NWI) @
Th s page was p odu ed by the NWI mappe

APPENDIX E
AGENCY COORDINATION

1. PROJECT INFORMATION

Project Name: **Misty Lane Sewer Line Replacement**
Date of Review: **2/17/2021 02:27:29 PM**
Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewer line maintainence-repair, replacement of existing line**
Project Area: **3.99 acres**
County(s): **Fayette**
Township/Municipality(s): **NORTH UNION TOWNSHIP**
ZIP Code:
Quadrangle Name(s): **UNIONTOWN**
Watersheds HUC 8: **Lower Monongahela**
Watersheds HUC 12: **Cove Run-Redstone Creek**
Decimal Degrees: **39.917578, -79.668171**
Degrees Minutes Seconds: **39° 55' 3.2823" N, 79° 40' 5.4168" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

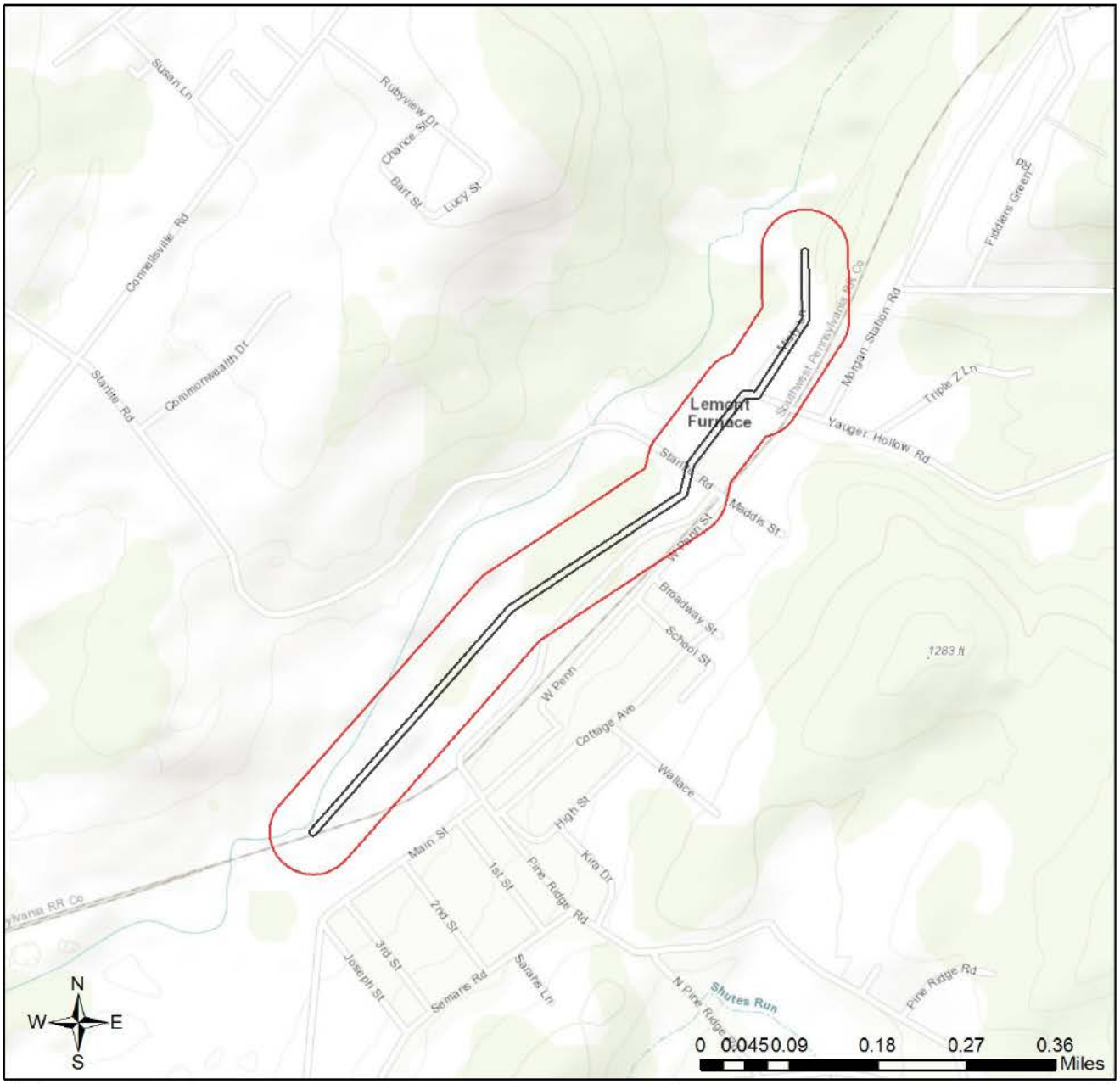
Misty Lane Sewer Line Replacement

Project Boundary

Buffered Project Boundary

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

Misty Lane Sewer Line Replacement



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Ken Kubicar
Company/Business Name: McMillen Engineering, Inc.
Address: 115 Wayland Smith Drive
City, State, Zip: Uniontown, PA 15401
Phone: (724) 439-8110 Fax: (724) 439-4733
Email: kkubicar@mcmilleng.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

applicant/project proponent signature

2/17/2021
date

1. PROJECT INFORMATION

Project Name: **Yauger Hollow Sewer Line**
Date of Review: **7/26/2021 02:17:51 PM**
Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewage module/Act 537 plan**
Project Area: **29.11 acres**
County(s): **Fayette**
Township/Municipality(s): **NORTH UNION TOWNSHIP**
ZIP Code:
Quadrangle Name(s): **UNIONTOWN**
Watersheds HUC 8: **Lower Monongahela**
Watersheds HUC 12: **Cove Run-Redstone Creek**
Decimal Degrees: **39.921120, -79.654038**
Degrees Minutes Seconds: **39° 55' 16.317" N, 79° 39' 14.5368" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

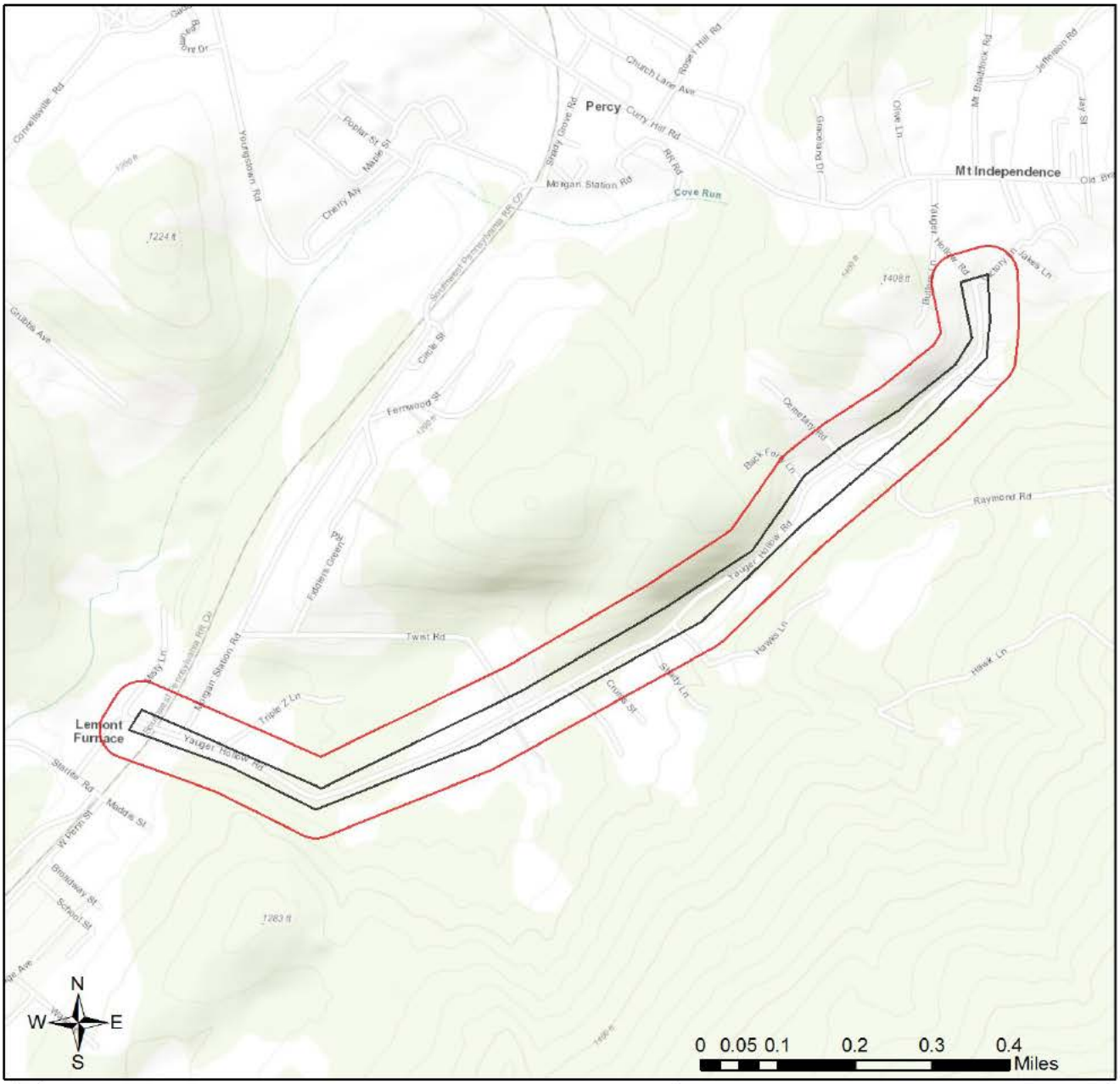
Yauger Hollow Sewer Line

Project Boundary

Buffered Project Boundary

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

Yauger Hollow Sewer Line



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Ken Kubicar
Company/Business Name: McMillen Engineering, Inc.
Address: 115 Wayland Smith Drive
City, State, Zip: Uniontown, PA 15401
Phone: (724) 439-8110 Fax: (724) 439-4733
Email: kkubicar@mcmilleng.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

applicant/project proponent signature

7/26/2021
date

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: Fayette County Conservation District
10 Nickman Plaza
Lemont Furnace PA 15456

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cover Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

The North Union Township Municipal Services Authority has been awarded Section 313 funding through the Army Corps of Engineers for the replacement and extension of sewer lines in the areas of Misty Lane and Cove Run.

Enclosed are the following documents:

- Public Notice to Various Agencies
- USGS Plan
- Development Plan
- PNDI

We ask comments are returned within fifteen days to be considered in the Environmental Assessment currently being prepared for the project.

Any questions should be directed to our office at either James Stanton, P.E., Project Engineer or myself at 724-439-8110.

115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: Fayette County Office of Planning, Zoning and Community Development
Sara Rosiek
61 East Main Street, 4th Floor
Uniontown, PA 15401

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cove Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

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115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg PA 17105-8552

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cove Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

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115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: PA Fish and Boat Commission
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cove Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

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115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: U.S. Fish and Wildlife Services
Pennsylvania Field Office
Endangered Species Section
110 Radnor Road, Suite 101
State College, PA 16801

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cove Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

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115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cove Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

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115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN
ENGINEERING INC
civil engineers • land surveyors

To: North Union Township
7 South Evans Station Road
Lemont Furnace, PA 15456

From: Tammy Stenson, AICP, BCO

Date: December 1, 2021

Subject: Misty Lane and Cove Run Sewer Line Replacement and Extensions, North Union Township, Fayette County, Pennsylvania

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115 Wayland Smith Drive, Uniontown, PA 15401
Ph: 724-439-8110 / Email: info@mcmilleng.com

McMILLEN ENGINEERING INC
civil engineers • land surveyors

115 Wayland Smith Drive
Uniontown, PA 15401
724.439.8110
724.439.4733 (fax)
mcmilleng.com
info@mcmilleng.com

PUBLIC NOTICE
December 1, 2021
Section 313
North Union Township Municipal Services Authority
North Union Township, Fayette County, Pennsylvania

McMillen Engineering, Inc. is preparing an Environmental Assessment (EA) for the North Union Township Municipal Services Authority (NUTMSA) for the community/area of Misty Lane and Cove Run in North Union Township, Fayette County, Pennsylvania. NUTMSA's project is for replacement and extension of sewer lines to those areas currently served by individual on-lot systems. All flows will be treated at the regional system of the Greater Uniontown Joint Sewer Authority Sewage Treatment Plant.

The EA is being prepared under the authority of Section 313 of the Water Resources Development Act of 1992, as amended, which established the South-Central Environmental Program. The Army Corps of Engineers (ACOE) under the authority of Section 313 allows them to provide design and construction assistance to non-Federal interests. This assistance is limited to environmental infrastructure actions and is for reimbursement of design and construction costs to non-federal sponsors. This assistance from the ACOE is limited to environmental infrastructure actions occurring subsequent to, or within six years prior to, entering into an agreement with the ACOE.

The EA will be prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and will document potential impact to the natural or human environment for the proposed project and the no action alternative. It's anticipated the EA will result in a Finding of No Significant Impact (FONSI) with publishing a Notice of Availability.

Interested individuals/parties are asked to submit written comments for consideration within fifteen days of this Public Notice. Any comments received will be reviewed and considered with the preparation of the EA. This Public Notice is being sent to organizations and individuals known to have an interest in this project. We ask you bring this matter to the attention of any other organization or individuals with similar interest who are not included on the attached list. Comments are to be sent to: McMillen Engineering. Inc., Tammy Stenson, AICP, 115 Wayland Smith Drive, Uniontown, PA 15401.

Enclosure

APPENDIX F

PHMC CORRESPONDENCE

FAYETTE ENGINEERING COMPANY INC.
2200 University Drive
Lemont Furnace, PA 15456-1024

Consulting Engineers
Established 1902

June 17, 2013

Pennsylvania Historical and Museum Commission
Bureau of Historic Preservation
400 North Street, Second Floor
Harrisburg, PA 17120-0093

To Whom It May Concern:

Re: North Union Township Municipal Services Authority
Sanitary Sewer Expansion
ER No. 2013-1405-051-A

We are in receipt of your "Additional Information Request Sheet", which was received in our office on June 12, 2013. As stated in our initial letter dated April 25, 2013, the four different service areas are Yauger Hollow, Oliver, West Leisenring, and Misty Lane. Also stated was the majority of the line will be placed in existing public rights-of-way. The Misty Lane and Oliver service areas will require placement of the lines outside of public rights-of-way. We have included a more detailed map showing the locations of these areas. Also, for your convenience, the maps submitted with our April 2, 2013 letter are also included with these areas highlighted in yellow.

Please send a letter of reply at your earliest convenience. If you should require additional information or have any questions, please do not hesitate to contact me at **(724) 438-5573**.

Sincerely,

PE, PLS

Neil C. Shultz, PE, PLS
Project Manager

Enclosures

ER No. 2013-1405-051-B

The project will have
NO EFFECT
on historic properties

Date 7/11/2013 Reviewer KWH

Tammy Stenson

From: Frederick, Barbara <bafrederic@pa.gov>
Sent: Tuesday, June 29, 2021 12:50 PM
To: Garrett, Cheri; Tammy Stenson
Subject: RE: [External] ER No. 2013-1405-51-B

Hi Tammy,

If the plans have not changed, the review remains valid. However, if you would like to get a more recent response from our office, you can send in a Project Supplement on Project # 2013PR13979 via PA-SHARE. Include the project information as an attachment and request a confirmation of the past finding. I have added you as a contact on the project to make this possible.

More information on how to access PA-SHARE and send supplemental information on existing ER projects is found here: https://www.phmc.pa.gov/Preservation/About/Documents/ER%20Consultation%20with%20PA%20SHPO%20Guidance%20Overview.pdf.

Best,

Barbara

From: Tammy Stenson <TStenson@McMilleng.com>
Sent: Tuesday, June 29, 2021 10:08 AM
To: PH, PAShare <pashare@pa.gov>
Subject: [External] ER No. 2013-1405-51-B

Good Morning,

Above is a reference to a project that was reviewed and cleared by PHMC in 2013. We are the new consultant and have secured funding for the project. I will need a new confirmation on the PHMC- there is nothing that changed with the project---
Please advise what I need to submit as this is not a new project. I have attached the clearance from 2013. Is this still valid or not?

Tammy Stenson, A.I.C.P., B.C.O.
Senior Planner
tstenson@mcmilleng.com | www.mcmilleng.com

115 Wayland Smith Drive, Uniontown, PA 15401
724.439.8110 ext. 106 | 724.366.4542 (cell)

Pennsylvania State Historic Preservation Office
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

August 31, 2022

Rachael Hopkins
US Army Corps of Engineers, Pittsburgh District
1000 Liberty Ave
Pittsburgh PA 152220000

RE: ER Project # 2013PR13979.004, EXTENSION OF MUNICIPAL SANITARY SEWAGE LINE, Army Corps of Engineers, North Union Township, Fayette County

Dear Rachael Hopkins:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources
No Above Ground Concerns - Environmental Review - No Effect - Above Ground

Thank you for providing the updated submission information. We have reviewed the information received and available within our files, it is our opinion that the proposed project will have No Effect on above ground historic properties, including historic buildings, districts, structures, and/or objects, should they exist. Should the scope of the project change and/or should you be made aware of historic property concerns, you will need to reinitiate consultation with our office using PA-SHARE.

For questions concerning above ground resources, please contact Sara-Ladd Manley at samanley@pa.gov.

Archaeological Resources
No Archaeological Concerns - Environmental Review - No Effect - Archaeological

Thank you for providing the updated submission information. We have reviewed the information received and available within our files, the proposed project should have No Effect on archaeological resources. Our analysis indicates that archaeological resources are potentially located in this project area. Should the scope of the project be amended to include additional ground-disturbing activity and/or should you be made aware of historic property concerns, you will need to reinitiate consultation with our office using PA-SHARE.

For questions concerning archaeological resources, please contact Sara-Ladd Manley at samanley@pa.gov.

Sincerely,

Emma Diehl
Environmental Review Division Manager

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PITTSBURGH DISTRICT
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

REPLY TO
ATTENTION OF

August 3, 2022

Environmental and Cultural Resources Section

Ms. Andrea L. MacDonald
Bureau Director, Pennsylvania Bureau for Historic Preservation
Commonwealth Keystone Building, Second Floor
400 North Street
Harrisburg, Pennsylvania 17120-0093

Dear Ms. MacDonald,

The United States Army Corps of Engineers, Pittsburgh District (USACE) is supporting the North Union Township Municipal Services Authority (NUTMSA), under Section 313 of the Water Resources Development Act of 1992 (Public Law 102-580), on the North Union Township Extension Sewer Line project. In accordance with the National Historic Preservation Act of 1966, as amended (NHPA), and 36 CFR § 800.3, the Corps is following up on a consultation submitted by Fayette Engineering Company, Inc. on behalf of NUTMSA on April 2, 2013. In this consultation, Fayette Engineering Company, Inc. determined that the project would have no effect on any historic properties. The Pennsylvania SHPO concurred with this determination of no-effect in a letter from June 2013 (Enclosure 1). Since the completion of that consultation the project has taken on a new consultant, McMillen Engineering, Inc., but the scope of the project is the same as previously submitted.

The purpose of this letter is to establish USACE as the Lead Federal Agency for the North Union Township Extension Sewer Line project, to update the consultation to include the new consultant, McMillen Engineering, Inc., and to concur with the previous determination of no-effect. After reviewing the documentation submitted to us by McMillen Engineering, Inc., the previously submitted consultation from Fayette Engineering Company, Inc., USACE files, and historic data from PA-SHARE, USACE has determined that no historic properties will be affected by this project.

If you have any questions or require additional information, please contact Ms. Rachael Hopkins, District Historian, at (412) 395-7377 or rachael.hopkins@usace.army.mil.

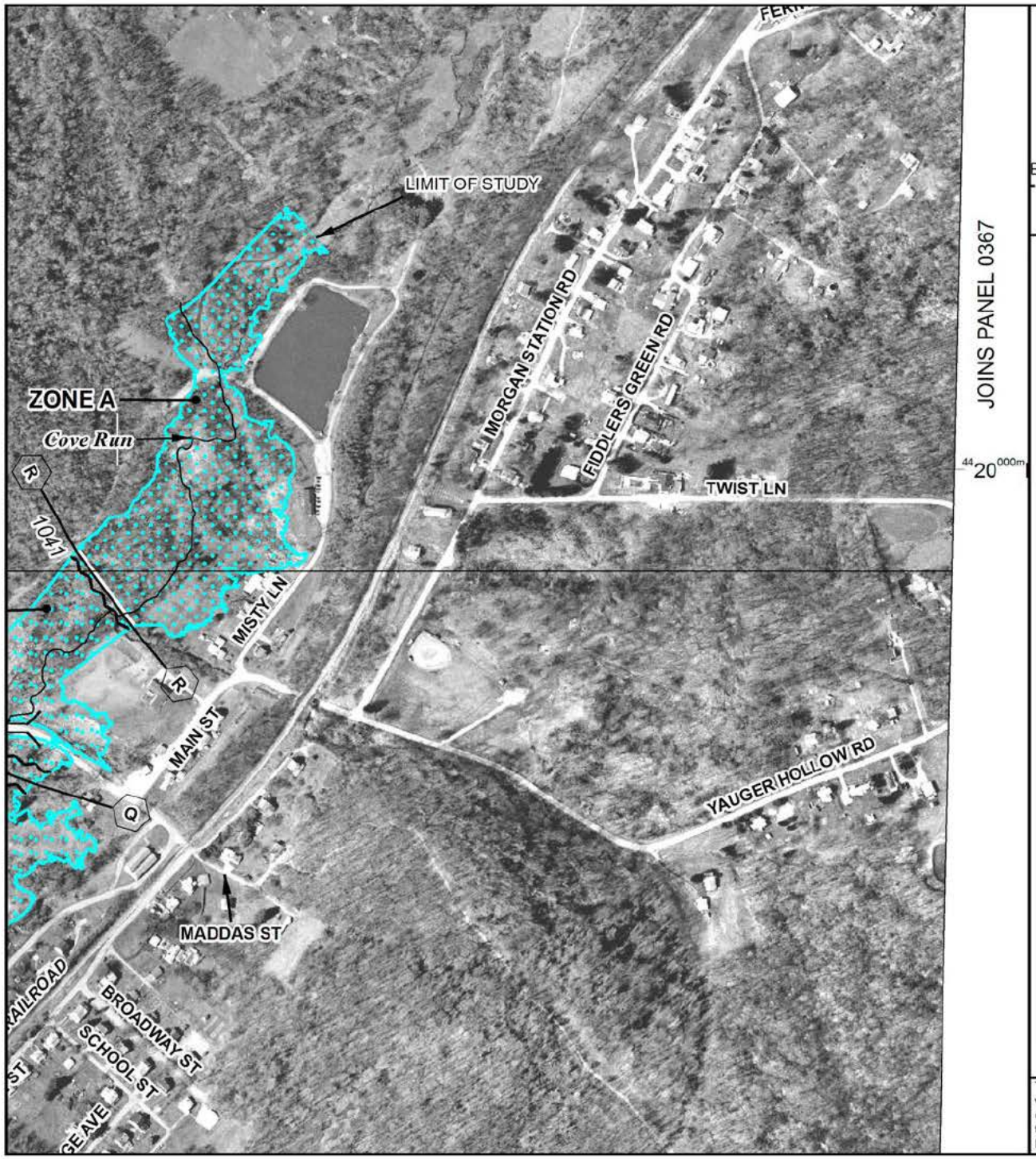
Sincerely,

Marc A. Glowczewski, PE, PMP
Chief, Planning & Environmental Branch

Enclosures

APPENDIX G

FLOODPLAIN – FEMA FIRMETTE MAP



MAP SCALE 1" = 500'

250 0 500 1000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0366E

FIRM

FLOOD INSURANCE RATE MAP

FAYETTE COUNTY, PENNSYLVANIA
(ALL JURISDICTIONS)

