ORDINANCE ATTACHMENT A

SIMPLIFIED APPROACH TO STORMWATER MANAGEMENT FOR SMALL PROJECTS

Attachment A

Simplified Approach to Stormwater Management for Small Projects

Attachment A.1 –
Applicability, Submittal and Approval Requirements

Attachment A.2 –
"*Simplified Approach to Stormwater Management for Small Projects – Handbook*"

Attachment A.1

Applicability, Submittal and Approval Requirements

Borough of Phoenixville
Chester County, Pennsylvania

Applicability:

1. Small projects with less than two thousand (2,000) square feet of Regulated Impervious Surfaces (as defined in the Borough of Phoenixville Stormwater Management Ordinance) and with less than five thousand (5,000) square feet of proposed Earth Disturbance (as defined in the Borough of Phoenixville Stormwater Management Ordinance) may apply the "Simplified Approach to Stormwater Management for Small Projects" (Simplified Approach).

2. Only projects that meet the above size thresholds as specified in the Borough of Phoenixville Stormwater Management Ordinance may use this Simplified Approach and are then not required to submit a fully engineered Stormwater Management Site Plan to the Borough of Phoenixville (Borough). However, these projects are still required to address water quality and infiltration requirements as outlined in the *Simplified Approach to Stormwater Management for Small Projects – Handbook* (Handbook). This Handbook is intended to aid applicants in addressing these requirements through the installation of a properly sized underground infiltration trench.

3. Any project with more than two thousand (2,000) square feet of Regulated Impervious Surface or more than five thousand (5,000) square feet of proposed Earth Disturbance cannot apply the Simplified Approach.

4. The Applicant should first review the planned project with the Borough Engineer prior to initiating the Simplified Approach to confirm the following:

    - That the proposed project is not otherwise exempt from the stormwater management control and the engineered Stormwater Management Site Plan requirements of the Borough of Phoenixville Stormwater Management Ordinance;
    - That the proposed project is eligible to use the Simplified Approach;
    - Which components of the proposed project must be included in the calculation of "impervious surfaces (areas)"; and
    - Whether any local conditions are known to the Borough Engineer that would preclude the use of any of the techniques included in the Simplified Approach.

Submittal and Approval Requirements:

Use of the Simplified Approach requires:

1. The Applicant shall submit the following to the Borough for review and approval prior to beginning construction per the Handbook:

    - Simplified Approach – Stormwater Management Application
    - Simplified Approach – Stormwater Management Checklist
    - Simplified Approach Stormwater Management Site Plan (i.e., sketch plan)

    - A completed, signed, and notarized “Stormwater Best Management Practices (BMPs) and Conveyances Operation, Maintenance and Easement Agreement”.
2. The Applicant shall record the “Stormwater Best Management Practices (BMPs) and Conveyances Operation, Maintenance and Easement Agreement " at the Chester County Office of the Recorder of Deeds after signature by the Borough.
3. A final inspection conducted by the Borough after completion of construction.

Attachment A.2

Simplified Approach to Stormwater Management for Small Projects - Handbook

Simplified Approach to Stormwater Management for Small Projects Handbook

Prepared for the

Borough of Phoenixville

as part of the County-wide Act 167 Stormwater Management Plan for Chester County, PA.

Revised Date: 11/17/2022

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1.0 Introduction

Pennsylvania's Storm Water Management Act (PA Act 167) was enacted in 1978 in response to the impacts of the accelerated stormwater runoff resulting from land development in the state. PA Act 167 requires counties to prepare and adopt watershed-based stormwater management plans. Municipalities are also required to adopt and implement ordinances to regulate development consistent with these plans. The purpose of these regulations is to protect public health, safety and general welfare, property values, and water quality and quantity by implementing drainage and Stormwater Management practices, criteria, and provisions for land development, construction, and Earth Disturbance Activities.

PA Act 167 gave Pennsylvania Municipalities the power to regulate activities affecting flooding, streambank erosion, stormwater runoff, and surface and groundwater quality and quantity. The Borough of Phoenixville Stormwater Management Ordinance (Ordinance) was prepared to comply with the provisions included in PA Act 167. This Ordinance also includes provisions allowing this Simplified Approach to Stormwater Management for Small Projects (Simplified Approach) to be used for small projects.

This Handbook has been developed to allow homeowners or applicants for small projects to comply with stormwater management requirements of the Stormwater Management Ordinance of the Borough of Phoenixville (Borough), including sizing, designing, locating, and installing on-lot measures, referred to herein as "Best Management Practices" (BMPs). Only projects that meet the size thresholds specified in the Borough of Phoenixville Stormwater Management Ordinance may use the Simplified Approach and are then not required to submit a formal fully engineered Stormwater Management Site plan to the Borough. However, these projects are still required to address certain requirements, such as stormwater quality, infiltration, rate, and volume management goals as outlined in this Handbook. This Handbook is intended to aid applicants in addressing these requirements through the installation of a properly sized underground infiltration trench.

The purpose of requiring effective stormwater management from small projects is to help reduce stormwater runoff in the community, to maintain groundwater recharge, to prevent degradation of surface and groundwater quality, and to otherwise protect water resources and for public safety.

2.0 Project Eligibility for the Simplified Approach

To be eligible for the Simplified Approach, projects must meet the threshold, roof area, and BMP type requirements described below. It is recommended that prior to submission of an application utilizing the Simplified Approach, a meeting should be scheduled with the Borough Engineer to confirm eligibility and review the application process. It shall be noted that the plan approval shall not be considered at this meeting.

Threshold

Small projects with five hundred (500) to two thousand (2,000) square feet of Regulated Impervious Surface (as defined in the Borough of Phoenixville Stormwater Management Ordinance) and/or with less than five thousand (5,000) square feet of proposed Earth Disturbance (as defined in the Borough of Phoenixville Stormwater Management Ordinance) may apply the Simplified Approach. Regulated Impervious Surface includes Proposed Impervious Surface as part of a current proposed project and all existing Impervious Surfaces installed after 9/9/2014.

Only projects that meet the above size thresholds as specified may use the Simplified Approach and are then not required to submit a formal Stormwater Management Site Plan to the Borough. However, these projects are still required to address water quality and infiltration requirements as outlined in this Attachment A.