PANEL 366 OF 710
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

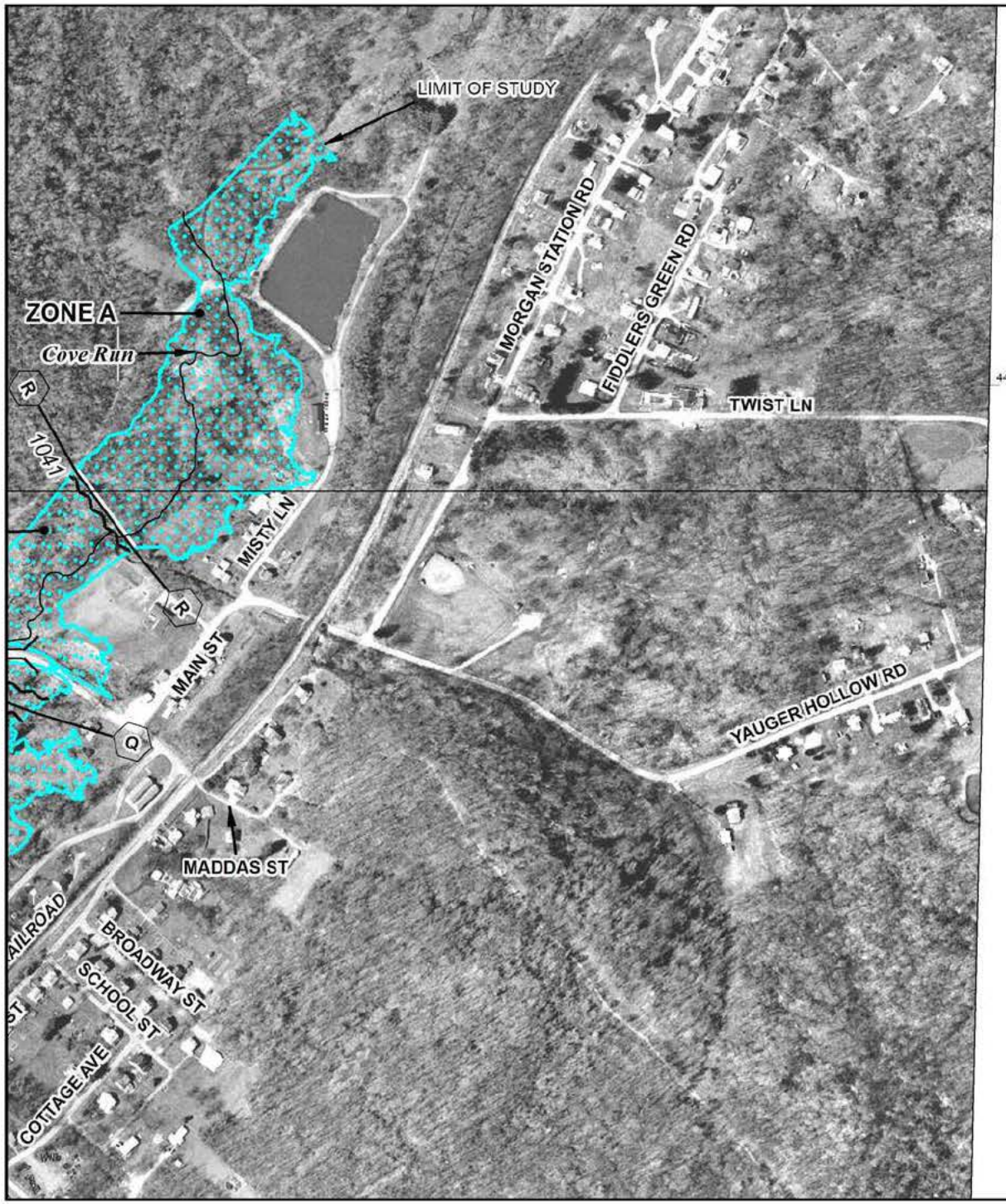
COMMUNITY	NUMBER	PANEL	SUFFIX
NORTH UNION, TOWNSHIP OF	421633	0366	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
42051C0366E

EFFECTIVE DATE
JULY 18, 2017

Federal Emergency Management Agency



MAP SCALE 1" = 500'

250 0 500 1000 FEET

50 0 150 300 ME

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0366E

FIRM

FLOOD INSURANCE RATE MAP

FAYETTE COUNTY, PENNSYLVANIA
(ALL JURISDICTIONS)

PANEL 366 OF 710
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NORTH UNION, TOWNSHIP OF	421633	0366	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
42051C0366E

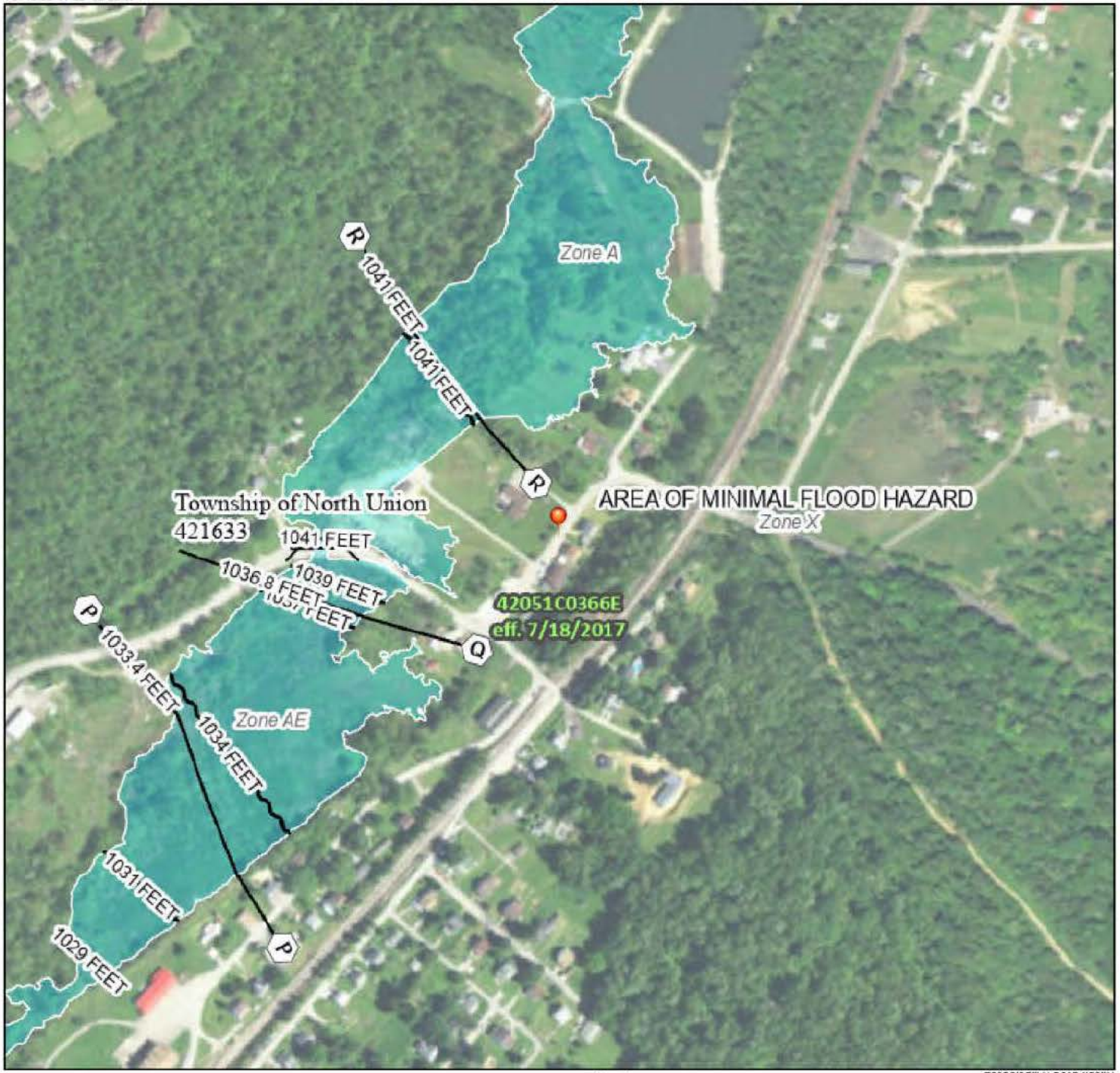
EFFECTIVE DATE
JULY 18, 2017

Federal Emergency Management Agency

National Flood Hazard Layer FIRMette

FEMA

79°40'13"W 39°55'26"N



79°39'35"W 39°54'58"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/17/2021 at 3:43 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX H

LIMITED PHASE I HAZARDOUS, TOXIC AND RADIOACTIVE WASTE INVESTIGATION

Available upon request

APPENDIX I

STREAM CROSSING PERMITS

3150-PM-B 0500 v. 4/2021
Form

COMMON EALTH OF PENNSYLVANIA
D PAR TMENT OF ENVIRONM NTAL P OTECTION
BUREAU OF WATERWAYS ENGINEERING AND W TLANDS

CHAPTER 105 AT R OBSTRUCTIONS AND NC ROACHMENT GENERAL PERMIT REGISTRATION

SECTION A. APPLICANT INFORMATION

☐ FERC Natural Gas Activity Docket Number _____ Type of Facility _____

Has a Water Quality Certification (WQC) r qu st been s nt to DE P? ☐ Yes ☐ No

☐ Activity Subject to FERC approval and/or Oil & Gas Exploration, Production, Storage or Transmission if the activity is egulated by FERC and provide the FERC docket number.

Applicant's Nam / Cli nt	DEP Client ID# (if known)	mploye ID# (EIN)
North Union Townsh p Munic pal Services Authority		25-1665540

Client Information - Please select Client ype / Code from drop down box under the correct entity shown below. (or may be written in) ↓

Government	Non-Government	Individual
AUTH Authority		

Mailing Address	City	State	ZIP + 4
P.O. Box 309	Lemont Furnace	PA	15456

Contact Person – Last Name	First	MI	Suffix	Telephone
Mechling	Garrett			(724) 438-6330

mail Addre ss
garrett@nutwp.com

SECTION B. CONSULTANT INFORMATION (If applicabl) ☐ N/A

Contact Person – Last Name	First	MI	Suffix	Consultants Titl	Consulting Firm
Kub car	Ke			Engineer Tech cian	McMillen E gi eering, Inc.

Mailing Address	City	State	ZIP + 4
115 Wayland Smith Drive	on tow	PA	15401

Telephone	Fax	mploye ID# (EIN)
(7244) 439-8110	(724) 439-4733	23-2871380

mail
kkubicar@mcm lleng.com

SECTION C. PROJECT INFORMATION

Project / Sit Nam	DEP Site ID# (if known or leave blank)
NUTMSA/M sty Lane Sanitary Sewer	

Client Relationship - Please select Site-to-Client Relationship / Code from drop down box to the right. (or may be written in) →

Double-click on shaded area below to select correct Site-to-Cl ent Relationship / Code ↓
AGENT Agent for Owner or Operator

County	Municipality				Note: Municipal & County Notification is quired
Fayette	North Union	☐ City	☐ Borough	☒ Township	

Site Location / Address	City	State	ZIP + 4
Starlite Road	Lemont Furnace	PA	15456

Collection Method: ☐ EMAP ☐ HGIS ☐ GISDR* ☐ ITPMP ☒ GPS ☐ WAAS ☐ LORAN

Check the horizo tal reference datum (or project on datum) employed in the collection method.

EMAP and HGIS (PNDI) have known datum and do not require checking here. ☐ NAD 7 ☒ NAD83 ☐ WGS84
(GEO84) LAT.: 39.915556 and 39.920278 LONG.: -79.671111 and -79.6647 2

NOTE: A Submerged Lands Licens Agreement (SLLA) with an annual fee, if applicable, may also be required for your project. You will be notified if an SLLA is required.

The Aquatic Resources Impact Table (SECTION E. PROPOSED IMPACTS) must be completed or equivalent submitted for this gistration to be complet .

SECTION D. REGISTRATION CH CK LIST AND R Q UIREM NTS

Please place an "X" next to ac h it m (1 -9) to nsure it is completed and/or provid d.

less otherwi se specified, all items are ***required*** to ensure a complete Registration package.

Provide ONE (1) ORIGINAL and ONE (1) COPY of the Reg strat on package

Please provid a copy of the gistratio n form to the Municipality & County in which the work will b pe rform d. Proof of receipt is not eq uired to be provided to D P.

1. G ISTERING A G NE AL PERMIT (GP) check all that apply

Federal, State, county or municipal agencies or municipal authorities: ☒ **XEMPT from f s**

☐ GP-1	Fish Habitat Enhancement Structures	Per Project	$ 50	= $ _____
☐ GP-2	Small Docks and Boat Launchi g Ramps	Per Dock / Ramp _____ (#) x	$ 175	= $ _____
☐ GP-3	Bank Rehabilitatio , Ba k Protection and Gravel Bar Removal	Per Project _____ (#) x	$ 250	= $ _____
☐ GP-4	Intake and Outfall Structures	Per Structure _____ (#) x	$ 200	= $ _____
☒ GP-5	tili ty L e Str eam Crossings	Per Individual Utility 1 (#) x _ (#) x	$ 250	= $ 0
☐ GP-6	Agricultural Cross gs a d Ramps	Per Crossi g / Ramp _____ (#) x	$ 50	= $ _____
☐ GP-7	Mi or Road Crossings	Per Cross g _____ (#) x	$ 350	= $ _____
☐ GP-8	em porary Road Crossings	Per Cross g _____ (#) x	$ 175	= $ _____
☐ GP-9	Agricultural Activ ties	Per Project	$ 50	= $ _____
☐ GP-10	Abando ed Mine Reclamat on	Per Project	$ 500	= $ _____
☒ GP-11	Ma tenance, Testi g, Repair, Rehabilitation, or Replacement of Water Obstructio s and Encroachme ts[1]		$ 750	+
	☐ em porary D sturbance ($400/0.1ac)	_____.____ acres x $4,000 =	$ _____	+
	☐ Perma ent Disturbance ($800/0.1ac)	_____.____ acres x $8,000 =	$ _____	= $ 0
☐ GP-15	Private Reside ti al Construction i Wetlands[1]		$ 750	+
	☐ em porary D sturbance ($400/0.1ac)	_____.____ acres x $4,000 =	$ _____	+
	☐ Perma ent Disturbance ($800/0.1ac)	_____.____ acres x $8,000 =	$ _____	= $ _____
			GP(s) FEE subtotal (b)	$ 0

	Applicant ntry	DEP Use Only
2. Location Map (USGS quad map) with project site marked:	☒	☐
3. Color Photographs with dates, locat ons, and descriptions: ☐ GP-3 ☐ GP-11 ☐ **N/A**	☒	☐
4. Project Description: (Example: Linear pipeli e project using multiple GP-5's and GP-8's; One GP-7 for an access road to my property) Linear sewer pipeline project using GP-5 for two stream crossings. A portion of an ex sting sewer line will be abandoned in place, under and adjacent to the u named tributary of Cove Run.	☒	☐
5. Site Specific and/or Standard Drawings are (required for all) project's GP activities. For Activ ties that qualify for GP-7 or GP-11 Plans, specifications, and reports for bridges and culverts across a stream which are to be used by the general public such as an access to an ndustrial, commercial or residential development, etc., shall be prepared by a registered profess onal engineer and shall be aff xed th their seal and certificat on h ich shall read as follows on the drawings: If the project cludes a bridge or culvert replacement or the proposed ork ll change the aterw ay ope ng, please complete and provide the Bridge and/or Culvert Replacement Projects or Projects That Change the Waterway Opening (3150-PM-BWEW0552B) worksheet. If the project co sists of similar work (replacement or change waterway opening) on more than one structure, provide the data requested for each structure included in this Registration package. *"I (name) hereby certify pursuant to the penalties f 18 Pa. C.S.A. Sec. 4904 to the best of my kn wle dge, information and belief, that the information c ntained in the accompanying plans, specifications, an eports has been prepa ed in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapte 105 of the rules and regulations of the Department f Envi onmental Protecti n."*	☒	☐
6. Proposed Project Purpose depicting the site of the projects GP activities and impacts. Briefly discuss the need for the authorizat on.	☒	☐
7. Erosion & Sediment Control Plan (E&S Plan) (Required for all GP's but specifically required with submission with a gistration of GP-11 or GP's for oil and gas elated activities submitted to DEP.)	☐	☐
8. Pennsylvania Natural Dive sity Inventory (PNDI): PNDI Search ceipt and clearance lett s, if available. See additional quirements for submission with Avoidance Measures and/or Potential Impacts.	☒	☐
9. Activities which impact wetlands: (For State Regulated Impacts) **Please place an "X" next to the appropriate box indicating the information provid d:**		
➢ N/A because no wetland impacts are proposed or no compensatory mitigat on is necessary.	☒	☐
➢ A etlan d deli eation with complete data sheets n accordance with the 1987 Corps of Engineers Wetland Del eatio n Manual AND the appropriate Regional Supplements to the Corps of Engi eers Wetland Delineation Manual for use in Pe sylva ia.....	☐	☐
➢ If direct or indirect wetland mpacts are greater than 0.05 acre, a compensatory mitigation plan accorda ce with the Department's Replacement criteria which provides compensation for both affected acreage, and functions at a minimum of one to one ratio.	☐	☐
➢ **If compensatory mitigation onsite is det mine d not feasible:** A check, number _____, in the amount of $ _____ payable to the National Fish and Wildlife Foundatio , N.A. 1237, as compensatory mitigation for _____ acres of mpact wetlands, in accordance with the Pennsylva ia Wetland Replacement Project.....	☐	☐
(Additional Mitigation May B quired by U.S. Army Corps)	☐	☐
NOTE: If the Pennsylvania Wetland placement Fund is proposed to b used as compensatory mitigation for waters of th Commonwealth the U.S. Army Corps of Engineers may also equire additional mitigation if the proposed activity impacts waters of the United States.		

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client _____

AQUATIC RESOURCE IMPACT TABLE
FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION

Project / Site Name: _____ Date: _____

DEP USE ONLY			Project Information									PADEP / 105		
PADEP Permit Number	Single Complete Crossing No.	Crossing Number	Fee	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	Watercourse Impact Top of Bank to Top of Bank Length and Width in feet	Floodway Impact Top of Bank Landward Length and Width in feet	Wetland Impact Dimension Length and Width in feet
												-	-	-
												-	-	-
												-	-	-
												-	-	-
												-	-	-
												-	-	-
												-	-	-
												-	-	-

PADEP Impact Type: temporary or permanent.

Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water.

Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts).

SECTION E. PROPOSED IMPACTS

NOTE: Form 3150-PM-BWEW0557 or equivalent must be printed and submitted und this Se ction.

SECTION F. CERTIFICATION

I certify under penalty of law that the information provided in this permit registration is true and correct to the best of my knowledge and information and that I possess the authority to undertake the proposed action. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (If any of the information and/or plans is found to be in error, falsified, and/or incomplete, this authorization/verification may be subject to modification, suspension, or revocation in accordance with applicable regulations.) I further certify that this project complies with all the conditions of the general permit.

Garrett Mechling — Signature of Applicant / Owner

June 4, 2021 — Date

Garrett Mechling — Typed / Printed Name

General Manager — Typed / Printed Title

This General Permit shall not be effective until the owner has had their E&S Plan reviewed by the appropriate Regional Office or District, and, where required, obtained an SLLA from DEP.

THIS ACKNOWLEDGED COPY OF THIS GENERAL PERMIT REGISTRATION PACKAGE AND THE E&S PLAN MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION.

SECTION G. DECISION / DISPOSITION – COMPLETED BY DEP

Decision Review:

Elizabeth Ann Farley — DEP / District Reviewer Signature

Elizabeth Ann Farley, P.E. — Reviewer's Typed / Printed Name

GP GP112605221-025

GP GP052605221-005

NOTE: See Aquatic Resource Impact Table for any additional authorizations.

Disposition Status			Comments
☒ **ACKNOWLEDGED**	Date 9/23/21		
SLLA Required	☐ Yes Attached	☒ No	
☐ **INCOMPLETE / DEFICIENCY**	Date		
☐ **EXTENSION REQUEST**	Date		
☐ **WITHDRAWN**	Date		

NOTE: If the GP registration information is incomplete a copy of this registration form and requested additional information will be sent to the applicant. A copy of the returned registration form and additional information must be re-submitted within 60 calendar days unless extended by the extension date listed above.

☒ **FEDERAL AUTHORIZATION**

- ☒ Non-reporting PASPGP verification / authorization attached.
- ☐ Reporting – A copy of this General Permit registration package has been sent to the U.S. Army Corps of Engineers. Separate federal authorization may be required

NOTE: Please be advised that if the reporting box is checked you do not have Federal authorization for this project and such authorization may be required prior to starting your project. In accordance with Section 404 of the Clean Water Act, a Department of the Army authorization is required for the discharge of dredged and/or fill material into waters of the United States, including jurisdictional wetlands. Section 10 of the Rivers and Harbors Act also requires Department of the Army authorization for any work in, over, or under a navigable water of the United States. In accordance with procedures established with the U.S. Army Corps of Engineers, you will be contacted directly by the Corps regarding Federal Authorization.

3150-PM-BWEW0557 ev 4/2018
Ap lication

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONM NTAL P ROTECTION
BUR AU OF WATERWAYS ENGINE ING AND TLANDS

Applicant's Name / Client North Union Township

Municipal Services Authority

AQUATIC RESOURC IMPACT TABLE

FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND NC ROACHM NT APPLICATION/ REGISTRATION

Project / Site Name: NUTMSA/ Misty Lane nitary Sewer Date: 8/31/2021

DEP US E ONLY			Project Information									PADP / 105		
PADEP Permit Number	Single Complete Crossing No.	Crossing Number	Fee	Structure/ Activity unique identifier	Aquatic Resource Ty e	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Ty e tem / perm	Watercourse Impact To of Bank to Top of Bank Length and Width in feet	Floodway Impact Top of Bank Landward Length and Width in feet	Wetland Impact Dimension Length and Width in feet
			A	GP 5 1	Perenn l	39.915556	-79.671111	Cove Run	WWF	Exc va tio n	Temp	39 - 8	147 8	A
			A	GP 5 1	"	"	"	"	"	"	Perm	39 2	147 2	A
			A	GP 5 2	Perenn l	39.920402	79.664745	UNT Cove Run	WWF	Exc va tio n	Temp	42 8	124 8	A
			A	GP 5 2	"	"	"	"	"	"	Perm	42 2	124 2	A
			A	GP 11 1	"	"	"	"	"	Abandone d Line	Perm	17 2	103 2	

PADEP Impact Type: temporary or permanent.

Permanent Impacts are those are s affected by water obstruction or encroachment th t cons st of both direct and ndirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting nto a watercourse, floodway or body of water.

Temporary Impacts are those areas ffected during the construction of a water obstruction or encroachment that consists of both direct nd indirect impacts located in, along or across, or project ng into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained s a result of the operation and m ntenance of the water obstruction or encro chment located n, along or across, or project ng into watercourse, floodway or body of water (these are considered perm nent mpacts).

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office

September 12, 2018

Robert Garbart
North Union Township MSA
PO Box 309
Lemont Furnace, PA 15456

Re: General Permit (GP) Acknowledgment Notification
DEP File No.: GP052618205
NUTMSA/Oliver Sanitary Sewer
North Union Township
Fayette County

Dear Mr. Garbart:

This letter acknowledges receipt of your notification to use and registers your use of a General Permit (GP) under the authority of the Dam Safety and Encroachments Act (32 P. S. § 693.1 et. seq.) and 25 Pa. Code Chapter 105. You are responsible for assuring the work is done in accordance with the drawings, terms and conditions contained in the GP. You may proceed with your project after making the required notifications stipulated in the GP and securing all other approvals that may be necessary.

Enclosed is an acknowledged copy of your GP Registration Form. Please place this letter and the acknowledged GP Registration form with your copy of the GP Registration package, the applicable GP terms and conditions, required Federal authorizations, and the Erosion and Sediment Control plan and maintain on site during construction. Please review the complete permit authorization package so that you are aware of the extent of authorization(s) and the conditions that apply to that authorization(s).

We have determined that the four stream crossings constitute four single and complete projects, and each is authorized by its own Pennsylvania State Programmatic General Permit-5 (PASPGP-5). These PASPGP-5 verifications provide U.S. Army Corps of Engineers authorization pursuant to Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. These authorizations may be subject to modification, suspension, or revocation if any of the information contained in the application, including the plans, is later found to be in error.

The enclosed list of conditions must be followed for purposes of the PASPGP-5s (enclosed). A PASPGP-5 Permit Compliance, Self-Certification Form must be completed and returned to the appropriate Corps of Engineers office upon completion of construction of each crossing (enclosed).

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board
Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Environmental Hearing Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at http://ehb.courtapps.com or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

If you have questions about your registration, please contact Michala Hart at the below telephone number and refer to the above referenced registration number.

Sincerely,

Michala Hart
Environmental Engineering Technician
Waterways & Wetlands Program

Enclosures

cc: US Army Corps of Engineers
Fayette County Conservation District
James Stanton- McMillen Engineering, Inc.

PASPGP-5 PERMIT COMPLIANCE, SELF-CERTIFICATION FORM

Project Name: NUTSMA Oliver Sanitary Sewer Applicant Name: North Union Township Muni Sewer Auth

PADEP Permit No: GP052618205 Date of Issuance: 09/12/18

Corps Permit Number: n/a Date of Issuance: n/a

Waterway: Redstone Creek & UNTs Redstone Creek County: Fayette

In accordance with the compliance certification condition of your PASPGP-5 authorization, you are required to complete and sign this certification form and return it to the appropriate Corps of Engineers District in which the work is located.

☐ U.S. Army Corps of Engineers
Philadelphia District
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

☐ U.S. Army Corps of Engineers
Baltimore District
1631 South Atherton Street
Suite 101
State College, PA 16801-6260

☐ U.S. Army Corps of Engineers
Pittsburgh District
Regulatory Branch
Federal Building, 20th Floor
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Please note that the permitted activity is subject to compliance inspections by U.S. Army Corps of Engineers representatives. As a condition of this permit, failure to return this notification form, provide the required information below, or to perform the authorized work in compliance with the permit, can result in suspension, modification or revocation of your authorization in accordance with 33 CFR Part 325.7 and/or administrative, civil, and/or criminal penalties, in accordance with 33 CFR part 326.

Please provide the following information:

1. Date authorized work commenced: _____

2. Date authorized work completed: _____

3. Was all work, including any required mitigation, completed in accordance with your PASPGP-5 authorization?
☐YES ☐ NO

4. Explain any deviations (use additional sheets if necessary)

_____

_____

5. Was compensatory wetland/stream mitigation accomplished through an approved Mitigation Bank and/or In-Lieu fee program?
☐YES ☐NO (if **YES,** attach proof of transaction, if **NO** complete Number 6 and 7 below).

6. Was permittee compensatory wetland and/or stream mitigation required? ☐ YES ☐ NO If **YES,** was the required compensatory mitigation completed in accordance with the permit and mitigation plan requirements? ☐ YES ☐ NO

7. Attach labeled color photographs showing completed work including any mitigation area(s).

I hereby certify that, except as noted above, that all work, including mitigation, has been completed in accordance with the terms and conditions, including special conditions of the above referenced permit.

(Permittee Signature): _____ (Telephone Number): _____

(Address): _____ (Email): _____

_____

_____

29 April 2016

PENNSYLVANIA STATE PROGRAMMATIC GENERAL PERMIT – 5
(PASPGP-5)
July 1, 2016

Please note: the full text of the PASPGP-5 may be viewed on the Baltimore District web site at http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx **or by calling the Corps at 814-235-0570**

Permittee: North Union Township Municipal Sewer Authority
Date of PASPGP-5 Verification: 09/12/2018
State Authorization(s): GP052618205

Corps District:

☐ **Philadelphia**
U.S. Army Corps of Engineers,
Philadelphia District
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

☐ **Baltimore**
U.S. Army Corps of Engineers,
Baltimore District
Regulatory Branch
1631 South Atherton Street
Suite 101
State College, PA 16801-6260

☑ **Pittsburgh**
U.S. Army Corps of Engineers,
Pittsburgh District
Regulatory Branch
Federal Building, 20th floor
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

It has been determined that your proposed project, which includes the discharge of dredged and/or fill material and/or the placement of structures into waters of the United States, including wetlands, qualifies for Federal authorization under the provisions of Section 404 of the Clean Water Act and /or Section 10 of the River and Harbor Act of 1899, under the terms and conditions of the PASPGP-5.

All activities authorized under PASPGP-5 must comply with all conditions of the authorization, including General, Procedural, and Special Conditions. Failure to comply with all the conditions of the authorization, including project special conditions, will constitute a permit violation and may be subject to criminal, civil, or administrative penalties, and /or restoration.

The authorized activity must be performed in compliance with the following General Conditions to be authorized under PASPGP-5:

General Conditions:

1. **Permit Conditions:** The permittee shall comply with all terms and conditions set forth in the PADEP authorization, including all conditions of the State Water Quality Certification as required by Section 401 of the CWA, and any subsequent amendments or modifications to such authorizations. The permittee shall conduct all work and activities in strict compliance with all approved maps, plans, profiles, and specifications used by PADEP and/or the Corps in issuing their authorization/verification.

2. **Aquatic Life Movements:** No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be appropriately depressed to maintain aquatic life movement and low flow conditions.

3. **Threatened and Endangered Species:** By signing the PNDI receipt, the permittee has agreed to comply with all avoidance measures identified by the PNDI receipt. As such, those avoidance measures associated with Federally-listed threatened or endangered species are a condition of the PASPGP-5 verification, unless modified by the Corps.

If an activity is verified under the PASPGP-5, and a Federally-listed threatened or endangered species, or proposed species, is subsequently found to be present, all work must cease, and the Corps and USFWS (or NMFS) must be notified. The PASPGP-5 verification is suspended and will not be re-issued until consultation pursuant to Section 7 of the ESA is concluded and adverse effects to Federally-listed threatened, endangered and proposed species are avoided.

Furthermore, persons have an independent responsibility under Section 9 of the ESA to not engage in any activity that could result in the "take" of a Federally-listed species.

4. **Spawning Areas:** The permittee shall comply with all time-of-year-restrictions associated with spawning areas as set forth by the PFBC or other designated agency. Discharges or structures in spawning or nursery areas shall not occur during spawning seasons, unless written approval is obtained from the PFBC or other designated agency. In addition, work in areas used for other time sensitive life span activities of fish and wildlife (such as hibernation or migration) may necessitate the use of seasonal restrictions for avoidance of adverse impacts to vulnerable species. Impacts to these areas shall be avoided or minimized to the maximum extent practicable during all other times of the year.

5. **Migratory Bird Breeding Areas:** Activities in waters of the United States, including jurisdictional wetlands, that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable. Recommendations pertaining to the conservation of migratory birds can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

6. **Shellfish Production:** No discharge of dredged and/or fill material and/or the placement of structures may occur in areas of concentrated shellfish production, unless the discharge is directly related to an authorized shellfish harvesting activity.

7. **Adverse Effects From Impoundment:** If the activity, including the discharge of dredged and/or fill material or the placement of a structure, creates an impoundment of water, the adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow, including impacts to wetlands, shall be minimized to the maximum extent practicable.

8. **Obstruction of High Flows:** To the maximum extent practicable, the activity must be designed to maintain pre-construction downstream flow conditions (i.e., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters), and the structure or discharge of dredged and/or fill material shall be designed to withstand expected high flows.

9. **Erosion and Sediment Controls:** During construction, appropriate erosion and sedimentation controls must be used and maintained in effective operating condition in accordance with State regulations. All disturbed soil and other fill material must be permanently stabilized.

10. **Suitable Material:** No activities, including discharges of dredged and/or fill material or the placement of structures, may consist of unsuitable material (i.e., asphalt, trash, debris, car bodies, etc.). No material discharged shall contain toxic pollutants in amounts that would violate the effluent limitation standards of § 307 of the CWA.

11. **Temporary Fill:** Temporary fill (i.e., access roads and cofferdams) in waters and/or wetlands verified by the PASPGP-5 shall be properly constructed and stabilized during use to prevent erosion and accretion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade, unless such requirement is specifically waived by the Corps. Whenever possible, rubber or wooden mats should be used for equipment access through wetlands to the project area. Temporary fills shall be removed, in their entirety, to an upland site, and suitably contained to prevent erosion and transport to a waterway or wetland. Temporary fill areas shall be restored to their preconstruction contours, elevations, and hydrology, and revegetated with a wetland seed mix that contains non-invasive, native species, as soon as practicable.

12. **Equipment Working in Wetlands:** Measures must be taken to minimize soil disturbance when heavy equipment is used in wetlands. These measures include, but are not limited to, avoiding the use of such equipment, use of timber mats or geotextile fabric, and use of low pressure tire vehicles.

13. **Installation and Maintenance:** Any structure or fill verified shall be properly installed and maintained to ensure public safety.

14. **PASPGP-5 Authorization:**

    a. The PASPGP-5 expires June 30, 2021, unless suspended or revoked.

    b. Verifications of PASPGP-5 expire June 30, 2021, unless the PASPGP-5 permit is suspended, revoked, or the PADEP authorization expires, whichever date occurs sooner. Activities authorized under the PASPGP-5 that have commenced construction or are under contract to commence construction will remain authorized provided the activity is completed within 12 month of the date of the PASPGP-5's expiration, modification, or revocation; or until the expiration date of the project specific verification, whichever is sooner.

15. **One-Time Use:** A PASPGP-5 verification is valid to construct the project, or perform the activity, one time only, except for PASPGP-5 verification specifically issued for reoccurring maintenance activities.

16. **Water Supply Intakes:** No activity, including discharges of dredged and/or fill material and/or placement of structures, may occur in the proximity of a public water supply intake and adversely impact the public water supply.

17. **Cultural Resources:** For all activities verified under a PASPGP-5, upon the unanticipated discovery of any previously unknown historic properties (historic or archeological), all work must cease and the permittee must notify the SHPO and the Corps of Engineers. The Corps will contact the Tribes they routinely consult with within 24 hours in accordance with each District's tribal Consultation process. The PASPGP-5 verification is not valid until it is determined, through the Section 106 consultation process, whether the activity will have an effect on the historic property. The PASPGP-5 may be re-verified and special conditions added if necessary, after an effects determination on historic properties and/or Tribal resource is made, in consultation with the SHPO, the Tribes and other interested parties. The PASPGP-5 verification may be modified and/or rescinded for the specific activity if an adverse effect on the historic property cannot be avoided, minimized, or mitigated.

18. **Tribal Rights:** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting grounds.

19. **Corps Civil Works Projects:** The PASPGP-5 does not authorize any work which will interfere with an existing or proposed Corps Civil Works project (i.e., flood control projects, dams, reservoirs, and navigation projects), unless specifically waived by the Corps in writing.

20. **Navigation:** No activity verified under PASPGP-5 may cause more than minimal adverse effect on navigation. No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. In addition, activities that require temporary causeways that prohibit continued navigational use of a waterway (i.e., temporary causeways extending greater than ¾ the width across the waterway) shall be removed in their entirety upon completion of their use. Any safety lights and signals prescribed by the U.S. Coast Guard, through regulation or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States. The permittee understands and agrees that, if further operations by the United States require the removal,

relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

21. **Inspections:** The permittee shall allow a District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with all the terms and conditions of the PASPGP-5. The District Engineer may also require post-construction engineering drawings (as-built plans) for completed work.

22. **PASPGP-5 Permit Compliance Self Certification Form:** A Self Certification Form, will be forwarded to each permittee with a PASPGP-5 verification. Every permittee, who receives a written PASPGP-5 verification, shall submit a signed Self Certification Form upon completion of the verified work and required mitigation, to the appropriate Corps District.

23. **Monitoring of Temporary Wetland Impacts:** For all temporary wetland impacts greater than 0.10 acre per Single and Complete Project, a monitoring report using the standard monitoring form (including preconstruction photographs as described on the monitoring form) will be submitted to the Corps, unless this requirement is specifically waived by the Corps in writing, or such monitoring is superseded by more stringent monitoring required by the Corps as a Special Condition of a PASPGP-5 verification. To obtain a waiver from the Corps the applicant must contact the appropriate Corps district with a written request to be relieved of the monitoring requirement. Such request shall include the state authorization, and the Corps permit numbers if known, and a rationale as to why the monitoring should not be required.

    The permittee shall inspect the subject areas within 7 days after restoration of the temporary impact is completed, and again at the end of the first full growing season (no later than October 31) after the site has been restored. The standard monitoring form is available on the Baltimore District web site at:
    http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx or by contacting the applicable Corps District office. When more than one temporary wetland impact is authorized as part of a Single and Complete Project, separate monitoring forms shall be filled out for each temporarily impacted wetland.

    The completed report shall be submitted to the appropriate Corps District within two weeks of the final inspection of the temporarily impacted wetland. If the initial monitoring event reveals that the temporarily impacted area is not restored to preconstruction contours, the permittee shall take corrective measures to return the area back to preconstruction grades. The permittee shall document the actions taken to restore the area back to preconstruction grades on the monitoring form.

    This condition is not applicable to any project authorized as a grandfathered PASPGP-4 (see Part IV A. 30. "Grandfathered Activities"

24. **Permit Modifications:** Any proposed modification of a verified Single and Complete Project that results in a change in the verified impact to, or use of waters of the United States, including jurisdictional wetlands, must be approved by PADEP. Corps approval is also required if the Single and Complete Project had been previously reviewed by the Corps, or if the proposed modification is a reporting activity under PASPGP-5. Project modifications that cause a Single and Complete Project to exceed 1.0 acre of waters of the United States, including jurisdictional wetlands, or greater than 1,000 linear feet of permanent stream loss will not be eligible for PASPGP-5 and will be forwarded to the Corps for review.

25. **Recorded Conservation Instruments:** As per Part IV.A.28 and Part IV.B.9 of this permit, proposed Draft Conservation Instruments may be submitted by the applicant as part of the permit

application package for review and approval. When such proposed Conservation Instruments are submitted by the applicant, proof of the recorded deed restriction, conservation easement, or deed restricted open space area shall be forwarded to the appropriate Corps District and appropriate PADEP offices, prior to the initiation of any permitted work, unless specifically waived by the Corps in writing. Conservation Instrument templates can be found at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx

26. **Property Rights:** The PASPGP-5 does not obviate the need to obtain other Federal, state, or local authorizations required by law, nor does the permit grant any property rights or exclusive privileges, or authorize any injury to the property or rights of others.

27. **Navigable Waters of the United States (Section 10 Waters):**

    a. The PASPGP-5 may be used to authorize work in the following navigable waters of the United States:

        i. Codorus Creek – from the confluence with the Susquehanna River 11.4 miles upstream to the Richland Avenue Bridge in York, Pennsylvania;

        ii. Main Stem Susquehanna River – from the confluence with the Chesapeake Bay upstream to Athens , Pennsylvania (approximately 4 miles south from the New York State line);

        iii. West Branch of the Susquehanna River – from the confluence with the main stem Susquehanna River upstream to the dam at Lock Haven, Pennsylvania;

        iv. Chester Creek – from the confluence with the Delaware River 2 miles upstream;

        v. Crum Creek – from the confluence with the Delaware River 1 mile upstream to the upstream side of the Dam at Eddystone;

        vi. Darby Creek – from the confluence with the Delaware River 5 miles upstream to the upstream side of the 84th Street Bridge in Philadelphia, Pennsylvania;

        vii. Delaware River – from U.S. Route 202 Bridged in New Hope, Pennsylvania, including the West Branch of the Delaware River, upstream to the Pennsylvania/New York border at the 42nd parallel;

        viii. Lehigh River – from the confluence with the Delaware River 72 miles upstream to the downstream side of the PA Route 940 Bridge;

        ix. Neshaminy Creek – the confluence with the Delaware River, including Neshaminy State Park Harbor Project at the mouth of Neshaminy Creek, 4 miles upstream to the downstream side of the Newportville Bridge;

        x. Pennypack Creek – from the confluence with the Delaware River 2 miles upstream to the downstream side of the Frankford Avenue Bridge in Philadelphia, Pennsylvania;

        xi. Ridley Creek – from the confluence with the Delaware River 1 mile upstream to the upstream side of the Baltimore and Ohio Railroad Bridge in Chester, Pennsylvania;

        xii. Schuylkill River – from the Fairmont Dam, 104 miles upstream to Port Carbon, Pennsylvania;

xiii. Schuylkill Navigation Channel (Manayunk Canal) – along the Schuylkill River for 2 miles from the Flat Rock Dam to Lock Street in the Manayunk Section of Philadelphia, Pennsylvania;

xiv. Delaware Canal;

xv. Lehigh Canal; and

xvi. All other waters not specifically exempted in the PASPGP-5, Part III, A, 5, that are subject to the ebb and flow of the tide. Such waters are considered navigable waters of the United States to the head of tidal influence.

b. In addition to the other general conditions, the following conditions are applicable for navigable waters of the United States eligible for PASPGP-5.

i. For aerial transmission lines, the following minimum clearances are required for aerial electric power transmission lines crossing navigable waters of the United States. These clearances are related to the clearances over the navigable channel provided by the existing fixed bridges, or the clearances which would be required by the United States Coast Guard (USCG) for new fixed bridges, in the vicinity of the proposed aerial transmission line. These clearances are based on the low point of the line under conditions producing the greatest sag, taking into consideration temperature, load, wind, length of span, and type of supports as outlines in the National Electric Safety Code:

Nominal System Voltage (kV)	Minimum Additional Clearance (ft.) Above Clearance Required for Bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750-765	45

a. Clearances for communication lines, stream gauging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless specifically authorized otherwise by the District Engineer.

b. Corps of Engineers regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both regulation and ER 1110-2-4401 apply, the greater minimum clearance is required.

ii. Encasement: The top of the cable, encasement, or pipeline shall be located a minimum of three feet below the existing bottom elevation of the streambed and shall be backfilled with suitable heavy material to the preconstruction bottom elevation. Where the cable, encasement, or pipeline is placed in rock, a minimum depth of one foot from the lowest point in the natural contour of the streambed shall be maintained. When crossing a maintained navigation channel, the requirements are a minimum of eight feet between the top of the cable, encasement, or pipeline and the authorized depth of the navigation channel. For maintained navigational channels, where the utility line is placed in rock, a minimum depth of two feet from the authorized depth of the navigation channel shall be maintained.

iii. As-Built Drawings: Within 60 days of completing an activity that involves an aerial transmission line, submerged cable, or submerged pipeline across a navigable water of the United States (i.e., Section 10 waters), where the permittee shall furnish the Corps and the National Oceanic and Atmospheric Administration, Nautical Data Branch, N/CS26, Station 7317, 1315 East-West Highway, Silver Spring, Maryland, 20910 with professional, certified as-built drawings, to scale, with control (i.e., latitude/longitude, state plane coordinates), depicting the alignment and minimum clearance of the aerial wires above the MHWL at the time of survey or depicting the elevations and alignment of the buried cable or pipeline across the navigable waterway.

iv. Aids to Navigation: The permittee must prepare and provide for USCG approval, a Private Aids to Navigation Application (CG-2554). The form can be found at: http://www.uscg.mil/forms/cg/CG_2554.pdf . Within 30 days of the date of receipt of the USCG approval, the permittee must provide a copy to the applicable Corps District.

28. **PADEP Waiver:** If the Corps determines a specific activity, which is eligible for a PADEP Non-reporting Waiver, has a significant adverse impact on life, property or important aquatic resources, the Corps may require the owner to modify the activity to eliminate the adverse condition or to obtain an Individual Permit.

29. **Corps Water Releases:** For projects located downstream of a Corps dam, the permittee should contact the appropriate Corps of Engineers, Area Engineer Office, to obtain information on potential water releases and to provide contact information for notification of unscheduled water releases. It is recommended that no in-water work be performed during periods of high water flow velocities. Any work performed at the project site is at the permittee's own risk.

30. **State Authorization:** The activity must receive State authorization. For the purpose of this requirement, any one of the following would be considered as a State authorization:

a. A PADEP Chapter 105 Water Obstruction and Encroachment Permit, including PADEP approved Environmental Assessment pursuant to 25 Pa. Code § 105.15; or

b. A PADEP GP issued pursuant to 25 Pa. Code § §105.441-105.449; or

c. A PADEP approved Environmental Assessment for activities not otherwise requiring a PADEP permit pursuant to 25 Pa. Code § 105.12; or

d. A State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA for activities which qualify for waiver of PADEP permit requirement per 25 Pa. Code §105.12; or

e. A PADEP Dam Permit, including maintenance or repairs of existing authorized dams, including maintenance dredging; or

f. A PADEP Emergency Permit issued pursuant to 25 Pa. Code § 105.64; or

g. A PADEP permit for the construction of a bridge or culvert (including bridges and culverts authorized by PADEP prior to implementations of the PASPGP-1 in March 1995), which allows for maintenance activities of bridges and culvert; or

h. A PADEP Chapter 105 Dam Safety and Encroachment Enforcement Action; or

i. A programmatic/project specific State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA where no other State authorization, as listed above, is required.

31. **Other Authorizations:** Additional Federal, State, and/or local authorizations or approvals may be required and where applicable must be secured by the applicant, prior to initiating any discharge of dredged and/or fill material, and/or the placement of structures into waters of the United States, including jurisdictional wetlands. These approvals include, but are not limited to:

    a. A State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA;

    b. A Consistency Determination issued by PADEP pursuant to Section 307 of the Federal Coastal Zone Management Act for activities located within the designated Coastal Zone Management Area; and

    c. Fills within the 100-year floodplains. This activity must comply with applicable FEMA approved State or local floodplain management requirements.

32. **Federal Liability:** In issuing this permit, the Federal Government does not assume any liability for the following:

    a. Damages to permitted project or users, thereof, as a result of other permitted or unpermitted activities or from natural causes;

    b. Damages to the permitted project or uses, thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;

    c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

    d. Design or construction deficiencies associated with the permitted work; and

    e. Damage claims associated with any future modification, suspension, or revocation of the PASPGP-5.

33. **False and Incomplete Information:** The Corps may modify or rescind a previously issued project specific verification, if determined that the original verification was issued based on false, incomplete and/or inaccurate information; or other information becomes available whereby such action is necessary to ensure compliance with other federal laws and regulations.

34. **Essential Fish Habitat:** No work can take place in the following waterways from March 15th to June 30th unless approved in writing by the Corps. Questions on the applicability of this condition should be directed to the Corps of Engineers, Philadelphia District.

    a. Delaware River (within Pennsylvania, upstream from the U.S. Route 202 Bridge in New Hope, Pennsylvania,); and

    b. Lehigh River (from the mouth to Francis E. Walter Dam, located in Carbon and Luzerne County, Pennsylvania)

35. **Conservation Measures for Atlantic and Shortnose Sturgeon:** All work proposed in the following listed waters must comply with the below Conservation Measures, unless specifically waived by the Corps in writing. Questions on the applicability of this condition should be directed to the Corps of Engineers, Philadelphia District.

Waterway	Action Area (From Point Specified to the Confluence with the Delaware River)	Latitude	Longitude
Marcus Hook Creek	US Route 13 Bridge	39.822054	-75.409873
Stoney Creek	US Route 13 Bridge	39.828408	-75.400953
Chester Creek	Kerlin Street Bridge	39.855846	-75.37641
Ridley Creek	McDade Boulevard	39.869522	-75.356692
Crum Creek	US Route 13 Bridge	39.866799	-75.340677
Darby Creek	Pine Street Bridge	39.914006	-75.259994
Frankford Creek	Frankford Avenue/US 13 Bridge	40.005314	-75.070173
Frankford Creek (Original Mouth)	End of Channel	40.004912	-75.070173
Pennypack Creek	Route 13 Bridge	40.043421	-75.020638
Poquessing Creek	Mill Road Bridge	40.043421	-75.982076
Neshaminy Creek	Rapids just below Hulmeville Road Bridge (SR 513), Bucks County	40.141393	-74.911899
Unnamed Tributary 1, located in Croydon, PA	River Road crossing	40.085774	-74.8856
Otter/Mill Creek	US 13 (Bristol Pike) Bridge	40.100424	-74.866976
Unnamed Tributary 2, located in Bristol, PA	Wood Street Bridge	40.102044	-74.845682
Martins Creek	Main Street (Tulleytown)	40.141975	-74.812026
Scott's Creek	End of creek	40.12921	-74.793879
Scott's Creek Relocated Channel, located at Money Island, Bucks County, PA	First culvert crossing	40.125578	-74.776886
Non-Tidal Tributaries			
Buck Creek	Delaware Canal	40.243699	-74.838279
Dyers Creek	Delaware Canal	40.267098	-74.858495
Houghs Creek	Delaware Canal	40.28148	-74.865783
Jericho Creek	Delaware Canal	40.313984	-74.902899
Pidcock Creek	Delaware Canal	40.331508	-74.935788

Conservation Measures:

a. No work shall occur from March 15 to November 15, of any given year.

b. All Dredging shall be performed by a mechanical dredge and/or techniques (clamshell bucket etc.).

c. All work, including the installation of turbidity curtains and dewatering cofferdams, shall be performed during low tide or when the tide is waterward of the proposed work in all tidal waterbodies listed, or during periods of low or no flow in the non-tidal waterbodies listed.

d. Blasting is not authorized by the PASPGP-5 within the listed waterbodies.

e. Pile Driving:

i. Piles shall not be greater than 12 inches in diameter;

ii. Piles shall be installed using a vibratory hammer or an impact hammer provided noise attenuation devices (cushion blocks, etc.) are used, and a "soft start" is performed each day of pile driving. A "soft start" is the building up of power slowly during pile driving activities to allow for fish and other wildlife to leave the area; and

iii. Pile driving activities shall be limited to no more than 12 hours per day.