Any project with more than two thousand (2,000) square feet of Regulated Impervious Surface or more than five thousand (5,000) square feet of proposed Earth Disturbance cannot apply the Simplified Approach.

Starting on 9/9/2014, projects and Impervious Surfaces are measured cumulatively. If an Applicant completes a project this year that qualifies for the Simplified Approach, but then proposes to complete a second project next year, and the total Impervious Surface for the two projects exceeds the applicable threshold for the Simplified Approach, a fully engineered Stormwater Management Plan for the entirety of the two projects will be required.

Roof Area

For a project to be considered for utilizing the Simplified Approach, sufficient roof area must be available, either existing or proposed, so that the roof area being conveyed to the stormwater BMP (i.e., underground infiltration trench) is of equivalent or greater area than the Regulated Impervious Surface proposed, including existing Impervious Surface(s) installed after 9/9/2014. Impervious Surface is defined in §23-202 of the Borough of Phoenixville Stormwater Management Ordinance. Plans proposing capturing and conveyance of overland flow will not be considered. Sizing of the bed shall be in accordance with the Infiltration Trench Notes (Sheet 3A and/or 3B of 4) of the Simplified Approach Stormwater Management Plan Packet (Section 5.0 below) and shall be based upon the actual roof area being conveyed to the bed, not the Regulated Impervious Surface.

BMP Type

The only stormwater BMP allowable under the Simplified Approach is the underground infiltration trench referenced in the Simplified Approach Stormwater Management Plan Application Packet. Refer to Section 5.0 below for the application packet and Section 6.0 for Example Simplified Approach Stormwater Management Site Plans. BMPs other than specifically referenced above shall require fully engineered plans prepared in accordance with the provisions of the stormwater ordinance.

3.0 Simplified Approach Design Procedure

All Regulated Impervious Surfaces, which include Proposed Impervious Surfaces and existing Impervious Surfaces constructed after 9/9/2014 (as defined in §23-202) must be included in the

determination of the amount of Proposed Impervious Surfaces and the size of proposed underground infiltration trench needed to control stormwater. Proposed Impervious Surfaces on an individual residential lot may include, but are not limited to: roof area, pavement, sidewalks, driveways, patios, porches, parking areas, decks, or pools. Refer to the definitions provided in Part 2 of the Ordinance and contact the Borough Engineer to confirm what features of the proposed project must be included in the calculation of Regulated Impervious Surface area.

Sufficient roof area shall be available and diverted via downspout(s) to the proposed infiltration trench(es). The downspouts shall have appropriate measures to prevent clogging by unwanted debris (e.g., silt, leaves, and vegetation). Such measures shall include but are not limited to leaf traps, gutter guards, and cleanouts. Alternative designs, or alternative stormwater structures, shall be reviewed by the Borough Engineer and shall be subject to the requirements of the Borough of Phoenixville Stormwater Management Ordinance.

Below are the steps that must be undertaken to meet the Ordinance requirements. The size and description of the proposed construction as well as important aspects related to the design of the BMP(s) must be documented in the Simplified Approach - Stormwater Management Worksheet. All individuals planning on using the Simplified Approach are encouraged to review the planned project with the Borough Engineer prior to initiating the Simplified Approach to confirm the following, as the Borough Engineer will be responsible for determining eligibility to use the Simplified Approach:

1. That the proposed project is not otherwise exempt from the stormwater management control and fully engineered Stormwater Management Site Plan requirements of the Borough of Phoenixville Stormwater Management Ordinance;
2. That the proposed project size is within the range eligible to use the Simplified Approach;
3. That sufficient roof area is available to manage and is equal to or greater than the Regulated Impervious Surface;
4. Which components of the proposed project must be included in the calculation of "Impervious Surfaces"; and
5. Whether any local conditions are known to the Borough Engineer that would preclude the use of any of the techniques included in the Simplified Approach.

STEP 1 – PREPARE THE SIMPLIFIED APPROACH STORMWATER MANAGEMENT SITE PLAN THAT INCLUDES:

1. Name and address of the owner of the property.
2. Name and address of the individual preparing the plan (if different).
3. Date of plan preparation.
4. North arrow.
5. Location of all existing features within 50 feet of the property, including (if present):
    - Buildings;
    - Driveways;
    - Roads;
    - Easements;
    - Septic Systems;

- Streams;
- Wetlands;
- Floodplains; and
- Existing Stormwater Facilities.

6. Show water supply wells within 50 feet of the proposed facility or add a note that no wells are present within 50 feet of the proposed facility.
7. Location and approximate size of the roof area to be captured and diverted to the proposed BMP.
8. Location and approximate size in square feet of proposed:
   a. Structures;
   b. Driveways; and
   c. Other Impervious Surfaces.
9. Location, orientation, and dimensions of the proposed underground infiltration trench(es). Length, width, and depth must be included on the plan.
10. Distance from the proposed underground infiltration trench(es) to any existing surface water features, such as: streams, lakes, ponds, wetlands, or other natural waterbodies (must be greater than 50 feet from surface water features or outside of an existing legally prescribed buffer (i.e., deed, covenants, easement, etc.), whichever is greater).
11. Distance from the proposed underground infiltration trench(es) to any existing septic system, public sewer line, or service lateral (must be greater than 50 feet unless otherwise approved by Borough Engineer).
12. Distance from the proposed underground infiltration trench(es) to any existing wells or water service lines (must be greater than 50 feet unless otherwise approved by Municipal Engineer).
13. Distance from the proposed underground infiltration trench(es) to nearest property line (must be > 5 feet).
14. Distance from the proposed underground infiltration trench(es) to all buildings and features with subgrade elements (e.g., basements, foundation walls, etc.) must be > 25 feet, unless otherwise approved by the Borough Engineer.
15. Show distance from at least two existing fixed features to the proposed underground infiltration trench(es). Fixed features include, but are not limited to, corners of existing buildings, driveways, septic system cleanout pipes, and mailboxes.
16. PA ONE CALL (8-1-1 OR 1-800-242-1776) Identification Number received by calling the PA One Call system.

STEP 2 – DETERMINE PROPOSED IMPERVIOUS SURFACES:

1. Determine the total area of all Proposed Impervious Surfaces that will need to drain to one or more infiltration trench(es).
2. Determine the total area of Earth Disturbance needed to complete the project and install the infiltration trench(es).
3. Determine locations where the infiltration trench(es) need to be placed so runoff from all the Proposed Impervious Surfaces can be captured.