Any activity that cannot meet these conditions will be sent to the Corps as a Reporting Activity at which time the Corps will conduct project specific Section 7 Endangered Species Act consultation with NMFS.

36. **Migratory Birds and Bald and Golden Eagles:** The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulation governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity. Information on the conservation of migratory birds and Bald and Golden Eagles can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

By Authority of the Secretary of the Army:

Edward P. Chamberlayne
Colonel, Corps of Engineers
District Engineer, Baltimore

Michael A. Bliss
Lieutenant Colonel, Corps of Engineers
District Engineer, Philadelphia

Bernard R. Lindstrom
Colonel, Corps of Engineers
District Engineer, Pittsburgh

3150-PM-BWEW0500 Rev. 2/2018
Form

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

CHAPTER 105 WATER OBSTRUCTIONS AND ENCROACHMENT GENERAL PERMIT REGISTRATION

SECTION A. APPLICANT INFORMATION

☐ FERC Natural Gas Activity Docket Number _____ Type of Facility Sewer Extension

Has a Water Quality Certification (WQC) request been sent to DEP? ☐ Yes ☒ No

Activity Related to Oil & Gas Exploration, Production, Storage or Transmission

Applicant's Name / Client	DEP Client ID# (if known)	Employer ID# (EIN)
North Union Township MSA		25-1665540

Client Information - Please select Client Type / Code from drop down box under the correct entity shown to the right. (or may be written in) →	Government	Non-Government	Individual
	AUTH Authority		

Mailing Address	City	State	ZIP + 4
P.O. Box 309 , 120 Commonwealth Drive, Suite 101	Lemont Furnace	PA	15456

Contact Person – Last Name	First	MI	Suffix	Telephone	Email Address
Garbart	Robert			(724) 438-6316	rlgarbart@aol.com

SECTION B. CONSULTANT INFORMATION (If applicable) ☐ N/A

Contact Person – Last Name	First	MI	Suffix	Consultants Title	Consulting Firm
Stanton	James			Vice President of Engineering	McMillen Engineering, Inc.

Mailing Address	City	State	ZIP + 4
115 Wayland Smith Drive	Uniontown	PA	15401

Telephone	Fax	Email	Employer ID# (EIN)
(724) 439-8110	(724) 439-4733	jstanton@mcmilleng.com	23-2871380

SECTION C. PROJECT INFORMATION

Project / Site Name	FERC Docket No. (if applicable)	DEP Site ID# (if known or leave blank)
NUTMSA/Oliver Sanitary Sewer		

Client Relationship - Please select Site-to-Client Relationship/ Code from drop down box to the right. (or may be written in) →	Double-click on shaded area below to select correct Site-to-Client Relationship / Code ↓ AGENT Agent for Owner or Operator

County	Municipality ☐ City ☐ Borough ☒ Township	Note: Municipal & County Notification is Required
Fayette	North Union	

Site Location / Address	City	State	ZIP + 4
Oliver Road, Lower Oliver 3 Road, and Bute Road	Uniontown	PA	15401

Collection Method: ☒ EMAP ☐ HGIS ☐ GISDR* ☐ ITPMP ☐ GPS ☐ WAAS ☐ LORAN

Check the horizontal reference datum (or projection datum) employed in the collection method.

EMAP and HGIS (PNDI) have known datum and do not require checking here. ☐ NAD27 ☐ NAD83 ☐ WGS84

(GEO84) LAT.: _____ LONG.: _____

NOTE: A Submerged Lands License Agreement (SLLA) with an annual fee, if applicable, may also be required for your project. You will be notified if an SLLA is required.

The Aquatic Resources Impact Table (SECTION E. PROPOSED IMPACTS) must be completed or equivalent submitted for this registration to be complete.

SECTION D. REGISTRATION CHECKLIST AND REQUIREMENTS

Please place an "X" next to each item (1-9) to ensure it is completed and/or provided.

Unless otherwise specified, all items are ***required*** to ensure a complete Registration package.

Provide ONE (1) ORIGINAL and ONE (1) COPY of the Registration package Municipality & County Notification:

Please provide a copy of the Registration form to the Municipality & County in which the work will be performed. Proof of receipt is not required to be provided to DEP.

1. REGISTERING A GENERAL PERMIT (GP) check all that apply

☐ **GP-1** Fish Habitat Enhancement Structures
Fee: $50 per project

☐ **GP-2** Small Docks & Boat Launching Ramps
Fee: $175 _____
Please mark ("X") the specific type of project:
☐ private recreational dock ☐ public service facility
☐ access facility ☐ other private or commercial facility

☐ **GP-3** Bank Rehabilitation, Bank Protection, and Gravel Bar Removal
Fee: $250

☐ **GP-4** Intake and Outfall Structures
Fee: $200

☒ **GP-5** Utility Line Stream Crossing
Fee: $250

☐ **GP-6** Agricultural Crossings & Ramps
Fee: $50

☐ **GP-7** Minor Road Crossings
Fee: $350

☐ **GP-8** Temporary Road Crossings
Fee: $175

☐ **GP-9** Agricultural Activities public
Fee: $50 per project

☐ **GP-10** Abandoned Mine Reclamation
Fee: $500 per project

☐ **GP-11** Maintenance, Testing, Repair, Rehabilitation, or Replacement of Water Obstructions and Encroachments (reviewed by DEP Regional Office only)
Fee: $750
☐ Temporary Disturbance $400/ .1 acre ☐ Permanent Disturbance $800/ .1 acre

☐ **GP-15** Private Residential Construction in Wetlands
Fee: $750
☐ Temporary Disturbance $400/ .1 acre ☐ Permanent Disturbance $800/ .1 acre

Disturbance Fees associated with GP's 11 and15 are rounded up to the next tenth.

Example: .103 = .2 acre = $800 temporary disturbance.

*****See Chapter 105 FEE(S) Calculation Worksheet for Explanation of Fees*****
Federal, state, county, municipal agencies or municipal authorities FEE EXEMPT

	Applicant Entry	DEP Use Only
2. Location Map (USGS quad map) with project site marked:	☒	☐
3. Color Photographs with dates, locations, and descriptions: ☐ GP-3 ☐ GP-11 ☐ **N/A**	☒	☐
4. Project Description: (Example: Linear pipeline project using multiple GP-5's and GP-8's; One GP-7 for an access road to my property) Sewer extension using four GP-5's	☒	☐
5. Site Specific and/or Standard Drawings depicting the project's GP activities. Activities that qualify for GP-7 or GP-11 Plans, specifications, and reports for bridges and culverts across a stream which are to be used by the general public such as an access to an industrial, commercial or residential development, etc., shall be prepared by a registered professional engineer and shall be affixed with their seal and certification which shall read as follows: *"I (name) do hereby certify pursuant to the penalties of 18 Pa. C.S.A. Sec. 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications, and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection."*	☒	☐
6. Proposed Project Purpose depicting the site of the projects GP activities and impacts. *(See Section E.)* Briefly discuss the need for the authorization	☒	☐
7. Erosion & Sediment Control Plan (E&S Plan) (Required for all GP's but specifically required with submission with a registration of GP-11 or GP's for oil and gas related activities submitted to DEP)	☒	☐
8. Pennsylvania Natural Diversity Inventory (PNDI): PNDI Search Receipt and clearance letters, if available. See additional requirements for submission with Avoidance Measures and/or Potential Impacts.	☒	☐
9. Activities which impact wetlands: (For State Regulated Impacts) **Please place an "X" next to the appropriate box indicating the information provided:**		
➢ N/A because no wetland impacts are proposed or no compensatory mitigation is necessary.	☒	☐
➢ A wetland delineation with complete data sheets in accordance with the 1987 Corps of Engineers Wetland Delineation Manual AND the appropriate Regional Supplements to the Corps of Engineers Wetland Delineation Manual for use in Pennsylvania.....	☐	☐
➢ If direct or indirect wetland impacts are greater than 0.05 acres, a compensatory mitigation plan in accordance with the Department's Replacement criteria which provides compensation for both affected acreage and functions at a minimum one to one ratio.	☐	☐
➢ **If compensatory mitigation onsite is determined not feasible:** A check, number _____, in the amount of $ _____ payable to the National Fish and Wildlife Foundation, N.A. 1237, as compensatory mitigation for _____ acres of impact in wetlands, in accordance with the Pennsylvania Wetland Replacement Project.....	☐	☐
(Additional Mitigation May Be Required by Army Corps)	☐	☐
NOTE: If the Pennsylvania Wetland Replacement Fund is proposed to be used as compensatory mitigation for waters of the Commonwealth the Army Corps of Engineers may also require additional mitigation if the proposed activity impacts waters of the United States.		

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client NUTMSA

AQUATIC RESOURCE IMPACT TABLE

FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION

NOTE: THIS FORM OR AN EQUIVALENT FORM MUST BE SUBMITTED FOR GENERAL PERMIT REGISTRATION AS SECTION E.

Project / Site Name: NUTMSA/Oliver Sanitary Sewer Date: March 28, 2018

DEP USE ONLY			Project Information									PADEP / 105		
PADEP Permit Number	Single Complete Crossing No.	Crossing Number	Fees	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	Watercourse Impact Top of Bank to top of Bank Length and Width	Floodway Impact Area Top of Bank Landward Length and Width	Wetland Impact AREA Length and Width
	1	1	N/A	GP-5-1	Perennial	39.921993	-79.723964	Redstone Creek	WWF	Boring	Temp	88 - 10	-	N/A -
	1	1	N/A	GP-5-1	Perennial	39.921993	-79.723964	Redstone Creek	WWF	Boring	Temp	-	317 - 10	N/A -
												-	-	-
	2	2	N/A	GP-5-2	Perennial	39.934719	-79.719659	UNT RC	WWF	Boring	Temp	43 - 10	-	N/A -
	2	2	N/A	GP-5-2	Perennial	39.934719	-79.719659	"	WWF	Boring	Temp	-	356 - 10	N/A -
												-	-	-
	3	3	N/A	GP-5-3	Perennial	39.936352	-79.713169	"	WWF	Excavate	Temp	3 - 10	-	N/A -
	3	3	N/A	GP-5-3	Perennial	39.936352	-79.713169	"	WWF	Excavate	Temp	-	103 - 10	N/A -
												-	-	-
	4	4	N/A	GP-5-4	Perennial	39.934938	-79.707856	"	WWF	Boring	Temp	83 - 10	-	N/A -
	4	4	N/A	GP-5-4	Perennial	39.934938	-79.707856	"	WWF	Boring	Temp	-	49 - 10	N/A -
												-	-	-
												-	-	-

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

GP052618205

SECTION F. CERTIFICATION

I certify under penalty of law that the information provided in this permit registration is true and correct to the best of my knowledge and information and that I possess the authority to undertake the proposed action. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (If any of the information and/or plans is found to be in error, falsified, and/or incomplete, this authorization/verification may be subject to modification, suspension, or revocation in accordance with applicable regulations.) I further certify that this project complies with all the conditions of the general permit.

Robert L Garbart, Chairman
Signature of Applicant/ Owner

3/22/2018
Date

Robert L. Garbart
Typed / Printed Name

Chairman
Typed / Printed Title

This General Permit shall not be effective until the owner has had their E&S Plan reviewed by the appropriate Regional Office or District, and, where required, obtained an SLLA from DEP.

THIS ACKNOWLEDGED COPY OF THIS GENERAL PERMIT REGISTRATION PACKAGE AND THE E&S PLAN MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION.

SECTION G. DECISION / DISPOSITION – COMPLETED BY DEP

A. Decision Review:

Michala Hart
DEP / District Reviewer Signature

GP 05261820 5

Michala Hart
Reviewer's Typed / Printed Name

GP —

NOTE: See Section E for additional authorizations.

Disposition Status			Comments
☒ **ACKNOWLEDGED**	Date	9/12/18	
SLLA Required	☐ Yes Attached	☒ No	
☐ **WITHDRAWN**	Date		
☐ **INCOMPLETE**	Date		
☐ **EXTENSION REQUEST**	Date		

NOTE: If the GP registration information is incomplete a copy of this registration form and requested additional information will be sent to the applicant. A copy of the returned registration form and additional information must be re-submitted within 60 calendar days unless extended by the extension date listed above.

☒ **FEDERAL AUTHORIZATION**

☒ Non-reporting Attached PASPGP verification / authorization attached.

☐ Reporting – A copy of this General Permit registration package has been sent to the Army Corps of Engineers. Separate federal authorization may be required

NOTE: Please be advised that if the reporting box is checked you do not have Federal authorization for this project and such authorization may be required prior to starting your project. In accordance with Section 404 of the Clean Water Act, a Department of the Army authorization is required for the discharge of dredged and/or fill material into waters of the United States, including jurisdictional wetlands. Section 10 of the Rivers and Harbors Act also requires Department of the Army authorization for any work in, over, or under a navigable water of the United States. In accordance with procedures established with the U.S. Army Corps of Engineers, you will be contacted directly by the Corps regarding Federal Authorization.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office

September 12, 2018

Robert Garbart
North Union Township MSA
PO Box 309
Lemont Furnace, PA 15456

Re: General Permit (GP) Acknowledgment Notification
DEP File No.: GP052618206
NUTMSA/West Leisenring Sanitary Sewer
North Union Township
Fayette County

Dear Mr. Garbart:

This letter acknowledges receipt of your notification to use and registers your use of a General Permit (GP) under the authority of the Dam Safety and Encroachments Act (32 P. S. § 693.1 et. seq.) and 25 Pa. Code Chapter 105. You are responsible for assuring the work is done in accordance with the drawings, terms and conditions contained in the GP. You may proceed with your project after making the required notifications stipulated in the GP and securing all other approvals that may be necessary.

Enclosed is an acknowledged copy of your GP Registration Form. Please place this letter and the acknowledged GP Registration form with your copy of the GP Registration package, the applicable GP terms and conditions, required Federal authorizations, and the Erosion and Sediment Control plan and maintain on site during construction. Please review the complete permit authorization package so that you are aware of the extent of authorization(s) and the conditions that apply to that authorization(s).

We have determined that the five stream crossings constitute five single and complete projects, and each is authorized by its own Pennsylvania State Programmatic General Permit-5 (PASPGP-5). These PASPGP-5 verifications provide U.S. Army Corps of Engineers authorization pursuant to Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. These authorizations may be subject to modification, suspension, or revocation if any of the information contained in the application, including the plans, is later found to be in error.

The enclosed list of conditions must be followed for purposes of the PASPGP-5s (enclosed). A PASPGP-5 Permit Compliance, Self-Certification Form must be completed and returned to the appropriate Corps of Engineers office upon completion of construction of each crossing (enclosed).

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board
Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Environmental Hearing Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at http://ehb.courtapps.com or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

If you have questions about your registration, please contact Michala Hart at the below telephone number and refer to the above referenced registration number.

Sincerely,

Michala Hart
Environmental Engineering Technician
Waterways & Wetlands Program

Enclosures

cc: US Army Corps of Engineers
Fayette County Conservation District
James Stanton- McMillen Engineering, Inc.

PASPGP-5 PERMIT COMPLIANCE, SELF-CERTIFICATION FORM

Project Name: NUTSMA West Leisienring Sanitary Sewer Applicant Name: North Union Township Muni Sewer Auth

PADEP Permit No: GP052618206 Date of Issuance: 09/12/18

Corps Permit Number: n/a Date of Issuance: n/a

Waterway: Rankin Run County: Fayette

In accordance with the compliance certification condition of your PASPGP-5 authorization, you are required to complete and sign this certification form and return it to the appropriate Corps of Engineers District in which the work is located.

☐ U.S. Army Corps of Engineers
Philadelphia District
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

☐ U.S. Army Corps of Engineers
Baltimore District
1631 South Atherton Street
Suite 101
State College, PA 16801-6260

☑ U.S. Army Corps of Engineers
Pittsburgh District
Regulatory Branch
Federal Building, 20th Floor
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Please note that the permitted activity is subject to compliance inspections by U.S. Army Corps of Engineers representatives. As a condition of this permit, failure to return this notification form, provide the required information below, or to perform the authorized work in compliance with the permit, can result in suspension, modification or revocation of your authorization in accordance with 33 CFR Part 325.7 and/or administrative, civil, and/or criminal penalties, in accordance with 33 CFR part 326.

Please provide the following information:

1. Date authorized work commenced: _____

2. Date authorized work completed: _____

3. Was all work, including any required mitigation, completed in accordance with your PASPGP-5 authorization?
☐YES ☐NO

4. Explain any deviations (use additional sheets if necessary)

_____

_____

5. Was compensatory wetland/stream mitigation accomplished through an approved Mitigation Bank and/or In-Lieu fee program?
☐YES ☐NO (if **YES,** attach proof of transaction, if **NO** complete Number 6 and 7 below).

6. Was permittee compensatory wetland and/or stream mitigation required? ☐ YES ☐ NO If **YES,** was the required compensatory mitigation completed in accordance with the permit and mitigation plan requirements? ☐ YES ☐ NO

7. Attach labeled color photographs showing completed work including any mitigation area(s).

I hereby certify that, except as noted above, that all work, including mitigation, has been completed in accordance with the terms and conditions, including special conditions of the above referenced permit.

(Permittee Signature): _____ (Telephone Number): _____

(Address): _____ (Email): _____

_____

_____

29 April 2016

PENNSYLVANIA STATE PROGRAMMATIC GENERAL PERMIT – 5
(PASPGP-5)
July 1, 2016

Please note: the full text of the PASPGP-5 may be viewed on the Baltimore District web site at http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx **or by calling the Corps at 814-235-0570**

Permittee: North Union Township Municipal Sewer Authority
Date of PASPGP-5 Verification: 09/12/2018
State Authorization(s): GP052618206

Corps District:

☐ **Philadelphia**
U.S. Army Corps of Engineers,
Philadelphia District
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

☐ **Baltimore**
U.S. Army Corps of Engineers,
Baltimore District
Regulatory Branch
1631 South Atherton Street
Suite 101
State College, PA 16801-6260

☑ **Pittsburgh**
U.S. Army Corps of Engineers,
Pittsburgh District
Regulatory Branch
Federal Building, 20th floor
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

It has been determined that your proposed project, which includes the discharge of dredged and/or fill material and/or the placement of structures into waters of the United States, including wetlands, qualifies for Federal authorization under the provisions of Section 404 of the Clean Water Act and /or Section 10 of the River and Harbor Act of 1899, under the terms and conditions of the PASPGP-5.

All activities authorized under PASPGP-5 must comply with all conditions of the authorization, including General, Procedural, and Special Conditions. Failure to comply with all the conditions of the authorization, including project special conditions, will constitute a permit violation and may be subject to criminal, civil, or administrative penalties, and /or restoration.

The authorized activity must be performed in compliance with the following General Conditions to be authorized under PASPGP-5:

General Conditions:

1. **Permit Conditions:** The permittee shall comply with all terms and conditions set forth in the PADEP authorization, including all conditions of the State Water Quality Certification as required by Section 401 of the CWA, and any subsequent amendments or modifications to such authorizations. The permittee shall conduct all work and activities in strict compliance with all approved maps, plans, profiles, and specifications used by PADEP and/or the Corps in issuing their authorization/verification.

2. **Aquatic Life Movements:** No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be appropriately depressed to maintain aquatic life movement and low flow conditions.

3. **Threatened and Endangered Species:** By signing the PNDI receipt, the permittee has agreed to comply with all avoidance measures identified by the PNDI receipt. As such, those avoidance measures associated with Federally-listed threatened or endangered species are a condition of the PASPGP-5 verification, unless modified by the Corps.

If an activity is verified under the PASPGP-5, and a Federally-listed threatened or endangered species, or proposed species, is subsequently found to be present, all work must cease, and the Corps and USFWS (or NMFS) must be notified. The PASPGP-5 verification is suspended and will not be re-issued until consultation pursuant to Section 7 of the ESA is concluded and adverse effects to Federally-listed threatened, endangered and proposed species are avoided.

Furthermore, persons have an independent responsibility under Section 9 of the ESA to not engage in any activity that could result in the "take" of a Federally-listed species.

4. **Spawning Areas:** The permittee shall comply with all time-of-year-restrictions associated with spawning areas as set forth by the PFBC or other designated agency. Discharges or structures in spawning or nursery areas shall not occur during spawning seasons, unless written approval is obtained from the PFBC or other designated agency. In addition, work in areas used for other time sensitive life span activities of fish and wildlife (such as hibernation or migration) may necessitate the use of seasonal restrictions for avoidance of adverse impacts to vulnerable species. Impacts to these areas shall be avoided or minimized to the maximum extent practicable during all other times of the year.

5. **Migratory Bird Breeding Areas:** Activities in waters of the United States, including jurisdictional wetlands, that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable. Recommendations pertaining to the conservation of migratory birds can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

6. **Shellfish Production:** No discharge of dredged and/or fill material and/or the placement of structures may occur in areas of concentrated shellfish production, unless the discharge is directly related to an authorized shellfish harvesting activity.

7. **Adverse Effects From Impoundment:** If the activity, including the discharge of dredged and/or fill material or the placement of a structure, creates an impoundment of water, the adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow, including impacts to wetlands, shall be minimized to the maximum extent practicable.

8. **Obstruction of High Flows:** To the maximum extent practicable, the activity must be designed to maintain pre-construction downstream flow conditions (i.e., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters), and the structure or discharge of dredged and/or fill material shall be designed to withstand expected high flows.

9. **Erosion and Sediment Controls:** During construction, appropriate erosion and sedimentation controls must be used and maintained in effective operating condition in accordance with State regulations. All disturbed soil and other fill material must be permanently stabilized.

10. **Suitable Material:** No activities, including discharges of dredged and/or fill material or the placement of structures, may consist of unsuitable material (i.e., asphalt, trash, debris, car bodies, etc.). No material discharged shall contain toxic pollutants in amounts that would violate the effluent limitation standards of § 307 of the CWA.

11. **Temporary Fill:** Temporary fill (i.e., access roads and cofferdams) in waters and/or wetlands verified by the PASPGP-5 shall be properly constructed and stabilized during use to prevent erosion and accretion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade, unless such requirement is specifically waived by the Corps. Whenever possible, rubber or wooden mats should be used for equipment access through wetlands to the project area. Temporary fills shall be removed, in their entirety, to an upland site, and suitably contained to prevent erosion and transport to a waterway or wetland. Temporary fill areas shall be restored to their preconstruction contours, elevations, and hydrology, and revegetated with a wetland seed mix that contains non-invasive, native species, as soon as practicable.

12. **Equipment Working in Wetlands:** Measures must be taken to minimize soil disturbance when heavy equipment is used in wetlands. These measures include, but are not limited to, avoiding the use of such equipment, use of timber mats or geotextile fabric, and use of low pressure tire vehicles.

13. **Installation and Maintenance:** Any structure or fill verified shall be properly installed and maintained to ensure public safety.

14. **PASPGP-5 Authorization:**

    a. The PASPGP-5 expires June 30, 2021, unless suspended or revoked.

    b. Verifications of PASPGP-5 expire June 30, 2021, unless the PASPGP-5 permit is suspended, revoked, or the PADEP authorization expires, whichever date occurs sooner. Activities authorized under the PASPGP-5 that have commenced construction or are under contract to commence construction will remain authorized provided the activity is completed within 12 month of the date of the PASPGP-5's expiration, modification, or revocation; or until the expiration date of the project specific verification, whichever is sooner.

15. **One-Time Use:** A PASPGP-5 verification is valid to construct the project, or perform the activity, one time only, except for PASPGP-5 verification specifically issued for reoccurring maintenance activities.

16. **Water Supply Intakes:** No activity, including discharges of dredged and/or fill material and/or placement of structures, may occur in the proximity of a public water supply intake and adversely impact the public water supply.

17. **Cultural Resources:** For all activities verified under a PASPGP-5, upon the unanticipated discovery of any previously unknown historic properties (historic or archeological), all work must cease and the permittee must notify the SHPO and the Corps of Engineers. The Corps will contact the Tribes they routinely consult with within 24 hours in accordance with each District's tribal Consultation process. The PASPGP-5 verification is not valid until it is determined, through the Section 106 consultation process, whether the activity will have an effect on the historic property. The PASPGP-5 may be re-verified and special conditions added if necessary, after an effects determination on historic properties and/or Tribal resource is made, in consultation with the SHPO, the Tribes and other interested parties. The PASPGP-5 verification may be modified and/or rescinded for the specific activity if an adverse effect on the historic property cannot be avoided, minimized, or mitigated.

18. **Tribal Rights:** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting grounds.

19. **Corps Civil Works Projects:** The PASPGP-5 does not authorize any work which will interfere with an existing or proposed Corps Civil Works project (i.e., flood control projects, dams, reservoirs, and navigation projects), unless specifically waived by the Corps in writing.

20. **Navigation:** No activity verified under PASPGP-5 may cause more than minimal adverse effect on navigation. No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. In addition, activities that require temporary causeways that prohibit continued navigational use of a waterway (i.e., temporary causeways extending greater than ¾ the width across the waterway) shall be removed in their entirety upon completion of their use. Any safety lights and signals prescribed by the U.S. Coast Guard, through regulation or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States. The permittee understands and agrees that, if further operations by the United States require the removal,

relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

21. **Inspections:** The permittee shall allow a District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with all the terms and conditions of the PASPGP-5. The District Engineer may also require post-construction engineering drawings (as-built plans) for completed work.

22. **PASPGP-5 Permit Compliance Self Certification Form:** A Self Certification Form, will be forwarded to each permittee with a PASPGP-5 verification. Every permittee, who receives a written PASPGP-5 verification, shall submit a signed Self Certification Form upon completion of the verified work and required mitigation, to the appropriate Corps District.

23. **Monitoring of Temporary Wetland Impacts:** For all temporary wetland impacts greater than 0.10 acre per Single and Complete Project, a monitoring report using the standard monitoring form (including preconstruction photographs as described on the monitoring form) will be submitted to the Corps, unless this requirement is specifically waived by the Corps in writing, or such monitoring is superseded by more stringent monitoring required by the Corps as a Special Condition of a PASPGP-5 verification. To obtain a waiver from the Corps the applicant must contact the appropriate Corps district with a written request to be relieved of the monitoring requirement. Such request shall include the state authorization, and the Corps permit numbers if known, and a rationale as to why the monitoring should not be required.

    The permittee shall inspect the subject areas within 7 days after restoration of the temporary impact is completed, and again at the end of the first full growing season (no later than October 31) after the site has been restored. The standard monitoring form is available on the Baltimore District web site at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx or by contacting the applicable Corps District office. When more than one temporary wetland impact is authorized as part of a Single and Complete Project, separate monitoring forms shall be filled out for each temporarily impacted wetland.

    The completed report shall be submitted to the appropriate Corps District within two weeks of the final inspection of the temporarily impacted wetland. If the initial monitoring event reveals that the temporarily impacted area is not restored to preconstruction contours, the permittee shall take corrective measures to return the area back to preconstruction grades. The permittee shall document the actions taken to restore the area back to preconstruction grades on the monitoring form.

    This condition is not applicable to any project authorized as a grandfathered PASPGP-4 (see Part IV A. 30. "Grandfathered Activities"

24. **Permit Modifications:** Any proposed modification of a verified Single and Complete Project that results in a change in the verified impact to, or use of waters of the United States, including jurisdictional wetlands, must be approved by PADEP. Corps approval is also required if the Single and Complete Project had been previously reviewed by the Corps, or if the proposed modification is a reporting activity under PASPGP-5. Project modifications that cause a Single and Complete Project to exceed 1.0 acre of waters of the United States, including jurisdictional wetlands, or greater than 1,000 linear feet of permanent stream loss will not be eligible for PASPGP-5 and will be forwarded to the Corps for review.

25. **Recorded Conservation Instruments:** As per Part IV.A.28 and Part IV.B.9 of this permit, proposed Draft Conservation Instruments may be submitted by the applicant as part of the permit

application package for review and approval. When such proposed Conservation Instruments are submitted by the applicant, proof of the recorded deed restriction, conservation easement, or deed restricted open space area shall be forwarded to the appropriate Corps District and appropriate PADEP offices, prior to the initiation of any permitted work, unless specifically waived by the Corps in writing. Conservation Instrument templates can be found at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx

26. **Property Rights:** The PASPGP-5 does not obviate the need to obtain other Federal, state, or local authorizations required by law, nor does the permit grant any property rights or exclusive privileges, or authorize any injury to the property or rights of others.

27. **Navigable Waters of the United States (Section 10 Waters):**

    a. The PASPGP-5 may be used to authorize work in the following navigable waters of the United States:

        i. Codorus Creek – from the confluence with the Susquehanna River 11.4 miles upstream to the Richland Avenue Bridge in York, Pennsylvania;

        ii. Main Stem Susquehanna River – from the confluence with the Chesapeake Bay upstream to Athens , Pennsylvania (approximately 4 miles south from the New York State line);

        iii. West Branch of the Susquehanna River – from the confluence with the main stem Susquehanna River upstream to the dam at Lock Haven, Pennsylvania;

        iv. Chester Creek – from the confluence with the Delaware River 2 miles upstream;

        v. Crum Creek – from the confluence with the Delaware River 1 mile upstream to the upstream side of the Dam at Eddystone;

        vi. Darby Creek – from the confluence with the Delaware River 5 miles upstream to the upstream side of the 84th Street Bridge in Philadelphia, Pennsylvania;

        vii. Delaware River – from U.S. Route 202 Bridged in New Hope, Pennsylvania, including the West Branch of the Delaware River, upstream to the Pennsylvania/New York border at the 42nd parallel;

        viii. Lehigh River – from the confluence with the Delaware River 72 miles upstream to the downstream side of the PA Route 940 Bridge;

        ix. Neshaminy Creek – the confluence with the Delaware River, including Neshaminy State Park Harbor Project at the mouth of Neshaminy Creek, 4 miles upstream to the downstream side of the Newportville Bridge;

        x. Pennypack Creek – from the confluence with the Delaware River 2 miles upstream to the downstream side of the Frankford Avenue Bridge in Philadelphia, Pennsylvania;

        xi. Ridley Creek – from the confluence with the Delaware River 1 mile upstream to the upstream side of the Baltimore and Ohio Railroad Bridge in Chester, Pennsylvania;

        xii. Schuylkill River – from the Fairmont Dam, 104 miles upstream to Port Carbon, Pennsylvania;

xiii. Schuylkill Navigation Channel (Manayunk Canal) – along the Schuylkill River for 2 miles from the Flat Rock Dam to Lock Street in the Manayunk Section of Philadelphia, Pennsylvania;

xiv. Delaware Canal;

xv. Lehigh Canal; and

xvi. All other waters not specifically exempted in the PASPGP-5, Part III, A, 5, that are subject to the ebb and flow of the tide. Such waters are considered navigable waters of the United States to the head of tidal influence.

b. In addition to the other general conditions, the following conditions are applicable for navigable waters of the United States eligible for PASPGP-5.

i. For aerial transmission lines, the following minimum clearances are required for aerial electric power transmission lines crossing navigable waters of the United States. These clearances are related to the clearances over the navigable channel provided by the existing fixed bridges, or the clearances which would be required by the United States Coast Guard (USCG) for new fixed bridges, in the vicinity of the proposed aerial transmission line. These clearances are based on the low point of the line under conditions producing the greatest sag, taking into consideration temperature, load, wind, length of span, and type of supports as outlines in the National Electric Safety Code:

Nominal System Voltage (kV)	Minimum Additional Clearance (ft.) Above Clearance Required for Bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750-765	45

a. Clearances for communication lines, stream gauging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless specifically authorized otherwise by the District Engineer.

b. Corps of Engineers regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both regulation and ER 1110-2-4401 apply, the greater minimum clearance is required.

ii. Encasement: The top of the cable, encasement, or pipeline shall be located a minimum of three feet below the existing bottom elevation of the streambed and shall be backfilled with suitable heavy material to the preconstruction bottom elevation. Where the cable, encasement, or pipeline is placed in rock, a minimum depth of one foot from the lowest point in the natural contour of the streambed shall be maintained. When crossing a maintained navigation channel, the requirements are a minimum of eight feet between the top of the cable, encasement, or pipeline and the authorized depth of the navigation channel. For maintained navigational channels, where the utility line is placed in rock, a minimum depth of two feet from the authorized depth of the navigation channel shall be maintained.

iii. As-Built Drawings: Within 60 days of completing an activity that involves an aerial transmission line, submerged cable, or submerged pipeline across a navigable water of the United States (i.e., Section 10 waters), where the permittee shall furnish the Corps and the National Oceanic and Atmospheric Administration, Nautical Data Branch, N/CS26, Station 7317, 1315 East-West Highway, Silver Spring, Maryland, 20910 with professional, certified as-built drawings, to scale, with control (i.e., latitude/longitude, state plane coordinates), depicting the alignment and minimum clearance of the aerial wires above the MHWL at the time of survey or depicting the elevations and alignment of the buried cable or pipeline across the navigable waterway.

iv. Aids to Navigation: The permittee must prepare and provide for USCG approval, a Private Aids to Navigation Application (CG-2554). The form can be found at: http://www.uscg.mil/forms/cg/CG_2554.pdf . Within 30 days of the date of receipt of the USCG approval, the permittee must provide a copy to the applicable Corps District.

28. **PADEP Waiver:** If the Corps determines a specific activity, which is eligible for a PADEP Non-reporting Waiver, has a significant adverse impact on life, property or important aquatic resources, the Corps may require the owner to modify the activity to eliminate the adverse condition or to obtain an Individual Permit.

29. **Corps Water Releases:** For projects located downstream of a Corps dam, the permittee should contact the appropriate Corps of Engineers, Area Engineer Office, to obtain information on potential water releases and to provide contact information for notification of unscheduled water releases. It is recommended that no in-water work be performed during periods of high water flow velocities. Any work performed at the project site is at the permittee's own risk.

30. **State Authorization:** The activity must receive State authorization. For the purpose of this requirement, any one of the following would be considered as a State authorization:

a. A PADEP Chapter 105 Water Obstruction and Encroachment Permit, including PADEP approved Environmental Assessment pursuant to 25 Pa. Code § 105.15; or

b. A PADEP GP issued pursuant to 25 Pa. Code § §105.441-105.449; or

c. A PADEP approved Environmental Assessment for activities not otherwise requiring a PADEP permit pursuant to 25 Pa. Code § 105.12; or

d. A State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA for activities which qualify for waiver of PADEP permit requirement per 25 Pa. Code §105.12; or

e. A PADEP Dam Permit, including maintenance or repairs of existing authorized dams, including maintenance dredging; or

f. A PADEP Emergency Permit issued pursuant to 25 Pa. Code § 105.64; or

g. A PADEP permit for the construction of a bridge or culvert (including bridges and culverts authorized by PADEP prior to implementations of the PASPGP-1 in March 1995), which allows for maintenance activities of bridges and culvert; or

h. A PADEP Chapter 105 Dam Safety and Encroachment Enforcement Action; or

i. A programmatic/project specific State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA where no other State authorization, as listed above, is required.

31. **Other Authorizations:** Additional Federal, State, and/or local authorizations or approvals may be required and where applicable must be secured by the applicant, prior to initiating any discharge of dredged and/or fill material, and/or the placement of structures into waters of the United States, including jurisdictional wetlands. These approvals include, but are not limited to:

    a. A State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA;

    b. A Consistency Determination issued by PADEP pursuant to Section 307 of the Federal Coastal Zone Management Act for activities located within the designated Coastal Zone Management Area; and

    c. Fills within the 100-year floodplains. This activity must comply with applicable FEMA approved State or local floodplain management requirements.

32. **Federal Liability:** In issuing this permit, the Federal Government does not assume any liability for the following:

    a. Damages to permitted project or users, thereof, as a result of other permitted or unpermitted activities or from natural causes;

    b. Damages to the permitted project or uses, thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;

    c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

    d. Design or construction deficiencies associated with the permitted work; and

    e. Damage claims associated with any future modification, suspension, or revocation of the PASPGP-5.

33. **False and Incomplete Information:** The Corps may modify or rescind a previously issued project specific verification, if determined that the original verification was issued based on false, incomplete and/or inaccurate information; or other information becomes available whereby such action is necessary to ensure compliance with other federal laws and regulations.

34. **Essential Fish Habitat:** No work can take place in the following waterways from March 15th to June 30th unless approved in writing by the Corps. Questions on the applicability of this condition should be directed to the Corps of Engineers, Philadelphia District.

    a. Delaware River (within Pennsylvania, upstream from the U.S. Route 202 Bridge in New Hope, Pennsylvania,); and

    b. Lehigh River (from the mouth to Francis E. Walter Dam, located in Carbon and Luzerne County, Pennsylvania)

35. **Conservation Measures for Atlantic and Shortnose Sturgeon:** All work proposed in the following listed waters must comply with the below Conservation Measures, unless specifically waived by the Corps in writing. Questions on the applicability of this condition should be directed to the Corps of Engineers, Philadelphia District.

Waterway	Action Area (From Point Specified to the Confluence with the Delaware River)	Latitude	Longitude
Marcus Hook Creek	US Route 13 Bridge	39.822054	-75.409873
Stoney Creek	US Route 13 Bridge	39.828408	-75.400953
Chester Creek	Kerlin Street Bridge	39.855846	-75.37641
Ridley Creek	McDade Boulevard	39.869522	-75.356692
Crum Creek	US Route 13 Bridge	39.866799	-75.340677
Darby Creek	Pine Street Bridge	39.914006	-75.259994
Frankford Creek	Frankford Avenue/US 13 Bridge	40.005314	-75.070173
Frankford Creek (Original Mouth)	End of Channel	40.004912	-75.070173
Pennypack Creek	Route 13 Bridge	40.043421	-75.020638
Poquessing Creek	Mill Road Bridge	40.043421	-75.982076
Neshaminy Creek	Rapids just below Hulmeville Road Bridge (SR 513), Bucks County	40.141393	-74.911899
Unnamed Tributary 1, located in Croydon, PA	River Road crossing	40.085774	-74.8856
Otter/Mill Creek	US 13 (Bristol Pike) Bridge	40.100424	-74.866976
Unnamed Tributary 2, located in Bristol, PA	Wood Street Bridge	40.102044	-74.845682
Martins Creek	Main Street (Tulleytown)	40.141975	-74.812026
Scott's Creek	End of creek	40.12921	-74.793879
Scott's Creek Relocated Channel, located at Money Island, Bucks County, PA	First culvert crossing	40.125578	-74.776886
Non-Tidal Tributaries			
Buck Creek	Delaware Canal	40.243699	-74.838279
Dyers Creek	Delaware Canal	40.267098	-74.858495
Houghs Creek	Delaware Canal	40.28148	-74.865783
Jericho Creek	Delaware Canal	40.313984	-74.902899
Pidcock Creek	Delaware Canal	40.331508	-74.935788

Conservation Measures:

a. No work shall occur from March 15 to November 15, of any given year.

b. All Dredging shall be performed by a mechanical dredge and/or techniques (clamshell bucket etc.).

c. All work, including the installation of turbidity curtains and dewatering cofferdams, shall be performed during low tide or when the tide is waterward of the proposed work in all tidal waterbodies listed, or during periods of low or no flow in the non-tidal waterbodies listed.

d. Blasting is not authorized by the PASPGP-5 within the listed waterbodies.

e. Pile Driving:

   i. Piles shall not be greater than 12 inches in diameter;

   ii. Piles shall be installed using a vibratory hammer or an impact hammer provided noise attenuation devices (cushion blocks, etc.) are used, and a "soft start" is performed each day of pile driving. A "soft start" is the building up of power slowly during pile driving activities to allow for fish and other wildlife to leave the area; and

   iii. Pile driving activities shall be limited to no more than 12 hours per day.

   Any activity that cannot meet these conditions will be sent to the Corps as a Reporting Activity at which time the Corps will conduct project specific Section 7 Endangered Species Act consultation with NMFS.

36. **Migratory Birds and Bald and Golden Eagles:** The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulation governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity. Information on the conservation of migratory birds and Bald and Golden Eagles can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

By Authority of the Secretary of the Army:

Edward P. Chamberlayne
Colonel, Corps of Engineers
District Engineer, Baltimore

Michael A. Bliss
Lieutenant Colonel, Corps of Engineers
District Engineer, Philadelphia

Bernard R. Lindstrom
Colonel, Corps of Engineers
District Engineer, Pittsburgh

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Form

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

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CHAPTER 105 WATER OBSTRUCTIONS AND ENCROACHMENT GENERAL PERMIT REGISTRATION

SECTION A. APPLICANT INFORMATION

☐ FERC Natural Gas Activity **Docket Number** _____ **Type of Facility** Sewer Extension

Has a Water Quality Certification (WQC) request been sent to DEP? ☐ Yes ☒ No

Activity Related to Oil & Gas Exploration, Production, Storage or Transmission

Applicant's Name / Client	**DEP Client ID#** (if known)	**Employer ID#** (EIN)
North Union Township MSA		25-1665540

Client Information - Please select Client Type / Code from drop down box under the correct entity shown to the right. (or may be written in) →	**Government**	**Non-Government**	**Individual**
	AUTH Authority		

Mailing Address	**City**	**State**	**ZIP + 4**
P.O. Box 309 , 120 Commonwealth Drive, Suite 101	Lemont Furnace	PA	15456

Contact Person – Last Name / First / MI / Suffix	**Telephone**	**Email Address**
Garbart / Robert	(724) 438-6316	rlgarbart@aol.com

SECTION B. CONSULTANT INFORMATION (If applicable) ☐ N/A

Contact Person – Last Name / First / MI / Suffix	**Consultants Title**	**Consulting Firm**
Stanton / James	Vice President of Engineering	McMillen Engineering, Inc.

Mailing Address	**City**	**State**	**ZIP + 4**
115 Wayland Smith Drive	Uniontown	PA	15401

Telephone	**Fax**	**Email**	**Employer ID# (EIN)**
(724) 439-8110	(724) 439-4733	jstanton@mcmilleng.com	23-2871380

SECTION C. PROJECT INFORMATION

Project / Site Name	**FERC Docket No. (if applicable)**	**DEP Site ID# (if known or leave blank)**
NUTMSA/West Leisenring Sanitary Sewer		

Client Relationship - Please select Site-to-Client Relationship/ Code from drop down box to the right. (or may be written in) →	Double-click on shaded area below to select correct Site-to-Client Relationship / Code ↓ **AGENT Agent for Owner or Operator**

County	**Municipality** ☐ City ☐ Borough ☒ Township	**Note: Municipal & County Notification is Required**
Fayette	North Union	

Site Location / Address	**City**	**State**	**ZIP + 4**
Bute Road and Postal Way	West Leisenring	PA	15489

Collection Method: ☒ EMAP ☐ HGIS ☐ GISDR* ☐ ITPMP ☐ GPS ☐ WAAS ☐ LORAN

Check the horizontal reference datum (or projection datum) employed in the collection method.

EMAP and HGIS (PNDI) have known datum and do not require checking here. ☐ NAD27 ☐ NAD83 ☐ WGS84 (GEO84) LAT.: _____ LONG.: _____

NOTE: A Submerged Lands License Agreement (SLLA) with an annual fee, if applicable, may also be required for your project. You will be notified if an SLLA is required.

The Aquatic Resources Impact Table (SECTION E. PROPOSED IMPACTS) must be completed or equivalent submitted for this registration to be complete.

SECTION D. REGISTRATION CHECKLIST AND REQUIREMENTS

Please place an "X" next to each item (1-9) to ensure it is completed and/or provided.

Unless otherwise specified, all items are ***required*** to ensure a complete Registration package.

Provide ONE (1) ORIGINAL and ONE (1) COPY of the Registration package Municipality & County Notification:

Please provide a copy of the Registration form to the Municipality & County in which the work will be performed. Proof of receipt is not required to be provided to DEP.

1. REGISTERING A GENERAL PERMIT (GP) check all that apply

☐ **GP-1** Fish Habitat Enhancement Structures
Fee: $50 per project

☐ **GP-2** Small Docks & Boat Launching Ramps
Fee: $175 _____
Please mark ("X") the specific type of project:
☐ private recreational dock ☐ public service facility
☐ access facility ☐ other private or commercial facility

☐ **GP-3** Bank Rehabilitation, Bank Protection, and Gravel Bar Removal
Fee: $250

☐ **GP-4** Intake and Outfall Structures
Fee: $200

☒ **GP-5** Utility Line Stream Crossing
Fee: $250

☐ **GP-6** Agricultural Crossings & Ramps
Fee: $50

☐ **GP-7** Minor Road Crossings
Fee: $350

☐ **GP-8** Temporary Road Crossings
Fee: $175

☐ **GP-9** Agricultural Activities public
Fee: $50 per project

☐ **GP-10** Abandoned Mine Reclamation
Fee: $500 per project

☐ **GP-11** Maintenance, Testing, Repair, Rehabilitation, or Replacement of Water Obstructions and Encroachments (reviewed by DEP Regional Office only)
Fee: $750
☐ Temporary Disturbance $400/ .1 acre ☐ Permanent Disturbance $800/ .1 acre

☐ **GP-15** Private Residential Construction in Wetlands
Fee: $750
☐ Temporary Disturbance $400/ .1 acre ☐ Permanent Disturbance $800/ .1 acre

Disturbance Fees associated with GP's 11 and15 are rounded up to the next tenth.

Example: .103 = .2 acre = $800 temporary disturbance.

See Chapter 105 FEE(S) Calculation Worksheet for Explanation of Fees Federal, state, county, municipal agencies or municipal authorities FEE EXEMPT	Applicant Entry	DEP Use Only
2. Location Map (USGS quad map) with project site marked:	☒	☐
3. Color Photographs with dates, locations, and descriptions: ☐ GP-3 ☐ GP-11 ☐ **N/A**	☒	☐
4. Project Description: (Example: Linear pipeline project using multiple GP-5's and GP-8's; One GP-7 for an access road to my property) Sewer extension using five GP-5's	☒	☐
5. Site Specific and/or Standard Drawings depicting the project's GP activities. Activities that qualify for GP-7 or GP-11 Plans, specifications, and reports for bridges and culverts across a stream which are to be used by the general public such as an access to an industrial, commercial or residential development, etc., shall be prepared by a registered professional engineer and shall be affixed with their seal and certification which shall read as follows: *"I (name) do hereby certify pursuant to the penalties of 18 Pa. C.S.A. Sec. 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications, and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection."*	☒	☐
6. Proposed Project Purpose depicting the site of the projects GP activities and impacts. *(See Section E.)* Briefly discuss the need for the authorization	☒	☐
7. Erosion & Sediment Control Plan (E&S Plan) (Required for all GP's but specifically required with submission with a registration of GP-11 or GP's for oil and gas related activities submitted to DEP)	☒	☐
8. Pennsylvania Natural Diversity Inventory (PNDI): PNDI Search Receipt and clearance letters, if available. See additional requirements for submission with Avoidance Measures and/or Potential Impacts.	☒	☐
9. Activities which impact wetlands: (For State Regulated Impacts) **Please place an "X" next to the appropriate box indicating the information provided:**		
➢ N/A because no wetland impacts are proposed or no compensatory mitigation is necessary.	☒	☐
➢ A wetland delineation with complete data sheets in accordance with the 1987 Corps of Engineers Wetland Delineation Manual AND the appropriate Regional Supplements to the Corps of Engineers Wetland Delineation Manual for use in Pennsylvania.	☐	☐
➢ If direct or indirect wetland impacts are greater than 0.05 acres, a compensatory mitigation plan in accordance with the Department's Replacement criteria which provides compensation for both affected acreage and functions at a minimum one to one ratio.	☐	☐
➢ **If compensatory mitigation onsite is determined not feasible:** A check, number _____, in the amount of $ _____ payable to the National Fish and Wildlife Foundation, N.A. 1237, as compensatory mitigation for _____ acres of impact in wetlands, in accordance with the Pennsylvania Wetland Replacement Project.....	☐	☐
(Additional Mitigation May Be Required by Army Corps)	☐	☐
NOTE: If the Pennsylvania Wetland Replacement Fund is proposed to be used as compensatory mitigation for waters of the Commonwealth the Army Corps of Engineers may also require additional mitigation if the proposed activity impacts waters of the United States.		