Example:

Garage Roof (Front): 33 feet (ft) x 25 ft	=	825 square feet (sf)
Driveway: 10 ft x 26 ft	=	260 sf
Total Proposed Impervious Surface: 825 sf + 260 sf	=	1,085 sf
Total proposed Earth Disturbance area:	=	2,500 square feet (estimated)

STEP 3 – DETERMINE SIZE OF THE UNDERGROUND INFILTRATION TRENCH:

1. Select the appropriate value of Proposed Impervious Surface in the first column of the table below.
2. Select the width of the trench(es) to be utilized to determine the required length of the trench(es).
3. When appropriate, and when approved by the Borough Engineer prior to submission, minimum trench length can be achieved through the use of more than one trench.

Note: Trench(es) to be constructed to dimensions indicated below. Modifications of the dimensions are not permitted if utilizing the Simplified Approach. This table is based on an overall trench depth of at least four feet, containing a minimum cover of one foot of soil cover, and three feet of stone with filter fabric, installed in accordance with the diagram included with the Simplified Approach Stormwater Management Plan Application Packet. Infiltration testing is not required when using the Simplified Approach.

Table 1.1 – Underground Infiltration Trench Sizing Table for <1,000 ft² of Regulated Impervious Surface

Regulated Impervious Surface (square feet)	4-foot wide Trench	5-foot wide Trench	6-foot wide Trench	7-foot wide Trench	8-foot wide Trench
	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)
451-500	23.00	18.25	15.25	13.25	11.50
501-550	25.25	20.25	16.75	14.50	12.75
551-600	27.50	22.00	18.25	15.75	13.75
601-650	29.75	23.75	20.00	17.00	15.00
651-700	32.00	25.75	21.50	18.25	16.00
701-750	34.25	27.50	23.00	19.75	17.25
751-800	36.50	29.25	24.50	21.00	18.25
801-850	39.00	31.25	26.00	22.25	19.50
851-900	41.25	33.00	27.50	23.50	20.75
901-950	43.50	34.75	29.00	25.00	21.75
951-999	45.75	36.50	30.50	26.25	23.00

Table 1.2 – Underground Infiltration Trench Sizing Table for 1,000-2,000 ft^2 of Regulated Impervious Surface

Regulated Impervious Surface (square feet)	4-foot wide Trench	5-foot wide Trench	6-foot wide Trench	7-foot wide Trench	8-foot wide Trench
	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)	Length of trench (feet)
1,000	45.75	36.50	30.50	26.25	23.00
1,001 to 1,050	46.75	37.50	31.25	26.75	23.50
1,051 to 1,100	48.00	38.50	32.00	27.50	24.00
1,101 to 1,150	49.25	39.25	32.75	28.25	24.75
1,151 to 1,200	50.25	40.25	33.50	28.75	25.25
1,201 to 1,250	54.75	44.00	36.50	31.50	27.50
1,251 to 1,300	59.50	47.50	39.75	34.00	29.75
1,301 to 1,350	61.75	49.25	41.25	35.25	71.00
1,351 to 1,400	64.00	51.25	42.75	36.50	32.00
1,401 to 1,450	66.25	53.00	44.25	38.00	33.25
1,451 to 1,500	68.50	54.75	45.75	39.25	34.25
1,501 to 1,550	70.75	56.75	47.25	40.50	35.50
1,551 to 1,600	73.00	58.50	48.75	41.75	36.50
1,601 to 1,650	75.25	60.25	50.25	43.00	37.75
1,651 to 1,700	77.75	62.25	51.75	44.50	39.00
1,701 to 1,750	80.00	64.00	53.25	45.75	40.00
1,751 to 1,800	82.25	65.75	54.75	47.00	41.25
1,801 to 1,850	84.50	67.50	56.25	48.25	42.25
1,851 to 1,900	86.75	69.50	58.00	49.75	43.50
1,901 to 1,950	89.00	71.25	59.50	51.00	44.50
1,951 to 1,999	91.25	73.00	61.00	52.75	45.75

STEP 4 – SUBMISSION TO MUNICIPALITY:

1. Prepare the Simplified Approach Stormwater Management Site Plan, which consists of 4 sheets:
   a. **Simplified Site Plan (1 of 4)**
   b. **Infiltration Trench Detail (2 of 4)**
   c. **Infiltration Trench Notes (3A and/or 3B of 4)**
   d. **Infiltration Trench Operation & Maintenance Notes (4 of 4)**
2. Complete the **Simplified Approach – Stormwater Management Worksheet**.
3. Complete the **Simplified Approach – Stormwater Management Checklist** to ensure all required information is completed.
4. Submit the completed forms and plan to the Borough for review and approval prior to beginning construction.
5. After the Borough has approved the submission, a signed Stormwater Best Management Practices (BMPs) and Conveyances Operation, Maintenance and Easement Agreement (SWM O&M Agreement) will be provided to the Applicant.

6. Record the SWM O&M Agreement at the County's Office of Recorder of Deeds.
7. Construction can begin only after the Borough has issued its approval of the proposed project to the applicant and the SWM O&M Agreement has been recorded.
8. Notify the Borough two (2) business days prior to the start of any construction and schedule any needed inspections.
9. If the Applicant is using a contractor to construct the project, the approved application including the worksheet and plan must be shared with the contractor to ensure the underground infiltration trench(es) are properly installed.

Note: Property owners building underground infiltration trenches per the Simplified Approach will need to record a SWM O&M Agreement at the Chester County Recorder of Deeds. The SWM O&M Agreement is prepared by Borough staff (or the Borough staff may require that the Applicant or its consulting engineer prepare the SWM O&M Agreement subject to review by the Borough staff or the Borough Engineer) using the template shown in Attachment F. A SWM O&M Agreement is needed to ensure access, inspection, maintenance, operation, repair, and permanent protection for these stormwater management facilities.

4.0 Frequently Asked Questions

Frequently Asked Questions (FAQs) regarding the Simplified Approach and Stormwater Management are located below.