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client NUTMSA

AQUATIC RESOURCE IMPACT TABLE

FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION

NOTE: THIS FORM OR AN EQUIVALENT FORM MUST BE SUBMITTED FOR GENERAL PERMIT REGISTRATION AS SECTION E.

Project / Site Name: NUTMSA/West Leisenring Sanitary Sewer Date: March 28, 2018

DEP USE ONLY			Project Information									PADEP / 105		
PADEP Permit Number	Single Complete Crossing No.	Crossing Number	Fees	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	Watercourse Impact Top of Bank to top of Bank Length and Width	Floodway Impact Area Top of Bank Landward Length and Width	Wetland Impact AREA Length and Width
	1	1	N/A	GP-5-1	Perennial	39.952442	-79.704165	Rankin Run	WWF	Excavate	Temp	50 - 10	-	N/A -
	1	1	N/A	GP-5-1	Perennial	39.952442	-79.704165	Rankin Run	WWF	Excavate	Temp	-	150 - 10	N/A -
												-	-	-
	2	2	N/A	GP-5-2	Perennial	39.954183	-79.701220	Rankin Run	WWF	Boring	Temp	46 - 10	-	N/A -
	2	2	N/A	GP-5-2	Perennial	39.954183	-79.701220	Rankin Run	WWF	Boring	Temp	-	146 - 10	N/A -
												-	-	-
	3	3	N/A	GP-5-3	Perennial	39.954366	-79.700662	Rankin Run	WWF	Boring	Temp	55 - 10	-	N/A -
	3	3	N/A	GP-5-3	Perennial	39.954366	-79.700662	Rankin Run	WWF	Boring	Temp	-	155 - 10	N/A -
												-	-	-
	4	4	N/A	GP-5-4	Perennial	39.953382	-79.702340	Rankin Run	WWF	Boring	Temp	25 - 10	-	N/A -
	4	4	N/A	GP-5-4	Perennial	39.953382	-79.702340	Rankin Run	WWF	Boring	Temp	-	125-10 -	N/A -
												-	-	-
												-	-	-

GP052618206

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client NUTMSA

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↓	5	5	N/A	GP-5-5	Perennial	39.953551	-79.402066	Rankin Run	WWF	Boring	Temp	37 - 10	-	N/A -
↓	5	5	N/A	GP-5-5	Perennial	39.953551	-79.402066	Rankin Run	WWF	Boring	Temp	-	137 - 10	N/A -
												-	-	-
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GP052618206

SECTION F. CERTIFICATION

I certify under penalty of law that the information provided in this permit registration is true and correct to the best of my knowledge and information and that I possess the authority to undertake the proposed action. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (If any of the information and/or plans is found to be in error, falsified, and/or incomplete, this authorization/verification may be subject to modification, suspension, or revocation in accordance with applicable regulations.) I further certify that this project complies with all the conditions of the general permit.

Robert L Garbart, Chairman
Signature of Applicant/ Owner

3/22/2018
Date

Robert L. Garbart
Typed / Printed Name

Chairman
Typed / Printed Title

This General Permit shall not be effective until the owner has had their E&S Plan reviewed by the appropriate Regional Office or District, and, where required, obtained an SLLA from DEP.

THIS ACKNOWLEDGED COPY OF THIS GENERAL PERMIT REGISTRATION PACKAGE AND THE E&S PLAN MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION.

SECTION G. DECISION / DISPOSITION – COMPLETED BY DEP

A. Decision Review:

Michaela Hart
DEP / District Reviewer Signature

GP D5261B206

Michaela Hart
Reviewer's Typed / Printed Name

GP ———

NOTE: See Section E for additional authorizations.

Disposition Status			Comments
☒ **ACKNOWLEDGED**	Date	9/12/18	
SLLA Required	☐ Yes Attached	☒ No	
☐ **WITHDRAWN**	Date		
☐ **INCOMPLETE**	Date		
☐ **EXTENSION REQUEST**	Date		

NOTE: If the GP registration information is incomplete a copy of this registration form and requested additional information will be sent to the applicant. A copy of the returned registration form and additional information must be re-submitted within 60 calendar days unless extended by the extension date listed above.

☒ **FEDERAL AUTHORIZATION**

☒ Non-reporting Attached PASPGP verification / authorization attached.

☐ Reporting – A copy of this General Permit registration package has been sent to the Army Corps of Engineers. Separate federal authorization may be required

NOTE: Please be advised that if the reporting box is checked you do not have Federal authorization for this project and such authorization may be required prior to starting your project. In accordance with Section 404 of the Clean Water Act, a Department of the Army authorization is required for the discharge of dredged and/or fill material into waters of the United States, including jurisdictional wetlands. Section 10 of the Rivers and Harbors Act also requires Department of the Army authorization for any work in, over, or under a navigable water of the United States. In accordance with procedures established with the U.S. Army Corps of Engineers, you will be contacted directly by the Corps regarding Federal Authorization.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office

September 12, 2018

Robert Garbart
North Union Township MSA
PO Box 309
Lemont Furnace, PA 15456

Re: General Permit (GP) Acknowledgment Notification
DEP File No.: GP052618207
NUTMSA/Cove Run Sanitary Sewer
North Union Township
Fayette County

Dear Mr. Garbart:

This letter acknowledges receipt of your notification to use and registers your use of a General Permit (GP) under the authority of the Dam Safety and Encroachments Act (32 P. S. § 693.1 et. seq.) and 25 Pa. Code Chapter 105. You are responsible for assuring the work is done in accordance with the drawings, terms and conditions contained in the GP. You may proceed with your project after making the required notifications stipulated in the GP and securing all other approvals that may be necessary.

Enclosed is an acknowledged copy of your GP Registration Form. Please place this letter and the acknowledged GP Registration form with your copy of the GP Registration package, the applicable GP terms and conditions, required Federal authorizations, and the Erosion and Sediment Control plan and maintain on site during construction. Please review the complete permit authorization package so that you are aware of the extent of authorization(s) and the conditions that apply to that authorization(s).

We have determined that the twelve (12) stream crossings constitute twelve (12) single and complete projects, and each is authorized by its own Pennsylvania State Programmatic General Permit-5 (PASPGP-5). These PASPGP-5 verifications provide U.S. Army Corps of Engineers authorization pursuant to Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. These authorizations may be subject to modification, suspension, or revocation if any of the information contained in the application, including the plans, is later found to be in error.

The enclosed list of conditions must be followed for purposes of the PASPGP-5s (enclosed). A PASPGP-5 Permit Compliance, Self-Certification Form must be completed and returned to the appropriate Corps of Engineers office upon completion of construction of each crossing (enclosed).

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board
Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Environmental Hearing Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at http://ehb.courtapps.com or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

If you have questions about your registration, please contact Michala Hart at the below telephone number and refer to the above referenced registration number.

Sincerely,

Michala Hart
Environmental Engineering Technician
Waterways & Wetlands Program

Enclosures

cc: US Army Corps of Engineers
Fayette County Conservation District
James Stanton- McMillen Engineering, Inc.

PASPGP-5 PERMIT COMPLIANCE, SELF-CERTIFICATION FORM

Project Name: NUTSMA Cove Run Sanitary Sewer Applicant Name: North Union Township Muni Sewer Auth

PADEP Permit No: GP052618207 Date of Issuance: 09/12/18

Corps Permit Number: n/a Date of Issuance: n/a

Waterway: UNT Cove Run County: Fayette

In accordance with the compliance certification condition of your PASPGP-5 authorization, you are required to complete and sign this certification form and return it to the appropriate Corps of Engineers District in which the work is located.

☐ U.S. Army Corps of Engineers
Philadelphia District
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

☐ U.S. Army Corps of Engineers
Baltimore District
1631 South Atherton Street
Suite 101
State College, PA 16801-6260

☑ U.S. Army Corps of Engineers
Pittsburgh District
Regulatory Branch
Federal Building, 20th Floor
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Please note that the permitted activity is subject to compliance inspections by U.S. Army Corps of Engineers representatives. As a condition of this permit, failure to return this notification form, provide the required information below, or to perform the authorized work in compliance with the permit, can result in suspension, modification or revocation of your authorization in accordance with 33 CFR Part 325.7 and/or administrative, civil, and/or criminal penalties, in accordance with 33 CFR part 326.

Please provide the following information:

1. Date authorized work commenced: _____

2. Date authorized work completed: _____

3. Was all work, including any required mitigation, completed in accordance with your PASPGP-5 authorization?
☐YES ☐NO

4. Explain any deviations (use additional sheets if necessary)

_____

_____

5. Was compensatory wetland/stream mitigation accomplished through an approved Mitigation Bank and/or In-Lieu fee program?
☐YES ☐NO (if **YES,** attach proof of transaction, if **NO** complete Number 6 and 7 below).

6. Was permittee compensatory wetland and/or stream mitigation required? ☐ YES ☐ NO If **YES,** was the required compensatory mitigation completed in accordance with the permit and mitigation plan requirements? ☐ YES ☐ NO

7. Attach labeled color photographs showing completed work including any mitigation area(s).

I hereby certify that, except as noted above, that all work, including mitigation, has been completed in accordance with the terms and conditions, including special conditions of the above referenced permit.

(Permittee Signature): _____ (Telephone Number): _____

(Address): _____ (Email): _____

_____

_____

29 April 2016

PENNSYLVANIA STATE PROGRAMMATIC GENERAL PERMIT – 5
(PASPGP-5)
July 1, 2016

Please note: the full text of the PASPGP-5 may be viewed on the Baltimore District web site at http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx **or by calling the Corps at 814-235-0570**

Permittee: North Union Township Municipal Sewer Authority
Date of PASPGP-5 Verification: 09/12/2018
State Authorization(s): GP052618207

Corps District:

☐ **Philadelphia**
U.S. Army Corps of Engineers,
Philadelphia District
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

☐ **Baltimore**
U.S. Army Corps of Engineers,
Baltimore District
Regulatory Branch
1631 South Atherton Street
Suite 101
State College, PA 16801-6260

☑ **Pittsburgh**
U.S. Army Corps of Engineers,
Pittsburgh District
Regulatory Branch
Federal Building, 20th floor
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

It has been determined that your proposed project, which includes the discharge of dredged and/or fill material and/or the placement of structures into waters of the United States, including wetlands, qualifies for Federal authorization under the provisions of Section 404 of the Clean Water Act and /or Section 10 of the River and Harbor Act of 1899, under the terms and conditions of the PASPGP-5.

All activities authorized under PASPGP-5 must comply with all conditions of the authorization, including General, Procedural, and Special Conditions. Failure to comply with all the conditions of the authorization, including project special conditions, will constitute a permit violation and may be subject to criminal, civil, or administrative penalties, and /or restoration.

The authorized activity must be performed in compliance with the following General Conditions to be authorized under PASPGP-5:

General Conditions:

1. **Permit Conditions:** The permittee shall comply with all terms and conditions set forth in the PADEP authorization, including all conditions of the State Water Quality Certification as required by Section 401 of the CWA, and any subsequent amendments or modifications to such authorizations. The permittee shall conduct all work and activities in strict compliance with all approved maps, plans, profiles, and specifications used by PADEP and/or the Corps in issuing their authorization/verification.

2. **Aquatic Life Movements:** No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be appropriately depressed to maintain aquatic life movement and low flow conditions.

3. **Threatened and Endangered Species:** By signing the PNDI receipt, the permittee has agreed to comply with all avoidance measures identified by the PNDI receipt. As such, those avoidance measures associated with Federally-listed threatened or endangered species are a condition of the PASPGP-5 verification, unless modified by the Corps.

If an activity is verified under the PASPGP-5, and a Federally-listed threatened or endangered species, or proposed species, is subsequently found to be present, all work must cease, and the Corps and USFWS (or NMFS) must be notified. The PASPGP-5 verification is suspended and will not be re-issued until consultation pursuant to Section 7 of the ESA is concluded and adverse effects to Federally-listed threatened, endangered and proposed species are avoided.

Furthermore, persons have an independent responsibility under Section 9 of the ESA to not engage in any activity that could result in the "take" of a Federally-listed species.

4. **Spawning Areas:** The permittee shall comply with all time-of-year-restrictions associated with spawning areas as set forth by the PFBC or other designated agency. Discharges or structures in spawning or nursery areas shall not occur during spawning seasons, unless written approval is obtained from the PFBC or other designated agency. In addition, work in areas used for other time sensitive life span activities of fish and wildlife (such as hibernation or migration) may necessitate the use of seasonal restrictions for avoidance of adverse impacts to vulnerable species. Impacts to these areas shall be avoided or minimized to the maximum extent practicable during all other times of the year.

5. **Migratory Bird Breeding Areas:** Activities in waters of the United States, including jurisdictional wetlands, that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable. Recommendations pertaining to the conservation of migratory birds can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

6. **Shellfish Production:** No discharge of dredged and/or fill material and/or the placement of structures may occur in areas of concentrated shellfish production, unless the discharge is directly related to an authorized shellfish harvesting activity.

7. **Adverse Effects From Impoundment:** If the activity, including the discharge of dredged and/or fill material or the placement of a structure, creates an impoundment of water, the adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow, including impacts to wetlands, shall be minimized to the maximum extent practicable.

8. **Obstruction of High Flows:** To the maximum extent practicable, the activity must be designed to maintain pre-construction downstream flow conditions (i.e., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters), and the structure or discharge of dredged and/or fill material shall be designed to withstand expected high flows.

9. **Erosion and Sediment Controls:** During construction, appropriate erosion and sedimentation controls must be used and maintained in effective operating condition in accordance with State regulations. All disturbed soil and other fill material must be permanently stabilized.

10. **Suitable Material:** No activities, including discharges of dredged and/or fill material or the placement of structures, may consist of unsuitable material (i.e., asphalt, trash, debris, car bodies, etc.). No material discharged shall contain toxic pollutants in amounts that would violate the effluent limitation standards of § 307 of the CWA.

11. **Temporary Fill:** Temporary fill (i.e., access roads and cofferdams) in waters and/or wetlands verified by the PASPGP-5 shall be properly constructed and stabilized during use to prevent erosion and accretion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade, unless such requirement is specifically waived by the Corps. Whenever possible, rubber or wooden mats should be used for equipment access through wetlands to the project area. Temporary fills shall be removed, in their entirety, to an upland site, and suitably contained to prevent erosion and transport to a waterway or wetland. Temporary fill areas shall be restored to their preconstruction contours, elevations, and hydrology, and revegetated with a wetland seed mix that contains non-invasive, native species, as soon as practicable.

12. **Equipment Working in Wetlands:** Measures must be taken to minimize soil disturbance when heavy equipment is used in wetlands. These measures include, but are not limited to, avoiding the use of such equipment, use of timber mats or geotextile fabric, and use of low pressure tire vehicles.

13. **Installation and Maintenance:** Any structure or fill verified shall be properly installed and maintained to ensure public safety.

14. **PASPGP-5 Authorization:**

    a. The PASPGP-5 expires June 30, 2021, unless suspended or revoked.

    b. Verifications of PASPGP-5 expire June 30, 2021, unless the PASPGP-5 permit is suspended, revoked, or the PADEP authorization expires, whichever date occurs sooner. Activities authorized under the PASPGP-5 that have commenced construction or are under contract to commence construction will remain authorized provided the activity is completed within 12 month of the date of the PASPGP-5's expiration, modification, or revocation; or until the expiration date of the project specific verification, whichever is sooner.

15. **One-Time Use:** A PASPGP-5 verification is valid to construct the project, or perform the activity, one time only, except for PASPGP-5 verification specifically issued for reoccurring maintenance activities.

16. **Water Supply Intakes:** No activity, including discharges of dredged and/or fill material and/or placement of structures, may occur in the proximity of a public water supply intake and adversely impact the public water supply.

17. **Cultural Resources:** For all activities verified under a PASPGP-5, upon the unanticipated discovery of any previously unknown historic properties (historic or archeological), all work must cease and the permittee must notify the SHPO and the Corps of Engineers. The Corps will contact the Tribes they routinely consult with within 24 hours in accordance with each District's tribal Consultation process. The PASPGP-5 verification is not valid until it is determined, through the Section 106 consultation process, whether the activity will have an effect on the historic property. The PASPGP-5 may be re-verified and special conditions added if necessary, after an effects determination on historic properties and/or Tribal resource is made, in consultation with the SHPO, the Tribes and other interested parties. The PASPGP-5 verification may be modified and/or rescinded for the specific activity if an adverse effect on the historic property cannot be avoided, minimized, or mitigated.

18. **Tribal Rights:** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting grounds.

19. **Corps Civil Works Projects:** The PASPGP-5 does not authorize any work which will interfere with an existing or proposed Corps Civil Works project (i.e., flood control projects, dams, reservoirs, and navigation projects), unless specifically waived by the Corps in writing.

20. **Navigation:** No activity verified under PASPGP-5 may cause more than minimal adverse effect on navigation. No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. In addition, activities that require temporary causeways that prohibit continued navigational use of a waterway (i.e., temporary causeways extending greater than ¾ the width across the waterway) shall be removed in their entirety upon completion of their use. Any safety lights and signals prescribed by the U.S. Coast Guard, through regulation or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States. The permittee understands and agrees that, if further operations by the United States require the removal,

relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

21. **Inspections:** The permittee shall allow a District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with all the terms and conditions of the PASPGP-5. The District Engineer may also require post-construction engineering drawings (as-built plans) for completed work.

22. **PASPGP-5 Permit Compliance Self Certification Form:** A Self Certification Form, will be forwarded to each permittee with a PASPGP-5 verification. Every permittee, who receives a written PASPGP-5 verification, shall submit a signed Self Certification Form upon completion of the verified work and required mitigation, to the appropriate Corps District.

23. **Monitoring of Temporary Wetland Impacts:** For all temporary wetland impacts greater than 0.10 acre per Single and Complete Project, a monitoring report using the standard monitoring form (including preconstruction photographs as described on the monitoring form) will be submitted to the Corps, unless this requirement is specifically waived by the Corps in writing, or such monitoring is superseded by more stringent monitoring required by the Corps as a Special Condition of a PASPGP-5 verification. To obtain a waiver from the Corps the applicant must contact the appropriate Corps district with a written request to be relieved of the monitoring requirement. Such request shall include the state authorization, and the Corps permit numbers if known, and a rationale as to why the monitoring should not be required.

    The permittee shall inspect the subject areas within 7 days after restoration of the temporary impact is completed, and again at the end of the first full growing season (no later than October 31) after the site has been restored. The standard monitoring form is available on the Baltimore District web site at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx or by contacting the applicable Corps District office. When more than one temporary wetland impact is authorized as part of a Single and Complete Project, separate monitoring forms shall be filled out for each temporarily impacted wetland.

    The completed report shall be submitted to the appropriate Corps District within two weeks of the final inspection of the temporarily impacted wetland. If the initial monitoring event reveals that the temporarily impacted area is not restored to preconstruction contours, the permittee shall take corrective measures to return the area back to preconstruction grades. The permittee shall document the actions taken to restore the area back to preconstruction grades on the monitoring form.

    This condition is not applicable to any project authorized as a grandfathered PASPGP-4 (see Part IV A. 30. "Grandfathered Activities"

24. **Permit Modifications:** Any proposed modification of a verified Single and Complete Project that results in a change in the verified impact to, or use of waters of the United States, including jurisdictional wetlands, must be approved by PADEP. Corps approval is also required if the Single and Complete Project had been previously reviewed by the Corps, or if the proposed modification is a reporting activity under PASPGP-5. Project modifications that cause a Single and Complete Project to exceed 1.0 acre of waters of the United States, including jurisdictional wetlands, or greater than 1,000 linear feet of permanent stream loss will not be eligible for PASPGP-5 and will be forwarded to the Corps for review.

25. **Recorded Conservation Instruments:** As per Part IV.A.28 and Part IV.B.9 of this permit, proposed Draft Conservation Instruments may be submitted by the applicant as part of the permit

application package for review and approval. When such proposed Conservation Instruments are submitted by the applicant, proof of the recorded deed restriction, conservation easement, or deed restricted open space area shall be forwarded to the appropriate Corps District and appropriate PADEP offices, prior to the initiation of any permitted work, unless specifically waived by the Corps in writing. Conservation Instrument templates can be found at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx

26. **Property Rights:** The PASPGP-5 does not obviate the need to obtain other Federal, state, or local authorizations required by law, nor does the permit grant any property rights or exclusive privileges, or authorize any injury to the property or rights of others.

27. **Navigable Waters of the United States (Section 10 Waters):**

    a. The PASPGP-5 may be used to authorize work in the following navigable waters of the United States:

        i. Codorus Creek – from the confluence with the Susquehanna River 11.4 miles upstream to the Richland Avenue Bridge in York, Pennsylvania;

        ii. Main Stem Susquehanna River – from the confluence with the Chesapeake Bay upstream to Athens , Pennsylvania (approximately 4 miles south from the New York State line);

        iii. West Branch of the Susquehanna River – from the confluence with the main stem Susquehanna River upstream to the dam at Lock Haven, Pennsylvania;

        iv. Chester Creek – from the confluence with the Delaware River 2 miles upstream;

        v. Crum Creek – from the confluence with the Delaware River 1 mile upstream to the upstream side of the Dam at Eddystone;

        vi. Darby Creek – from the confluence with the Delaware River 5 miles upstream to the upstream side of the 84th Street Bridge in Philadelphia, Pennsylvania;

        vii. Delaware River – from U.S. Route 202 Bridged in New Hope, Pennsylvania, including the West Branch of the Delaware River, upstream to the Pennsylvania/New York border at the 42nd parallel;

        viii. Lehigh River – from the confluence with the Delaware River 72 miles upstream to the downstream side of the PA Route 940 Bridge;

        ix. Neshaminy Creek – the confluence with the Delaware River, including Neshaminy State Park Harbor Project at the mouth of Neshaminy Creek, 4 miles upstream to the downstream side of the Newportville Bridge;

        x. Pennypack Creek – from the confluence with the Delaware River 2 miles upstream to the downstream side of the Frankford Avenue Bridge in Philadelphia, Pennsylvania;

        xi. Ridley Creek – from the confluence with the Delaware River 1 mile upstream to the upstream side of the Baltimore and Ohio Railroad Bridge in Chester, Pennsylvania;

        xii. Schuylkill River – from the Fairmont Dam, 104 miles upstream to Port Carbon, Pennsylvania;

xiii. Schuylkill Navigation Channel (Manayunk Canal) – along the Schuylkill River for 2 miles from the Flat Rock Dam to Lock Street in the Manayunk Section of Philadelphia, Pennsylvania;

xiv. Delaware Canal;

xv. Lehigh Canal; and

xvi. All other waters not specifically exempted in the PASPGP-5, Part III, A, 5, that are subject to the ebb and flow of the tide. Such waters are considered navigable waters of the United States to the head of tidal influence.

b. In addition to the other general conditions, the following conditions are applicable for navigable waters of the United States eligible for PASPGP-5.

i. For aerial transmission lines, the following minimum clearances are required for aerial electric power transmission lines crossing navigable waters of the United States. These clearances are related to the clearances over the navigable channel provided by the existing fixed bridges, or the clearances which would be required by the United States Coast Guard (USCG) for new fixed bridges, in the vicinity of the proposed aerial transmission line. These clearances are based on the low point of the line under conditions producing the greatest sag, taking into consideration temperature, load, wind, length of span, and type of supports as outlines in the National Electric Safety Code:

Nominal System Voltage (kV)	Minimum Additional Clearance (ft.) Above Clearance Required for Bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750-765	45

a. Clearances for communication lines, stream gauging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless specifically authorized otherwise by the District Engineer.

b. Corps of Engineers regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both regulation and ER 1110-2-4401 apply, the greater minimum clearance is required.

ii. Encasement: The top of the cable, encasement, or pipeline shall be located a minimum of three feet below the existing bottom elevation of the streambed and shall be backfilled with suitable heavy material to the preconstruction bottom elevation. Where the cable, encasement, or pipeline is placed in rock, a minimum depth of one foot from the lowest point in the natural contour of the streambed shall be maintained. When crossing a maintained navigation channel, the requirements are a minimum of eight feet between the top of the cable, encasement, or pipeline and the authorized depth of the navigation channel. For maintained navigational channels, where the utility line is placed in rock, a minimum depth of two feet from the authorized depth of the navigation channel shall be maintained.

iii. As-Built Drawings: Within 60 days of completing an activity that involves an aerial transmission line, submerged cable, or submerged pipeline across a navigable water of the United States (i.e., Section 10 waters), where the permittee shall furnish the Corps and the National Oceanic and Atmospheric Administration, Nautical Data Branch, N/CS26, Station 7317, 1315 East-West Highway, Silver Spring, Maryland, 20910 with professional, certified as-built drawings, to scale, with control (i.e., latitude/longitude, state plane coordinates), depicting the alignment and minimum clearance of the aerial wires above the MHWL at the time of survey or depicting the elevations and alignment of the buried cable or pipeline across the navigable waterway.

iv. Aids to Navigation: The permittee must prepare and provide for USCG approval, a Private Aids to Navigation Application (CG-2554). The form can be found at: http://www.uscg.mil/forms/cg/CG_2554.pdf . Within 30 days of the date of receipt of the USCG approval, the permittee must provide a copy to the applicable Corps District.