4.1 What is Stormwater Management?

Stormwater Management is the practice of managing surface water runoff from precipitation events. Stormwater Management is a way to reduce the impacts of decreasing infiltration that results from altering the land from natural conditions. The goal of stormwater management is to reduce the volume of stormwater runoff through practices that capture, infiltrate, detain, or evaporate stormwater. These practices help to improve water quality, restore groundwater recharge, and improve stream habitat. Examples of residential Stormwater Management are rain gardens, rain barrels, porous pavers, drywells, and infiltration trenches.

4.2 Why do I have to do Stormwater Management for my small project?

The new Borough regulations, derived from Federal and State mandates, require that all property owners be responsible for managing stormwater runoff from Impervious Surfaces. All projects requiring a Zoning or Building Permit will be reviewed by the Borough for stormwater considerations.

4.3 How does the Municipality determine if a stormwater permit is required?

Starting on 9/9/2014, projects and Impervious Surfaces were measured cumulatively. If the project, or combination of projects since 9/9/2014, will result in five hundred (500) square feet of total Regulated Impervious Surface, including Proposed Impervious Surface(s) and existing Impervious Surface(s) installed after the above referenced date, or disturbs five thousand (5,000) square feet, a stormwater permit and fully engineered Stormwater Management Plan will be required. Impervious Surface is

defined in §23-202 of the Borough of Phoenixville Stormwater Management Ordinance.

4.4 Is the square footage of the BMP included in the Earth Disturbance calculation?

Yes. All disturbed soils are to be included in the calculation for Earth Disturbance.

4.5 What if I am removing and replacing existing Impervious Surface, such as a driveway or shed?

The net change in the land cover is what will be considered for the permit. The replacement in the exact footprint replacement of an existing one- or two-family dwelling unit or existing Impervious Surface such as patios, driveways, garages, sidewalks, decks, or pools that are accessory to an existing one- or two-family dwelling unit in the exact footprint of the existing Impervious Surface are exempt from the requirements of §§ 23-301, 23-304, 23-305, 23-306, 23-307, 23-308, 23-309, and 23-310, and Parts 4, 5, 6, and 7 of the Borough of Phoenixville Stormwater Management Ordinance.

4.6 What is the penalty if I do not apply for or follow the application process or maintenance obligations?

The Borough has legal enforcement action defined in the Borough's Code which may include the right to deny occupancy permits and assess fines as needed for enforcement.

4.7 Are professional engineering services necessary to meet these requirements?

This Attachment has been developed to assist the landowner in meeting the water quality and groundwater recharge goals of the Borough of Phoenixville Stormwater Management Ordinance. If the guidelines are followed, the landowner may not be required to utilize professional engineering services to comply with these water quality and groundwater recharge goals.

4.8 What needs to be submitted to the Borough?

Even though an engineered Stormwater Management Plan is not required for individual lot owners opting for the Simplified Approach, a brief description of the proposed underground infiltration trench, including types of material to be used, total Impervious Surfaces and volume calculations, and a Simplified Approach Stormwater Management Site Plan shall be submitted to the Borough prior to construction. The following information shall be submitted to the Borough: (1) Simplified Approach – Stormwater Management Worksheet; and (2) Simplified Approach Stormwater Management Site Plan, which consists of 4 sheets.

4.9 What is an underground infiltration trench?

An underground infiltration trench is a rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Infiltration testing is recommended

to ensure soil is capable of infiltrating stormwater. Underground infiltration trenches shall incorporate or make provisions for the following elements:

1. Shall be constructed after all Earth Disturbance associated with the project or site is stabilized to avoid clogging.
2. Perforated pipe is to be set level.
3. The width is limited to between four feet to eight feet with a fixed stone depth of three feet.
4. Trench(es) shall be wrapped in nonwoven geotextile (top, bottom, and sides).
5. There shall be a positive overflow that allows stormwater that cannot be stored or infiltrated to be discharged into a nearby vegetated area (clean-out or pop-up emitter).
6. It is recommended that there be a two-foot clearance above the regularly occurring seasonal high-water table and have a minimum depth to bedrock of two feet.
7. The underground infiltration trench shall be at least 25 feet from buildings, unless otherwise approved by the Borough Engineer, 5 feet from property lines, 50 feet from individual water supply wells, and 100 feet from community or Borough water supply wells. If no well is present within 50 feet of the underground infiltration trench, a note stating such must be put on the plan.
8. The underground infiltration trench shall be at least 50 feet from any septic system absorption area and 50 feet from community or Borough Sewer lines and laterals, or as otherwise approved by the Borough Engineer.
9. The underground infiltration trench shall not be located near hotspots which are areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants that are higher than those that are typically found in stormwater.
10. The underground infiltration trench shall be located a minimum of 10 feet from subsurface structures such as building foundations and basements so that it does not threaten their structural integrity.
11. Infiltration areas must be protected from compaction by heavy equipment during and after construction. The ratio of the collected area to the footprint of the facility shall be as small as possible with a ratio of less than 5:1 preferred.
12. Where roof drains are designed to discharge to the underground infiltration trench(es), the roof drains shall have appropriate measures to prevent clogging by unwanted debris (for example, silt, leaves and vegetation). Such measures may include but are not limited to leaf traps, gutter guards, or cleanouts.

4.10 How is an underground infiltration trench constructed?

Refer to the standard construction sequence for an underground infiltration trench as required by the Simplified Approach.

1. Contact PA ONE CALL 8-1-1 or 1-800-242-1776.
2. Protect infiltration areas from compaction by heavy equipment during and after construction.
3. Silt sock or silt fence should be installed upslope of the proposed infiltration trench and downslope of all proposed Earth Disturbance and shown on the Plan.

4. Construction of the underground infiltration trench shall only be started after all Earth Disturbance associated with the project or site is stabilized to avoid clogging.
5. Excavate the underground infiltration trench to a minimum depth of four feet. The excavated trench bottom must have uniform, level, uncompacted subgrade free from rocks and debris. Scarify the bottom of the trench, so not to compact the subgrade.
6. Place nonwoven geotextile along all the sides of the trench. Where separate pieces of geotextile meet, they shall overlap by a minimum of 18 inches. Fold back and secure excess geotextile during stone placement.
7. Place clean stone (e.g., PennDOT No. 2B, AASHTO #57, or three-quarter-inch clean stone) in the trench.
8. Install the continuously perforated pipe and cleanouts within the trench.
9. If a downspout will be connected to the system, install the piping from the downspout to the perforated trench piping. Install appropriate measures to prevent clogging by unwanted debris such as leaf traps, gutter guards, and cleanouts.
10. Backfill with clean stone to establish an overall stone depth of three feet. Fold and secure the nonwoven geotextile over the top of underground infiltration trench with an eighteen-inch overlap.
11. Place a minimum of 12 inches of topsoil over geotextile. Grading shall direct surface runoff toward the center of the trench (The Borough will consider surface materials on a project-by-project basis).
12. Stabilize the topsoil with seed and straw mulch.