28. **PADEP Waiver:** If the Corps determines a specific activity, which is eligible for a PADEP Non-reporting Waiver, has a significant adverse impact on life, property or important aquatic resources, the Corps may require the owner to modify the activity to eliminate the adverse condition or to obtain an Individual Permit.

29. **Corps Water Releases:** For projects located downstream of a Corps dam, the permittee should contact the appropriate Corps of Engineers, Area Engineer Office, to obtain information on potential water releases and to provide contact information for notification of unscheduled water releases. It is recommended that no in-water work be performed during periods of high water flow velocities. Any work performed at the project site is at the permittee's own risk.

30. **State Authorization:** The activity must receive State authorization. For the purpose of this requirement, any one of the following would be considered as a State authorization:

    a. A PADEP Chapter 105 Water Obstruction and Encroachment Permit, including PADEP approved Environmental Assessment pursuant to 25 Pa. Code § 105.15; or

    b. A PADEP GP issued pursuant to 25 Pa. Code § §105.441-105.449; or

    c. A PADEP approved Environmental Assessment for activities not otherwise requiring a PADEP permit pursuant to 25 Pa. Code § 105.12; or

    d. A State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA for activities which qualify for waiver of PADEP permit requirement per 25 Pa. Code §105.12; or

    e. A PADEP Dam Permit, including maintenance or repairs of existing authorized dams, including maintenance dredging; or

    f. A PADEP Emergency Permit issued pursuant to 25 Pa. Code § 105.64; or

    g. A PADEP permit for the construction of a bridge or culvert (including bridges and culverts authorized by PADEP prior to implementations of the PASPGP-1 in March 1995), which allows for maintenance activities of bridges and culvert; or

    h. A PADEP Chapter 105 Dam Safety and Encroachment Enforcement Action; or

i. A programmatic/project specific State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA where no other State authorization, as listed above, is required.

31. **Other Authorizations:** Additional Federal, State, and/or local authorizations or approvals may be required and where applicable must be secured by the applicant, prior to initiating any discharge of dredged and/or fill material, and/or the placement of structures into waters of the United States, including jurisdictional wetlands. These approvals include, but are not limited to:

    a. A State Water Quality Certification issued by PADEP consistent with Section 401 of the CWA;

    b. A Consistency Determination issued by PADEP pursuant to Section 307 of the Federal Coastal Zone Management Act for activities located within the designated Coastal Zone Management Area; and

    c. Fills within the 100-year floodplains. This activity must comply with applicable FEMA approved State or local floodplain management requirements.

32. **Federal Liability:** In issuing this permit, the Federal Government does not assume any liability for the following:

    a. Damages to permitted project or users, thereof, as a result of other permitted or unpermitted activities or from natural causes;

    b. Damages to the permitted project or uses, thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;

    c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

    d. Design or construction deficiencies associated with the permitted work; and

    e. Damage claims associated with any future modification, suspension, or revocation of the PASPGP-5.

33. **False and Incomplete Information:** The Corps may modify or rescind a previously issued project specific verification, if determined that the original verification was issued based on false, incomplete and/or inaccurate information; or other information becomes available whereby such action is necessary to ensure compliance with other federal laws and regulations.

34. **Essential Fish Habitat:** No work can take place in the following waterways from March 15th to June 30th unless approved in writing by the Corps. Questions on the applicability of this condition should be directed to the Corps of Engineers, Philadelphia District.

    a. Delaware River (within Pennsylvania, upstream from the U.S. Route 202 Bridge in New Hope, Pennsylvania,); and

    b. Lehigh River (from the mouth to Francis E. Walter Dam, located in Carbon and Luzerne County, Pennsylvania)

35. **Conservation Measures for Atlantic and Shortnose Sturgeon:** All work proposed in the following listed waters must comply with the below Conservation Measures, unless specifically waived by the Corps in writing. Questions on the applicability of this condition should be directed to the Corps of Engineers, Philadelphia District.

Waterway	Action Area (From Point Specified to the Confluence with the Delaware River)	Latitude	Longitude
Marcus Hook Creek	US Route 13 Bridge	39.822054	-75.409873
Stoney Creek	US Route 13 Bridge	39.828408	-75.400953
Chester Creek	Kerlin Street Bridge	39.855846	-75.37641
Ridley Creek	McDade Boulevard	39.869522	-75.356692
Crum Creek	US Route 13 Bridge	39.866799	-75.340677
Darby Creek	Pine Street Bridge	39.914006	-75.259994
Frankford Creek	Frankford Avenue/US 13 Bridge	40.005314	-75.070173
Frankford Creek (Original Mouth)	End of Channel	40.004912	-75.070173
Pennypack Creek	Route 13 Bridge	40.043421	-75.020638
Poquessing Creek	Mill Road Bridge	40.043421	-75.982076
Neshaminy Creek	Rapids just below Hulmeville Road Bridge (SR 513), Bucks County	40.141393	-74.911899
Unnamed Tributary 1, located in Croydon, PA	River Road crossing	40.085774	-74.8856
Otter/Mill Creek	US 13 (Bristol Pike) Bridge	40.100424	-74.866976
Unnamed Tributary 2, located in Bristol, PA	Wood Street Bridge	40.102044	-74.845682
Martins Creek	Main Street (Tulleytown)	40.141975	-74.812026
Scott's Creek	End of creek	40.12921	-74.793879
Scott's Creek Relocated Channel, located at Money Island, Bucks County, PA	First culvert crossing	40.125578	-74.776886
Non-Tidal Tributaries			
Buck Creek	Delaware Canal	40.243699	-74.838279
Dyers Creek	Delaware Canal	40.267098	-74.858495
Houghs Creek	Delaware Canal	40.28148	-74.865783
Jericho Creek	Delaware Canal	40.313984	-74.902899
Pidcock Creek	Delaware Canal	40.331508	-74.935788

Conservation Measures:

a. No work shall occur from March 15 to November 15, of any given year.

b. All Dredging shall be performed by a mechanical dredge and/or techniques (clamshell bucket etc.).

c. All work, including the installation of turbidity curtains and dewatering cofferdams, shall be performed during low tide or when the tide is waterward of the proposed work in all tidal waterbodies listed, or during periods of low or no flow in the non-tidal waterbodies listed.

d. Blasting is not authorized by the PASPGP-5 within the listed waterbodies.

e. Pile Driving:

i. Piles shall not be greater than 12 inches in diameter;

ii. Piles shall be installed using a vibratory hammer or an impact hammer provided noise attenuation devices (cushion blocks, etc.) are used, and a "soft start" is performed each day of pile driving. A "soft start" is the building up of power slowly during pile driving activities to allow for fish and other wildlife to leave the area; and

iii. Pile driving activities shall be limited to no more than 12 hours per day.

Any activity that cannot meet these conditions will be sent to the Corps as a Reporting Activity at which time the Corps will conduct project specific Section 7 Endangered Species Act consultation with NMFS.

36. **Migratory Birds and Bald and Golden Eagles:** The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulation governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity. Information on the conservation of migratory birds and Bald and Golden Eagles can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

By Authority of the Secretary of the Army:

Edward P. Chamberlayne
Colonel, Corps of Engineers
District Engineer, Baltimore

Michael A. Bliss
Lieutenant Colonel, Corps of Engineers
District Engineer, Philadelphia

Bernard R. Lindstrom
Colonel, Corps of Engineers
District Engineer, Pittsburgh

3150-PM-BWEW0500 Rev. 2/2018
Form

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

CHAPTER 105 WATER OBSTRUCTIONS AND ENCROACHMENT GENERAL PERMIT REGISTRATION

SECTION A. APPLICANT INFORMATION

☐ FERC Natural Gas Activity Docket Number _____ Type of Facility Sewer Extension

Has a Water Quality Certification (WQC) request been sent to DEP? ☐ Yes ☒ No

Activity Related to Oil & Gas Exploration, Production, Storage or Transmission

Applicant's Name / Client	DEP Client ID# (if known)	Employer ID# (EIN)
North Union Township MSA		25-1665540

Client Information - Please select Client Type / Code from drop down box under the correct entity shown to the right. (or may be written in) →	Government	Non-Government	Individual
	AUTH Authority		

Mailing Address	City	State	ZIP + 4
P.O. Box 309 , 120 Commonwealth Drive, Suite 101	Lemont Furnace	PA	15456

Contact Person – Last Name	First	MI	Suffix	Telephone	Email Address
Garbart	Robert			(724) 438-6316	rlgarbart@aol.com

SECTION B. CONSULTANT INFORMATION (If applicable) ☐ N/A

Contact Person – Last Name	First	MI	Suffix	Consultants Title	Consulting Firm
Stanton	James			Vice President of Engineering	McMillen Engineering, Inc.

Mailing Address	City	State	ZIP + 4
115 Wayland Smith Drive	Uniontown	PA	15401

Telephone	Fax	Email	Employer ID# (EIN)
(724) 439-8110	(724) 439-4733	jstanton@mcmilleng.com	23-2871380

SECTION C. PROJECT INFORMATION

Project / Site Name	FERC Docket No. (if applicable)	DEP Site ID# (if known or leave blank)
NUTMSA/Cove Run Sanitary Sewer		

Client Relationship - Please select Site-to-Client Relationship/ Code from drop down box to the right. (or may be written in) →	Double-click on shaded area below to select correct Site-to-Client Relationship / Code ↓
	AGENT Agent for Owner or Operator

County	Municipality ☐ City ☐ Borough ☒ Township	Note: Municipal & County Notification is Required
Fayette	North Union	

Site Location / Address	City	State	ZIP + 4
Yauger Hollow Road, Twist Lane, and Cemetery Road	Lemont Furnace	PA	15456

Collection Method: ☒ EMAP ☐ HGIS ☐ GISDR* ☐ ITPMP ☐ GPS ☐ WAAS ☐ LORAN

Check the horizontal reference datum (or projection datum) employed in the collection method.

EMAP and HGIS (PNDI) have known datum and do not require checking here. ☐ NAD27 ☐ NAD83 ☐ WGS84 (GEO84) LAT.: _____ LONG.: _____

NOTE: A Submerged Lands License Agreement (SLLA) with an annual fee, if applicable, may also be required for your project. You will be notified if an SLLA is required.

The Aquatic Resources Impact Table (SECTION E. PROPOSED IMPACTS) must be completed or equivalent submitted for this registration to be complete.

SECTION D. REGISTRATION CHECKLIST AND REQUIREMENTS

Please place an "X" next to each item (1-9) to ensure it is completed and/or provided.

Unless otherwise specified, all items are ***required*** to ensure a complete Registration package.

Provide ONE (1) ORIGINAL and ONE (1) COPY of the Registration package Municipality & County Notification:

Please provide a copy of the Registration form to the Municipality & County in which the work will be performed. Proof of receipt is not required to be provided to DEP.

1. REGISTERING A GENERAL PERMIT (GP) check all that apply

☐ **GP-1** Fish Habitat Enhancement Structures
Fee: $50 per project

☐ **GP-2** Small Docks & Boat Launching Ramps
Fee: $175 _____
Please mark ("X") the specific type of project:
☐ private recreational dock ☐ public service facility
☐ access facility ☐ other private or commercial facility

☐ **GP-3** Bank Rehabilitation, Bank Protection, and Gravel Bar Removal
Fee: $250

☐ **GP-4** Intake and Outfall Structures
Fee: $200

☒ **GP-5** Utility Line Stream Crossing
Fee: $250

☐ **GP-6** Agricultural Crossings & Ramps
Fee: $50

☐ **GP-7** Minor Road Crossings
Fee: $350

☐ **GP-8** Temporary Road Crossings
Fee: $175

☐ **GP-9** Agricultural Activities public
Fee: $50 per project

☐ **GP-10** Abandoned Mine Reclamation
Fee: $500 per project

☐ **GP-11** Maintenance, Testing, Repair, Rehabilitation, or Replacement of Water Obstructions and Encroachments (reviewed by DEP Regional Office only)
Fee: $750
☐ Temporary Disturbance $400/ .1 acre ☐ Permanent Disturbance $800/ .1 acre

☐ **GP-15** Private Residential Construction in Wetlands
Fee: $750
☐ Temporary Disturbance $400/ .1 acre ☐ Permanent Disturbance $800/ .1 acre

Disturbance Fees associated with GP's 11 and15 are rounded up to the next tenth.

Example: .103 = .2 acre = $800 temporary disturbance.

*****See Chapter 105 FEE(S) Calculation Worksheet for Explanation of Fees*****
Federal, state, county, municipal agencies or municipal authorities FEE EXEMPT

	Applicant Entry	DEP Use Only
2. Location Map (USGS quad map) with project site marked:	☒	☐
3. Color Photographs with dates, locations, and descriptions: ☐ GP-3 ☐ GP-11 ☐ **N/A**	☒	☐
4. Project Description: (**Example:** Linear pipeline project using multiple GP-5's and GP-8's; One GP-7 for an access road to my property) Sewer extension using twelve GP-5's	☒	☐
5. Site Specific and/or Standard Drawings depicting the project's GP activities. Activities that qualify for GP-7 or GP-11 Plans, specifications, and reports for bridges and culverts across a stream which are to be used by the general public such as an access to an industrial, commercial or residential development, etc., shall be prepared by a registered professional engineer and shall be affixed with their seal and certification which shall read as follows: *"I (name) do hereby certify pursuant to the penalties of 18 Pa. C.S.A. Sec. 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications, and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection."*	☒	☐
6. Proposed Project Purpose depicting the site of the projects GP activities and impacts. *(See Section E.)* Briefly discuss the need for the authorization	☒	☐
7. Erosion & Sediment Control Plan (E&S Plan) (Required for all GP's but specifically required with submission with a registration of GP-11 or GP's for oil and gas related activities submitted to DEP)	☒	☐
8. Pennsylvania Natural Diversity Inventory (PNDI): PNDI Search Receipt and clearance letters, if available. See additional requirements for submission with Avoidance Measures and/or Potential Impacts.	☒	☐
9. Activities which impact wetlands: (For State Regulated Impacts) **Please place an "X" next to the appropriate box indicating the information provided:**		
➢ N/A because no wetland impacts are proposed or no compensatory mitigation is necessary.	☒	☐
➢ A wetland delineation with complete data sheets in accordance with the 1987 Corps of Engineers Wetland Delineation Manual AND the appropriate Regional Supplements to the Corps of Engineers Wetland Delineation Manual for use in Pennsylvania.	☐	☐
➢ If direct or indirect wetland impacts are greater than 0.05 acres, a compensatory mitigation plan in accordance with the Department's Replacement criteria which provides compensation for both affected acreage and functions at a minimum one to one ratio.	☐	☐
➢ **If compensatory mitigation onsite is determined not feasible:** A check, number _____, in the amount of $ _____ payable to the National Fish and Wildlife Foundation, N.A. 1237, as compensatory mitigation for _____ acres of impact in wetlands, in accordance with the Pennsylvania Wetland Replacement Project.....	☐	☐
(Additional Mitigation May Be Required by Army Corps)	☐	☐
NOTE: If the Pennsylvania Wetland Replacement Fund is proposed to be used as compensatory mitigation for waters of the Commonwealth the Army Corps of Engineers may also require additional mitigation if the proposed activity impacts waters of the United States.		

3150-PM-BWEW0557 Rev. 2/2018

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client NUTMSA

AQUATIC RESOURCE IMPACT TABLE

FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION

NOTE: THIS FORM OR AN EQUIVALENT FORM MUST BE SUBMITTED FOR GENERAL PERMIT REGISTRATION AS SECTION E.

Project / Site Name: NUTMSA/Cove Run Sanitary Sewer Date: March 28, 2018

DEP USE ONLY			Project Information									PADEP / 105		
PADEP Permit Number	Single Complete Crossing No.	Crossing Number	Fees	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	Watercourse Impact Top of Bank to top of Bank Length and Width	Floodway Impact Area Top of Bank Landward Length and Width	Wetland Impact AREA Length and Width
	1	1	N/A	GP-5-1	Perennial	39.919418	-79.661044		WWF	Boring	Temp	34 - 10	-	-
↓	1	1	N/A	GP-5-1	Perennial	39.919418	-79.661044		WWF	Boring	Temp	-	134 - 10	-
												-	-	-
	2	2	N/A	GP-5-2	Perennial	39.920700	-79.655113		WWF	Boring	Temp	38 - 10	-	-
↓	2	2	N/A	GP-5-2	Perennial	39.920700	-79.655113		WWF	Boring	Temp	-	138 - 10	-
												-	-	-
	3	3	N/A	GP-5-3	Perennial	39.921994	-79.651705		WWF	Boring	Temp	4 - 10	-	-
↓	3	3	N/A	GP-5-3	Perennial	39.921994	-79.651705		WWF	Boring	Temp	-	104 - 10	-
												-	-	-
	4	4	N/A	GP-5-4	Perennial	39.922729	-79.650701		WWF	Boring	Temp	34 - 10	-	-
↓	4	4	N/A	GP-5-4	Perennial	39.922729	-79.650701		WWF	Boring	Temp	-	134 - 10	-
												-	-	-
												-	-	-

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GP052618207

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client NUTMSA

AQUATIC RESOURCE IMPACT TABLE

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	5	5	N/A	GP-5-5	Perennial	39.923379	-79.649566		WWF	Boring	Temp	56 - 10	-	-
	5	5	N/A	GP-5-5	Perennial	39.923379	-79.649566		WWF	Boring	Temp	-	156 - 10	-
												-	-	-
	6	6	N/A	GP-5-6	Perennial	39.924324	-79.648547		WWF	Boring	Temp	40 - 10	-	-
	6	6	N/A	GP-5-6	Perennial	39.924324	-79.648547		WWF	Boring	Temp	-	140 - 10	-
												-	-	-
	7	7	N/A	GP-5-7	Perennial	39.925868	-79.646565		WWF	Boring	Temp	23 - 10	-	-
	7	7	N/A	GP-5-7	Perennial	39.925868	-79.646565		WWF	Boring	Temp	-	230 - 10	-
												-	-	-
	8	8	N/A	GP-5-8	Perennial	39.927600	-79.643928		WWF	Boring	Temp	2.5 - 10	-	-
	8	8	N/A	GP-5-8	Perennial	39.927600	-79.643928		WWF	Boring	Temp	-	102.5 - 10	-
												-	-	-
												-	-	-

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

Applicant's Name / Client NUTMSA

AQUATIC RESOURCE IMPACT TABLE

FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION

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	9	9	N/A	GP-5-9	Perennial	39.918870	-79.659217		WWF	Boring	Temp	8 - 10	-	-
	9	9	N/A	GP-5-9	Perennial	39.918870	-79.659217		WWF	Boring	Temp	-	108 - 10	-
												-	-	-
	10	10	N/A	GP-5-10	Perennial	39.922911	-79.650243		WWF	Boring	Temp	16 - 10	-	-
	10	10	N/A	GP-5-10	Perennial	39.922911	-79.650243		WWF	Boring	Temp	-	116 - 10	-
												-	-	-
	11	11	N/A	GP-5-11	Perennial	39.923145	-79.650012		WWF	Boring	Temp	13.6 - 10	-	-
	11	11	N/A	GP-5-11	Perennial	39.923145	-79.650012		WWF	Boring	Temp	-	113.6 - 10	-
												-	-	-
	12	12	N/A	GP-5-12	Perennial	39.925320	-79.646951		WWF	Boring	Temp	21 - 10	-	-
	12	12	N/A	GP-5-12	Perennial	39.925320	-79.646951		WWF	Boring	Temp	-	121 - 10	-
												-	-	-
												-	-	-

GP052618207

SECTION F. CERTIFICATION

I certify under penalty of law that the information provided in this permit registration is true and correct to the best of my knowledge and information and that I possess the authority to undertake the proposed action. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (If any of the information and/or plans is found to be in error, falsified, and/or incomplete, this authorization/verification may be subject to modification, suspension, or revocation in accordance with applicable regulations.) I further certify that this project complies with all the conditions of the general permit.

Robert L Gorbont, Chairman
Signature of Applicant/ Owner

3/22/2018
Date

Robert L. Gorbont
Typed / Printed Name

Chairman
Typed / Printed Title

This General Permit shall not be effective until the owner has had their E&S Plan reviewed by the appropriate Regional Office or District, and, where required, obtained an SLLA from DEP.

THIS ACKNOWLEDGED COPY OF THIS GENERAL PERMIT REGISTRATION PACKAGE AND THE E&S PLAN MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION.

SECTION G. DECISION / DISPOSITION – COMPLETED BY DEP

A. Decision Review:

Michala Hart
DEP / District Reviewer Signature

GP 05261 8207

Michala Hart
Reviewer's Typed / Printed Name

GP —

NOTE: See Section E for additional authorizations.

Disposition Status			Comments
☒ **ACKNOWLEDGED**	Date	9/12/18	
SLLA Required	☐ Yes Attached	☒ No	
☐ **WITHDRAWN**	Date		
☐ **INCOMPLETE**	Date		
☐ **EXTENSION REQUEST**	Date		

NOTE: If the GP registration information is incomplete a copy of this registration form and requested additional information will be sent to the applicant. A copy of the returned registration form and additional information must be re-submitted within 60 calendar days unless extended by the extension date listed above.

☒ **FEDERAL AUTHORIZATION**

☒ Non-reporting Attached PASPGP verification / authorization attached.

☐ Reporting – A copy of this General Permit registration package has been sent to the Army Corps of Engineers. Separate federal authorization may be required

NOTE: Please be advised that if the reporting box is checked you do not have Federal authorization for this project and such authorization may be required prior to starting your project. In accordance with Section 404 of the Clean Water Act, a Department of the Army authorization is required for the discharge of dredged and/or fill material into waters of the United States, including jurisdictional wetlands. Section 10 of the Rivers and Harbors Act also requires Department of the Army authorization for any work in, over, or under a navigable water of the United States. In accordance with procedures established with the U.S. Army Corps of Engineers, you will be contacted directly by the Corps regarding Federal Authorization.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Southwest Regional Office

September 23, 2021

Garrett Mechling: garrett@nutwp.com
North Union Township Municipal Services Authority (NUTMSA)
120 Commonwealth Drive, Suite 101
Lemont Furnace, PA 15456

Re: General Permit (GP) Acknowledgment Notification
DEP File No.: GP052605221-005 & GP112605221-025
NUTMSA/Misty Lane Sanitary Sewer
North Union Township
Fayette County

Dear Garrett Mechling:

This letter acknowledges receipt of your notification to use and registers your use of above authorized General Permit(s) (GP(s)) under the authority of the Dam Safety and Encroachments Act (32 P. S. § 693.1 et. seq.) and 25 Pa. Code Chapter 105. You are responsible for assuring the work is done in accordance with the drawings, terms and conditions contained in the GP(s). Please direct special attention to all time sensitive issues associated with the GP authorization(s). You may proceed with your project after making the required notifications stipulated in the GP(s) and securing all other approvals that may be necessary.

Enclosed is an acknowledged copy of your GP Registration Form. Please place this letter and the acknowledged GP Registration form with your copy of the GP Registration package, the applicable GP terms and conditions, required Federal authorizations, and the Erosion and Sediment Control plan and maintain on site during construction. Please review the complete permit authorization package so that you are aware of the extent of the authorization(s).

We have determined that your proposed work, if accomplished in accordance with the enclosed terms and conditions, is authorized by the Pennsylvania State Programmatic General Permit-6 (PASPGP-6). This PASPGP-6 verification provides U.S. Army Corps of Engineers authorization pursuant to Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. This authorization may be subject to modification, suspension, or revocation if any of the information contained in the application, including the plans, is later found to be in error.

The enclosed list of conditions must be followed for purposes of the PASPGP-6 (Enclosure 1).

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board

Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Environmental Hearing Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at http://ehb.courtapps.com or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

If you have questions about your registration, please contact me at **412.442.4034** or **mduplaga@pa.gov** and refer to the above referenced registration number.