4.11 What are the maintenance requirements for an underground infiltration trench?

Vegetation along the surface of an underground infiltration trench shall be maintained in good condition, and any bare spots shall be revegetated as soon as possible. Vehicles may not be parked or driven on any underground infiltration trench, and care shall be taken to avoid excessive compaction by mowers. Any debris such as leaves blocking flow from reaching an underground infiltration trench shall be routinely moved.

4.12 What if my roof area is larger than the Regulated Impervious Surface I am proposing?

In order to utilize the Simplified Approach, the Applicant must size the proposed infiltration trench for the amount of roof area directed into it, even if it is larger than the amount of Regulated Impervious Surface being proposed. This additional roof area may be "credited" toward future Proposed Impervious Surface. If the Applicant were to propose additional Impervious Surface in the future and the total Regulated Impervious Surface is still less than the roof area that the infiltration trench was sized for, additional stormwater management requirements may not be applicable if all other requirements of the Ordinance are met.

5.0 Simplified Approach Stormwater Management Plan Application Packet

The pages below include the following required elements of a Simplified Approach Stormwater Management Plan Application Packet:

1. Simplified Approach – Stormwater Management Worksheet
2. Simplified Approach – Stormwater Management Checklist
3. Simplified Site Plan (1 of 4)
4. Infiltration Trench Detail (2 of 4)
5. Infiltration Trench Notes (3A and/or 3B of 4)
6. Infiltration Trench Operation and Maintenance Notes (4 of 4)
7. Stormwater Best Management Practices (BMPs) and Conveyances Operation, Maintenance and Easement Agreement*

*Contact the Borough of Phoenixville for the current template agreement.

Simplified Approach – Stormwater Management Worksheet

Name of Property Owner(s):		Date:
Name of Applicant (If different than Owner)*: *If Applicant is different than Owner, then proof of written permission of Owner is required.		
Contact Phone #:	Email Address:	
Address of Project:		
Description of Project:		
Distance from Earth Disturbance to nearest surface water feature (stream, pond, wetland, etc.): □ 50 feet or less □ More than 50 feet		
REGULATED IMPERVIOUS SURFACES		
Proposed Impervious Surface (New, Add'l & Replacement)	Dimensions (length x width)	Area (square feet)
A. Total Proposed Impervious Surface Area (square feet)*: **If less than 500 feet^2, Stormwater Management is not required. If more than 2,000 feet^2, the Simplified Approach cannot be used.*		
B. Existing impervious surface area installed after 9/9/2014 (square feet):		
C. Regulated Impervious Surface Area (A + B = C) (square feet):		
D. Total Proposed Earth Disturbance Area (square feet)**: ***If more than 5,000 feet^2, the Simplified Approach cannot be used.*		
PROPOSED UNDERGROUND INFILTRATION TRENCH SIZING		
Proposed Impervious Surface to Infiltration Trench (square feet)	Proposed Dimensions (length x width)	
1.		
2.		
Does the project involve new roof area? □ Yes □ No If yes, the downspout must be connected to the proposed Underground Infiltration Trench and must have measures to prevent clogging by unwanted debris. Indicate the measure proposed: □ Leaf trap □ Gutter guards □ Cleanout □ Other: _____		

Signature: _____ Date: _____
Printed Name: _____

Simplified Approach – Stormwater Management Checklist

Complete the checklist below to verify all required information is shown on the plan:

Yes	No	Not Applicable	Required Information
☐	☐	☐	Name and address of the owner of the property.
☐	☐	☐	Name and address of individual preparing the plan (if different).
☐	☐	☐	Date of plan preparation.
☐	☐	☐	North arrow.
☐	☐	☐	Location of all existing features within 50 feet of the property, including (if present): • Buildings; • Driveways; • Roads; • Water Lines/Wells (or a note that no wells are present within 50 feet of the proposed facility); • Septic Systems/Sewer Mains and Laterals; • Streams, Wetlands, and Floodplains • Existing Stormwater Facilities; and • Easements.
☐	☐	☐	Location and approximate size in square feet of existing roof area to be captured and diverted to the BMP.
☐	☐	☐	Location and approximate size in square feet of proposed: • Structures; • Driveways; and
☐	☐	☐	Location, orientation, and dimensions of the proposed Underground Infiltration Trench(es). Length and width must be included on the plan.
☐	☐	☐	Distance from the proposed Underground Infiltration Trench(es) to any existing surface water features, such as: streams, lakes, ponds, wetlands, or other natural waterbodies. Must be >50 feet from surface water features or outside of an existing legally described buffer (i.e., deed, covenants, easement, etc.) whichever is greater. Contact the Borough if this is not possible.
☐	☐	☐	Distance from the proposed Underground Infiltration Trench(es) to any existing septic system, public sewer line, or lateral.
☐	☐	☐	Distance from the proposed Underground Infiltration Trench(es) to any existing wells or waterlines.
☐	☐	☐	Distance from the proposed Underground Infiltration Trench(es) to any existing wells or waterlines.
☐	☐	☐	Show distance from at least two existing fixed features (e.g., house, shed, driveway) to the proposed Underground Infiltration Trench(es).
☐	☐	☐	PA One Call Serial Number (Dial 8-1-1 or 1-800-242-1776) to receive.