Sincerely,

Elizabeth Farley, P.E.
Environmental Engineer Manager
Waterways & Wetlands Program

Enclosures

cc: Fayette County Conservation District
McMillen Engineering, Inc., Ken Kubicar
File Copy (GP052605221-005 & GP112605221-025)

PENNSYLVANIA STATE PROGRAMMATIC GENERAL PERMIT – 6
(PASPGP-6)
July 1, 2021

Please note: the full text of the PASPGP-6 may be viewed on the Baltimore District web site at http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx **or by calling the Corps at 814-235-0570**

Permittee: North Union Township Municipal Services Authority
Date of PASPGP-6 Verification: 9/1/21
State Authorization(s): GP052605221-005 & GP112605221-025

Corps District:

☐ **Baltimore District**
U.S. Army Corps of Engineers State College Field Office
1631 South Atherton Street
Suite 101
State College, Pennsylvania 16801-6260
Email: NAB-Regulatory@usace.army.mil

☐ **Philadelphia District**
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East Regulatory Branch
Philadelphia, Pennsylvania 19107-3390
Email: PhiladelphiaDistrictRegulatory@usace.army.mil

☑ **Pittsburgh District**
U.S. Army Corps of Engineers, Regulatory Branch
William S. Moorhead Federal Building, 20th floor
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222-4186
Email: Regulatory.Permits@usace.army.mil

It has been determined that your proposed project, which includes the discharge of dredged and/or fill material and/or the placement of structures into waters of the United States, including wetlands, qualifies for federal authorization under the provisions of Section 404 of the Clean Water Act and /or Section 10 of the River and Harbor Act of 1899, under the terms and conditions of the PASPGP-6.

All activities authorized under PASPGP-6 must comply with all conditions of the authorization, including General, Procedural, and Special Conditions. Failure to comply with all the conditions of the authorization, including project special conditions, will constitute a permit violation and may be subject to criminal, civil, or administrative penalties, and /or restoration.

The authorized activity must be performed in compliance with the following General Conditions to be authorized under PASPGP-6:

General Conditions:

1. Permit Conditions: The permittee shall conduct all work and activities in waters of the United States, including jurisdictional wetlands, in strict compliance with the approved authorization/verification including all final maps, plans, profiles, and design specifications.

2. 401 State Water Quality Certification (SWQC) Conditions: The permittee shall comply with the following conditions unless a project specific SWQC is required as identified below:

    a. Prior to beginning any activity authorized by the Corps under PASPGP-6, the applicant shall obtain from the Department all necessary environmental permits, authorizations or approvals, and submit to the Department environmental assessments and other information necessary to obtain the permits and approvals, as required under state law, including The Clean Streams Law (35 P.S. §§ 691.1—691.1001), the Dam Safety and Encroachments Act (32 P.S. §§ 693.1—693.27), the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1—1396.19b), the Noncoal Surface Mining Conservation and Reclamation Act (52 P.S. §§ 3301—3326), the Bituminous Mine Subsidence and Land Conservation Act (52 P.S. §§ 1406.1—1406.21), the Coal Refuse Disposal Control Act (52 P.S. §§ 30.51—30.66), the Solid Waste Management Act (35 P.S. §§ 6018.101—6018.1003), the Hazardous Sites Cleanup Act (35 P.S. §§ 6020.101—6020.1305), the Land Recycling and Environmental Remediation Standards Act (35 P.S. §§ 6026.101— 6026.908), 58 Pa.C.S. §§ 3201—3274 (related to development), the Air Pollution Control Act (35 P.S. §§ 4001—4015), the Storage Tank and Spill Prevention Act (35 P.S. §§ 6021.101— 6021.2104) and the regulations promulgated thereunder, including 25 Pa. Code Chapters 16, 71, 77, 78, 78a, 86—91, 92a, 93, 95, 96, 102, 105, 106, 127, 245 and 260a—299.

    b. Fill material may not contain any wastes as defined in the Solid Waste Management Act.

    c. Applicants and projects eligible for the PASPGP-6 must obtain all state permits or approvals, or both, necessary to ensure that the project meets the state's applicable water quality standards, including a project-specific SWQC.

Note: As part of PADEP's issuance of 401 SWQC for PASPGP-6 on February 12, 2021, the following was included to clarify the meaning of this condition:

This 401 SWQC is only available for projects that do not require any federal authorization other than authorization from the Corps under Section 404 of the Act or Section 10 of the Rivers and Harbors Act of 1899. Applicants seeking authorization for activities not eligible for coverage under PASPGP-6, or for activities that require another federal authorization (such as an interstate natural gas pipeline, a gas storage field or a nuclear or hydroelectric project requiring authorization by another federal agency), must submit a request to the Department for a project-specific SWQC. The scope of the issuance of this SWQC is related only to the scope and applicability of the proposed PASPGP-6. Any activity or project requiring the Department to

issue 401 SWQC that is beyond the scope of the proposed PASPGP-6 or other programmatically issued SWQC (e.g. Nationwide Permits) will require the applicant to obtain a project-specific SWQC from the Department. This would include any activity or project requiring a SWQC associated with an authorization, permit or license issued by a federal agency, such as Federal Energy Regulatory Commission or Nuclear Regulatory Commission. Such activities or projects include, but are not limited to, an interstate natural gas pipeline, a gas storage field or a nuclear or hydroelectric project.

3. Terms and Conditions Related to Coastal Zone Management Act (CZMA) Certification: For those projects located within Pennsylvania's Coastal Zones, Non-Reporting Activities have General CZMA consistency determination and Reporting Activities must obtain individual CZMA consistency determination (see General Condition 30(b)).

4. Aquatic Life Movements: No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless crossing cannot be used, then culverts should be designed, constructed, and appropriately depressed, if possible, below the stream invert to minimize adverse effects to aquatic life movements.

5. Threatened and Endangered Species: By signing the Pennsylvania Natural Diversity Inventory (PNDI) receipt, the permittee has agreed to comply with all avoidance measures identified by the PNDI receipt. The applicant may also agree in writing to comply with all avoidance measures identified in U.S. Fish and Wildlife Service (USFWS) correspondence, including IPaC, as part of the application. To ensure compliance with the Endangered Species Act (ESA), those avoidance measures associated with federally listed, threatened, or endangered species are a condition of the PASPGP-6 verification, unless modified by the Corps.

If an activity is verified under the PASPGP-6, and a federally listed, threatened, or endangered species, or proposed species, is subsequently found to be present, all work must cease, and the Corps and USFWS (or National Marine Fisheries Service (NMFS)) must be notified by telephone immediately (contact information below). The PASPGP-6 verification is automatically suspended without additional notification to the permittee and will not be re-issued until consultation pursuant to Section 7 of the ESA is concluded and adverse effects to federally listed, threatened, endangered, and proposed species are avoided, or incidental take authorization issued.

Furthermore, persons have an independent responsibility under Section 9 of the ESA to avoid any activity that could result in the "take" of a federally listed species.

USFWS:
Pennsylvania Field Office
110 Radnor Rd; Suite 101
State College, PA 16801
office phone: 814 234-4090
fax: 814-234-0748 or 814 206-7452

NMFS:
Ms. Jennifer Anderson
Assistant Regional Administrator
Protected Resources Division NOAA Fisheries
55 Greater Republic Drive
Gloucester, Massachusetts 01930

6. Spawning Areas: The permittee shall comply with all time-of-year-restrictions (see below) associated with spawning areas as set forth by the Pennsylvania Fish and Boat Commission (PFBC) or other designated agency. Discharges or structures in spawning or nursery areas shall not occur during spawning seasons unless written approval is obtained from the PFBC or another designated agency. In addition, work in areas used for other time sensitive life span activities of fish and wildlife (such as hibernation or migration) may necessitate the use of seasonal restrictions for avoidance of adverse impacts to vulnerable species. Impacts to these areas shall be avoided or minimized to the maximum extent practicable during all other times of the year.

Wild Trout	October 1 - December 31
Class A Wild Trout	October 1 - April 1

List of Trout Streams found at:
https://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Pages/TroutWaterClassifications.aspx.

7. Shellfish Production: No discharge of dredged and/or fill material and/or the placement of structures may occur in areas of concentrated shellfish production, unless the discharge is directly related to an authorized shellfish harvesting activity.

8. Adverse Effects From Impoundment: If the regulated activity creates an impoundment of water, the adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow, including impacts to wetlands, shall be minimized to the maximum extent practicable.

9. Management of High Flows: To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity,

and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Erosion and Sediment Controls: Appropriate soil erosion and sediment controls, in accordance with state regulations, must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States, including jurisdictional wetlands, during periods of low-flow or no-flow, or during low tides.

11. Suitable Material: No activities, including discharges of dredged and/or fill material or the placement of structures, may consist of unsuitable material (i.e., asphalt, trash, debris, car bodies, etc.). No material discharged shall contain toxic pollutants in amounts that would violate the effluent limitation standards of § 307 of the Clean Water Act (CWA).

12. Temporary Fill and Structures: Temporary fill (i.e., access roads and cofferdams) and structures in waters and/or wetlands authorized by PASPGP-6 shall be properly constructed and stabilized during use to prevent erosion and accretion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade, unless such requirement is specifically waived by the Corps. Whenever possible, rubber or wooden mats should be used for equipment access through wetlands to the project area. Temporary fills and structures shall be removed, in their entirety, to an upland site, and suitably contained to prevent erosion and transport to a waterway or wetland. Temporarily impacted areas shall be restored to their preconstruction contours, elevations, and hydrology, and revegetated with a wetland seed mix that contains non-invasive, native species, to the maximum extent practicable. Unless approved by the Corps, the restoration work must be completed within 30 days of the date the temporary fill/structure is no longer needed.

13. Equipment Working in Wetlands: Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

14. Installation and Maintenance: Any regulated structure or fill authorized by PASPGP-6 shall be properly installed and maintained to ensure public safety.

15. PASPGP-6 Authorization:

    a. PASPGP-6 expires June 30, 2026, unless suspended or revoked.

    b. Verifications of PASPGP-6 expire June 30, 2026, unless the PASPGP-6 permit is suspended, revoked, or the PADEP authorization expires, whichever date occurs sooner. Activities authorized under PASPGP-6 that have commenced construction or are under contract to commence construction will remain authorized provided the activity is completed within 12 month of the date of the PASPGP-6 expiration, modification, or revocation; or until the expiration date of the project specific verification, whichever is sooner.

16. One-Time Use: A PASPGP-6 verification is valid to construct the project, or perform the activity, one time only, except for PASPGP-6 verifications specifically issued for reoccurring maintenance activities.

17. Water Supply Intakes: No regulated activity may occur in the proximity of a public water supply intake and adversely impact the public water supply. In order to minimize the effects of intakes on anadromous fish eggs and larvae, and oyster larvae, intake structures should be equipped with screening (with mesh size no larger than 2 mm) of wedge wire or another material of equal or better performance. Where feasible, intakes should be located away from spawning or nursery grounds, or to minimize the impingement on, or entrainment of, eggs or larvae. In addition, intake velocities should not exceed 0.5 ft/sec.

18. Historic Properties: For all activities verified under a PASPGP-6, upon the unanticipated discovery of any previously unknown historic properties (historic or archeological), all work must cease immediately, and the permittee must notify the State Historic Preservation Officer (SHPO) and the Corps. The Corps will contact the tribes with whom they routinely consult, within 24 hours in accordance with each District's tribal consultation process. PASPGP-6 may be re-verified, and special conditions added if necessary, after an effect's determination on historic properties and/or tribal resources is made, in consultation with the SHPO, the tribes and other interested parties. The PASPGP-6 verification may be modified and/or rescinded for the specific activity if an adverse effect on the historic property cannot be avoided, minimized, or mitigated.

19. Tribal Rights: No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

20. Corps Civil Works Projects: The PASPGP-6 does not authorize any work which will interfere with an existing or proposed Corps Civil Works project, or any Corps-owned or managed property or easement (i.e., flood control projects, dams, reservoirs, and navigation projects), unless specifically approved by the Corps in writing. Pursuant to 33 U.S.C 408, a review by, or permission from the Corps is required for activities that will alter or temporarily or permanently occupy or use a Corps federally authorized Civil Works project. Any activity that requires Section 408 permission and/or review is not authorized by PASPGP-6 until the appropriate Corps office issues the Section 408 permission or completes its review to alter, occupy, or use the Corps Civil Works project, and Corps issues a written PASPGP-6 verification.

21. Navigation: No activity verified under PASPGP-6 may cause more than minimal adverse effect on navigation. No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. In addition, activities that require temporary causeways that prohibit continued navigational use of a waterway (i.e., temporary causeways extending greater than ¾ the width across the waterway) shall be removed in their entirety upon completion of their use. Any safety lights and signals prescribed by the U.S. Coast Guard (USCG), through regulation or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States. The permittee understands and agrees that, if further operations by the United States require the removal, relocation, or other alteration, of the

structure or work herein authorized, or if, in the opinion of the Secretary of the Army or an authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

22. Inspections: The permittee shall allow a District Engineer or an authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with all the terms and conditions of PASPGP-6. The District Engineer may also require post-construction engineering drawings (as-built plans) for completed work.

23. Modifications of Prior Verifications: Any proposed modification of a previously verified Single and Complete project that results in a change in the verified impact to, or use of waters of the United States, including jurisdictional wetlands, must be approved by PADEP, or the Corps if applicable. Corps written approval is required if the prior verification was reviewed by the Corps, or if the proposed modification is a Reporting Activity under PASPGP-6. Project modifications that cause a Single and Complete Project to exceed 0.5 acre of loss of waters of the United States, including jurisdictional wetlands (except those identified in Part II A.2. a. and b.), or greater than 1,000 linear feet of permanent jurisdictional stream loss (except those identified in Part II A.2. a and b.), are not eligible for PASPGP-6 and will be forwarded to the Corps for review under an alternative permit review procedure.

24. Recorded Conservation Instruments: As per Part III.D.27 and Part III.E.8 of this permit, proposed Draft Conservation Instruments may be submitted by the applicant as part of the permit application package for review and approval. When such proposed Conservation Instruments are submitted by the applicant, proof of the recorded deed restriction, conservation easement, or deed restricted open space area shall be forwarded to the appropriate Corps District and appropriate PADEP offices, prior to the initiation of any permitted work, unless specifically waived by the Corps in writing. Conservation Instrument templates can be found at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx

25. Property Rights: PASPGP-6 does not obviate the need to obtain other federal, state, or local authorizations required by law, nor does the permit grant any property rights or exclusive privileges or authorize any injury to the property or rights of others.

26. Navigable Waters of the United States (Section 10 Waters):

    In addition to the other general conditions, the following conditions are applicable for activities in the eligible navigable waters of the United States identified in Appendix B:

    a. For aerial transmission lines, the following minimum clearances are required for aerial electric power transmission lines crossing navigable waters of the United States. These clearances are related to the clearances over the navigable channel provided by the

existing fixed bridges, or the clearances which would be required by the USCG for new fixed bridges, in the vicinity of the proposed aerial transmission line. These clearances are based on the low point of the line under conditions producing the greatest sag, taking into consideration temperature, load, wind, length of span, and type of supports as outlined in the National Electric Safety Code:

Nominal System Voltage (kV)	Minimum Additional Clearance (ft.) Above Clearance Required for Bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750-765	45

i. Clearances for communication lines, stream gauging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless specifically authorized otherwise by the District Engineer.

ii. Corps regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both regulation and ER 1110-2-4401 apply, the greater minimum clearance is required.

b. Encasement: The top of any cable, encasement, or pipeline shall be located a minimum of three feet below the existing bottom elevation of the streambed and shall be backfilled with suitable heavy material to the preconstruction bottom elevation. Where the cable, encasement, or pipeline is placed in rock, a minimum depth of one foot from the lowest point in the natural contour of the streambed shall be maintained. When crossing a maintained navigation channel, the requirements are a minimum of eight feet between the top of the cable, encasement, or pipeline and the authorized depth of the navigation channel. For maintained navigational channels, where the utility line is placed in rock, a minimum depth of two feet from the authorized depth of the navigation channel shall be maintained.

c. As-Built Drawings: Within 60 days of completing an activity that involves an aerial transmission line, submerged cable, or submerged pipeline across a navigable water of the United States (i.e., Section 10 waters), the permittee shall furnish the Corps and National Oceanic and Atmospheric Administration, Nautical Data Branch, N/CS26, Station 7317, 1315 East-West Highway, Silver Spring, Maryland, 20910 with professional, certified as-built drawings, to scale, with control (i.e., latitude/longitude, state plane coordinates), depicting the alignment and minimum clearance of the aerial wires above the mean high water line at the time of survey or depicting the elevations and alignment of the buried cable or pipeline across the navigable waterway.

d. Aids to Navigation: The permittee must prepare and provide for USCG approval, a Private Aids to Navigation Application (CG-2554). The application can be found at: https://media.defense.gov/2017/Nov/20/2001846135/-1/- 1/0/CG_2554.pdf. The completed application must be sent to the appropriate USCG office as indicated below:

i. Baltimore/Philadelphia Districts: Commander Fifth Coast Guard District, 431 Crawford Street, Room 100, Portsmouth, VA 23704-5504, Attn: Mr. Matthew Creelman; by email to Matthew.K.Creelman2@uscg.mil; or by FAX to (757) 398-6303.

ii. Pittsburgh District: Eighth Coast Guard District, Sector Ohio Valley, USCGC Osage, 300 McKown Ln, Sewickley, PA 15143; phone (412) 741-1180

Within 30 days of the date of receipt of the USCG approval, the permittee must provide a copy to the appropriate Corps district office.

27. PADEP Waiver: If the Corps determines a specific activity, which is eligible for a PADEP Non-reporting Waiver, has a significant adverse impact on life, property or important aquatic resources, the Corps may require the owner to modify the activity to eliminate the adverse condition or to obtain a Corps Individual Permit. In accordance with 33 CFR 325.7(a), "The District Engineer may reevaluate the circumstances and conditions of any permit, including regional permits, either on his own motion, at the request of the permittee, or a third party, or as the result of periodic progress inspections, and initiate action to modify, suspend, or revoke a permit as may be made necessary by considerations of the public interest. In the case of regional permits, this reevaluation may cover individual activities, categories of activities, or geographic areas."

28. Corps Water Releases: For projects located downstream of a Corps dam, the permittee should contact the appropriate Corps, Area Engineer Office, to obtain information on potential water releases and to provide contact information for notification of unscheduled water releases. It is recommended that no in-water work be performed during periods of high-water flow velocities. Any work performed at the project site is at the permittee's own risk.

29. State Authorization: The activity must receive state authorization. For the purpose of this requirement, any one of the following is considered as a state authorization:

a. A PADEP Chapter 105 Water Obstruction and Encroachment Permit, including PADEP approved Environmental Assessment pursuant to 25 Pa. Code § 105.15; or

b. A PADEP GP issued pursuant to 25 Pa. Code § §105.441-105.449; or

c. A PADEP approved Environmental Assessment for activities not otherwise requiring a PADEP permit pursuant to 25 Pa. Code § 105.12; or

d. A PADEP Dam Permit, including maintenance or repairs of existing authorized dams, including maintenance dredging; or

e. A PADEP Emergency Permit issued pursuant to 25 Pa. Code § 105.64; or

f. A PADEP permit for the construction of a bridge or culvert which allows for maintenance activities of bridges and culverts; or

g. A PADEP Chapter 105 Dam Safety and Encroachment Enforcement Action.

30. Other Authorizations: Additional federal, state, and/or local authorizations or approvals may be required and where applicable must be secured by the applicant, prior to initiating any discharge of dredged and/or fill material, and/or the placement of structures into waters of the United States, including jurisdictional wetlands. These approvals include, but are not limited to:

    a. A project specific 401 SWQC issued by PADEP or considered waived, consistent with Section 401 of the CWA.

       PADEP has issued 401 SWQC for activities authorized by PASPGP-6 with conditions. See General Condition 2 for conditions and for identification when a project specific 401 SWQC or a waiver thereof is required. If the permittee cannot comply with all of the conditions of the 401 SWQC previously issued for PASPGP-6, then the permittee must obtain a project specific 401 SWQC or waiver for the proposed discharge in order for the activity to be authorized by PASPGP-6. The Corps or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality; and

    b. Reporting Activities located within the designated CZM Areas. Require a CZMA consistency determination issued by PADEP or a presumption of concurrence pursuant to Section 307 of the Federal Coastal Zone Management Act.

       The District Engineer or PADEP may require additional measures to ensure that the authorized activity is consistent with state CAM requirements; and

    c. Fills within the 100-year floodplains. This activity must comply with applicable Federal Emergency Management Agency approved state or local floodplain management requirements.

31. Federal Liability: In issuing this permit and any subsequent activity verification, the federal government does not assume any liability, including but not limited to the following:

    a. Damages to permitted project or users, thereof, as a result of other permitted or unpermitted activities or from natural causes;

    b. Damages to the permitted project or uses, thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;

    c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

d. Design or construction deficiencies associated with the permitted work; and

e. Damage claims associated with any future modification, suspension, or revocation of the PASPGP-6.

32. False and Incomplete Information: The Corps may modify or rescind a previously issued project specific verification, if it determines that the original verification was issued based on false, incomplete and/or inaccurate information; or other information becomes available whereby such action is necessary to ensure compliance with other federal laws and regulations.

33. Anadromous Fish Waters: To protect anadromous fish during their migration and spawning, no work can take place in the following anadromous fish waterways listed in the table below from March 15 to June 30 unless approved in writing by the Corps. Questions on the applicability of this condition should be directed to the Corps, Philadelphia District.

Waterway	Downstream extent	Upstream extent	Upstream Latitude (N)	Upstream Longitude (E)
Delaware River in Pennsylvania (including W. Branch)	Rte. 220 Bridge	PA/NY Border	41.999448	-75.359573
Lehigh River and adjacent canals	confluence with Delaware River	500 feet upstream of the Cementon Dam	40.690275	-75.503800
Little Lehigh Creek	confluence with Lehigh River	500 feet upstream of the lowermost dam	40.596318	-75.475570
Hokendauqua Creek	confluence with Lehigh River	State Route 4014 (West Scenic Drive)	40.793273	-75.439262
Bushkill Creek	confluence with Delaware River	500 feet upstream of the lowermost dam	40.694859	-75.212406
Waterway	Downstream extent	Upstream extent	Upstream Latitude (N)	Upstream Longitude (E)
Brodhead Creek	confluence with Delaware River	500 feet upstream of the Stroudsburg Water Co. Dam	41.018667	-75.201063
Bush Kill	confluence with Delaware River	500 feet upstream of Resica Falls	41.111235	-75.095824
Lackawaxen River	confluence with Delaware River	500 feet upstream of the Woolen Mill Dam	40.984304	-75.191569
Dyberry Creek	confluence with Lackawaxen River	Jadwin Dam	41.612088	-75.263391
Darby Creek	Confluence with Delaware River	500 feet upstream of the confluence of Cobbs Creek and Darby Creek	39.907278	-75.255432

Schuylkill River	Fairmount Dam	500 feet upstream of the Bingaman St. Bridge in Reading, Pennsylvania	40.326411	-75.934417
Neshaminy Creek	Confluence with Delaware River	500 feet upstream of the lowermost dam	40.143369	-74.915828

34. Compliance Certification: Each permittee who receives a written PASPGP-6 verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. This certification should indicate if the success of any required permittee-responsible mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits. The signature of the permittee is also required to certify the completion of the activity and mitigation. The completed certification document must be submitted to the District Engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

35. Migratory Birds and Bald and Golden Eagles: The permittee is responsible for ensuring that an action authorized by PASPGP-6 complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the USFWS to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity. The permittee should contact the appropriate local office of the USFWS to determine if such authorizations are required for a particular activity. Information on the conservation of migratory birds and Bald and Golden Eagles can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

36. Migratory Bird Breeding Areas: Activities in waters of the United States, including jurisdictional wetlands, that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable. Recommendations pertaining to the conservation of migratory birds can be found at the following USFWS web site: http://www.fws.gov/northeast/pafo/

By Authority of the Secretary of the Army:

LITZ.JOHN.THOMAS.[redacted]

John T. Litz
Colonel, U.S. Army
Commander and District Engineer
Baltimore District

PARK.DAVID.CHON GWOO. [redacted] Digitally signed by [redacted]

David C. Park
Lieutenant Colonel, Corps of Engineers
District Commander
Philadelphia District

Andrew J. Short
Colonel, Corps of Engineers
District Engineer
Pittsburgh District