NORTH ARROW

DATE

UNDERGROUND SERVICE ALERT CALL: TOLL FREE 1-800-242-1776 THREE WORKING DAYS BEFORE YOU DIG

PROPERTY OWNER
NAME:
ADDRESS:

PLAN PREPARER
NAME:
ADDRESS:

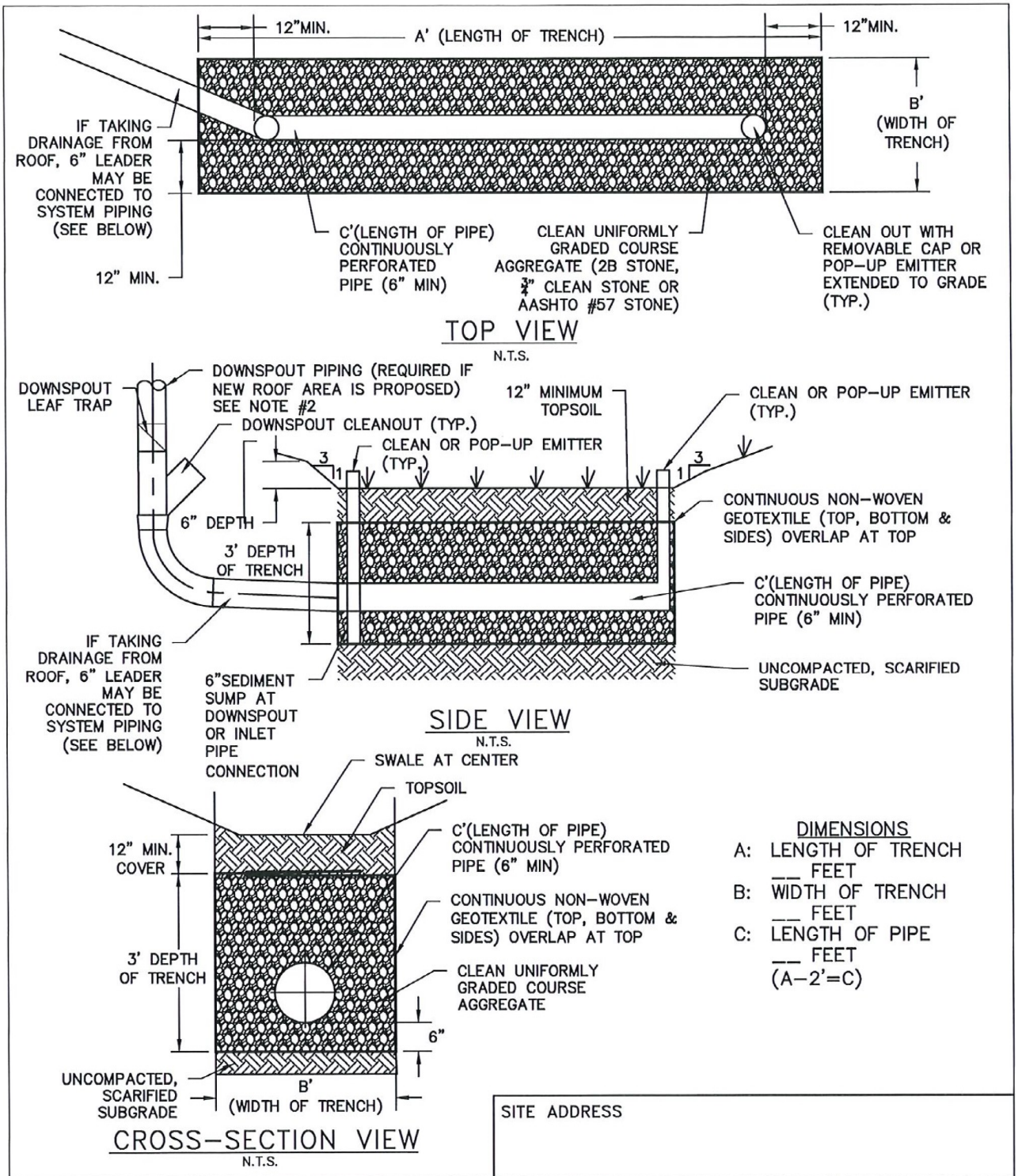
FOR USE BY MUNICIPAL ENGINEER

CHESTER COUNTY PENNSYLVANIA

SIMPLIFIED SITE PLAN

SHEET NO.

1 OF 4


12"MIN.
A' (LENGTH OF TRENCH)
12"MIN.
B' (WIDTH OF TRENCH)
IF TAKING DRAINAGE FROM ROOF, 6" LEADER MAY BE CONNECTED TO SYSTEM PIPING (SEE BELOW)
12" MIN.
C'(LENGTH OF PIPE) CONTINUOUSLY PERFORATED PIPE (6" MIN)
CLEAN UNIFORMLY GRADED COURSE AGGREGATE (2B STONE, ¾" CLEAN STONE OR AASHTO #57 STONE)
CLEAN OUT WITH REMOVABLE CAP OR POP-UP EMITTER EXTENDED TO GRADE (TYP.)
TOP VIEW
N.T.S.
DOWNSPOUT LEAF TRAP
DOWNSPOUT PIPING (REQUIRED IF NEW ROOF AREA IS PROPOSED) SEE NOTE #2
DOWNSPOUT CLEANOUT (TYP.)
12" MINIMUM TOPSOIL
CLEAN OR POP-UP EMITTER (TYP.)
CLEAN OR POP-UP EMITTER (TYP.)
3
1
3
1
6" DEPTH
3' DEPTH OF TRENCH
CONTINUOUS NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES) OVERLAP AT TOP
C'(LENGTH OF PIPE) CONTINUOUSLY PERFORATED PIPE (6" MIN)
IF TAKING DRAINAGE FROM ROOF, 6" LEADER MAY BE CONNECTED TO SYSTEM PIPING (SEE BELOW)
6"SEDIMENT SUMP AT DOWNSPOUT OR INLET PIPE CONNECTION
UNCOMPACTED, SCARIFIED SUBGRADE
SIDE VIEW
N.T.S.
SWALE AT CENTER
TOPSOIL
12" MIN. COVER
C'(LENGTH OF PIPE) CONTINUOUSLY PERFORATED PIPE (6" MIN)
CONTINUOUS NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES) OVERLAP AT TOP
3' DEPTH OF TRENCH
CLEAN UNIFORMLY GRADED COURSE AGGREGATE
6"
UNCOMPACTED, SCARIFIED SUBGRADE
B' (WIDTH OF TRENCH)
CROSS-SECTION VIEW
N.T.S.
DIMENSIONS
A: LENGTH OF TRENCH __ FEET
B: WIDTH OF TRENCH __ FEET
C: LENGTH OF PIPE __ FEET (A-2'=C)
SITE ADDRESS
DATE:
SCALE: NOT TO SCALE
REMINGTON & VERNICK ENGINEERS
Croton Road Corporate Center 555 Croton Road, Suite 401 King of Prussia, PA 19406
(610) 940-1050, FAX (610) 940-1161
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CHESTER COUNTY PENNSYLVANIA
INFILTRATION TRENCH DETAIL
SHEET NO.
2 OF 4

NOTES

§345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

§345-306.M: WHERE SEDIMENT TRANSPORT IN THE STORMWATER RUNOFF IS ANTICIPATED TO REACH THE INFILTRATION SYSTEM, APPROPRIATE PERMANENT MEASURES TO PREVENT OR COLLECT SEDIMENT SHALL BE INSTALLED PRIOR TO DISCHARGE TO THE INFILTRATION SYSTEM.

§345-306.N: WHERE ROOF DRAINS ARE DESIGNED TO DISCHARGE TO INFILTRATION PRACTICES, THEY SHALL HAVE APPROPRIATE MEASURES TO PREVENT CLOGGING BY UNWANTED DEBRIS (FOR EXAMPLE, SILT, LEAVES AND VEGETATION). SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO LEAF TRAPS, GUTTER GUARDS AND CLEANOUTS.

§345-306.Q: THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF ALL INFILTRATION TRENCHES:

(1) EXCAVATION FOR THE INFILTRATION TRENCH SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE INFILTRATION TRENCH.
(2) THE BOTTOM OF THE INFILTRATION TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
(3) ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
(4) THE TOPS AND SIDES OF ALL INFILTRATION TRENCH SHALL BE COVERED WITH DRAINAGE FABRIC. FABRIC SHALL BE NON-WOVEN FABRIC ACCEPTABLE TO THE TOWNSHIP ENGINEER.
(5) STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE SEEPAGE BED/TRENCH OR LIKE FACILITY AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED IN ALL FACILITIES.
(6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

TRENCH LENGTH (< 1000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

IMPERVIOUS SURFACE (sq ft)	4' WIDE TRENCH LENGTH OF TRENCH (ft)	5' WIDE TRENCH LENGTH OF TRENCH (ft)	6' WIDE TRENCH LENGTH OF TRENCH (ft)	7' WIDE TRENCH LENGTH OF TRENCH (ft)	8' WIDE TRENCH LENGTH OF TRENCH (ft)
451-500	23.00	18.25	15.25	13.25	11.50
501-550	25.25	20.25	16.75	14.50	12.75
551-600	27.50	22.00	18.25	15.75	13.75
601-650	29.75	23.75	20.00	17.00	15.00
651-700	32.00	25.75	21.50	18.25	16.00
701-750	34.25	27.50	23.00	19.75	17.25
751-800	36.50	29.25	24.50	21.00	18.25
801-850	39.00	31.25	26.00	22.25	19.50
851-900	41.25	33.00	27.50	23.50	20.75
901-950	43.50	34.75	29.00	25.00	21.75
951-999	45.75	36.50	30.50	26.25	23.00

* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE DIFFERENCE BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT, 2-YEAR FREQUENCY, 24-HOUR DURATION RAINFALL RUNOFF VOLUME.
* TRENCH SHOULD BE SIZED BASED ON SQUARE FEET OF ROOF AREA DIRECTED TO THE PROPOSED TRENCH, WHICH MAY NOT EQUAL THE REGULATED IMPERVIOUS SURFACE PROPOSED.

SITE ADDRESS

DATE:

SCALE: NOT TO SCALE

RVE 1961
REMINGTON & VERNICK ENGINEERS
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CHESTER COUNTY PENNSYLVANIA

INFILTRATION TRENCH NOTES

SHEET NO. 3A OF 4

NOTES

§345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

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(2) THE BOTTOM OF THE INFILTRATION TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
(3) ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
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(5) STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE SEEPAGE BED/TRENCH OR LIKE FACILITY AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED IN ALL FACILITIES.
(6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

TRENCH LENGTH (1000-2000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

IMPERVIOUS SURFACE (sq ft)	4' WIDE TRENCH LENGTH OF TRENCH(ft)	5' WIDE TRENCH LENGTH OF TRENCH(ft)	6' WIDE TRENCH LENGTH OF TRENCH(ft)	7' WIDE TRENCH LENGTH OF TRENCH(ft)	8' WIDE TRENCH LENGTH OF TRENCH(ft)
1000	45.75	36.50	30.50	26.25	23.00
1001-1050	46.75	37.50	31.25	26.75	23.50
1050-1100	48.00	38.50	32.00	27.50	24.00
1100-1150	49.25	39.25	32.75	28.25	24.75
1151-1200	50.25	40.25	33.50	28.75	25.25
1201-1250	54.75	44.00	36.50	31.50	27.50
1250-1300	59.50	47.50	39.75	34.00	29.75
1301-1350	61.75	49.25	41.25	35.25	31.00
1351-1400	64.00	51.25	42.75	36.50	32.00
1401-1450	66.25	53.00	44.25	38.00	33.25
1451-1500	68.50	54.75	45.75	39.25	34.25
1501-1550	70.75	56.75	47.25	40.50	35.50
1551-1600	73.00	58.50	48.75	41.75	36.50
1601-1650	75.25	60.25	50.25	43.00	37.75
1651-1700	77.75	62.25	51.75	44.50	39.00
1701-1750	80.00	64.00	53.25	45.75	40.00
1751-1800	82.25	65.75	54.75	47.00	41.25
1801-1850	84.50	67.50	56.25	48.25	42.25
1851-1900	86.75	69.50	58.00	49.75	43.50
1901-1950	89.00	71.25	59.50	51.00	44.50
1951-1999	91.25	73.00	61.00	52.75	45.75

* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE DIFFERENCE BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT, 2-YEAR FREQUENCY, 24-*HOUR DURATION RAINFALL RUNOFF VOLUME
* TRENCH SHOULD BE SIZED BASED ON SQUARE FEET OF ROOF AREA DIRECTED TO THE PROPOSED TRENCH, WHICH MAY NOT EQUAL THE REGULATED IMPERVIOUS SURFACE PROPOSED.

SITE ADDRESS

DATE:

SCALE: NOT TO SCALE

RVE 1961
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CHESTER COUNTY PENNSYLVANIA

INFILTRATION TRENCH NOTES

SHEET NO. 3B OF 4

STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PLAN

THE PROPERTY OWNER WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF ALL STORMWATER BEST MANAGEMENT PRACTICES AND CONVEYANCE FACILITIES. THE FACILITIES WILL INCLUDE THE INFILTRATION TRENCH ON THE PROPERTY AS WELL AS ANY YARD OR ROOF DRAINS, PIPING, POP-UP EMMITERS OR CLEAN-OUTS SHOWN ON THIS PLAN.

MAINTENANCE AND OPERATION WILL BE AS FOLLOWS:

1. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE INSPECTED ANNUALLY OR AS NEEDED FOLLOWING SIGNIFICANT PRECIPITATION EVENTS TO ASCERTAIN IF ANY SEDIMENT IS ENTERING THE FACILITIES. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE CLEANED IF NECESSARY. CLEANING WILL CONSIST OF REMOVING THE ACCUMULATED SILT, DEBRIS OR SEDIMENT.

2. THE OVERLYING VEGETATION ON THE INFILTRATION TRENCH SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS RE-VEGETATED AS SOON AS POSSIBLE.

3. VEHICULAR ACCESS ON THE INFILTRATION TRENCH SHOULD BE PROHIBITED, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.

4. REPAIR ALL DAMAGED PIPING, CLEAN-OUTS, AND POP-UP EMITTERS PROMPTLY TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. SPECIAL CARE SHOULD BE TAKEN TO AVOID DAMAGING EXPOSED ELEMENTS WITH MOWERS AND/OR STRING TRIMMERS.

5. GRASSES OVER THE INFILTRATION TRENCH SHALL BE MOWED AT LEAST TWICE EACH YEAR. TREES AND SHRUBS SHOULD NOT BE PERMITTED TO GROW ABOVE THE INFILTRATION TRENCH.

SITE ADDRESS

DATE:

SCALE:
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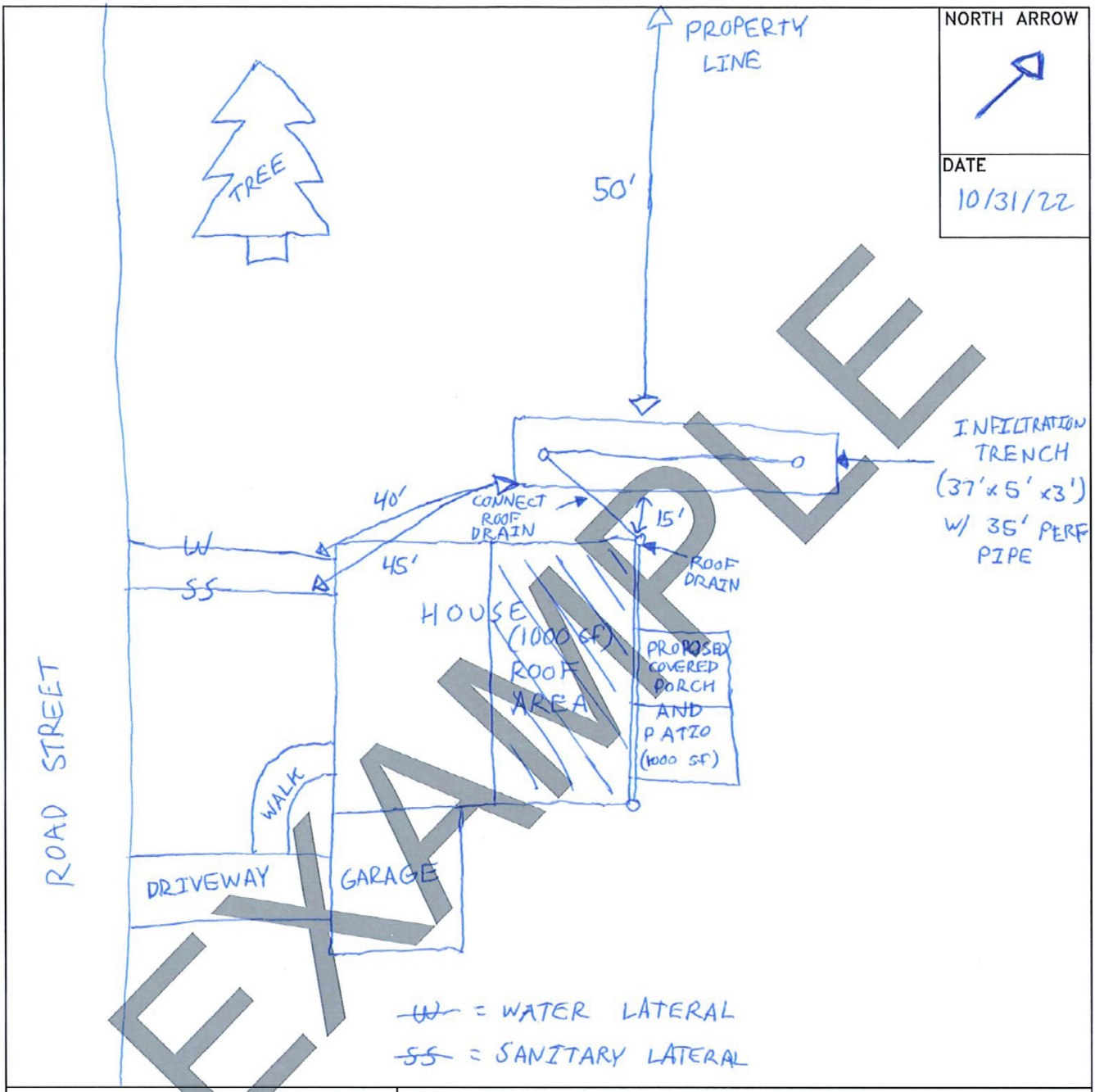
CHESTER COUNTY PENNSYLVANIA

INFILTRATION TRENCH OPERATION & MAINTENANCE NOTES

SHEET NO.

4 OF 4



PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP! CALL BEFORE YOU DIG!

UNDERGROUND SERVICE ALERT CALL: TOLL FREE 1-800-242-1776 THREE WORKING DAYS BEFORE YOU DIG

PROPERTY OWNER
NAME: JOHN SMITH
ADDRESS: 123 ROAD STREET, TOWN PA 07734

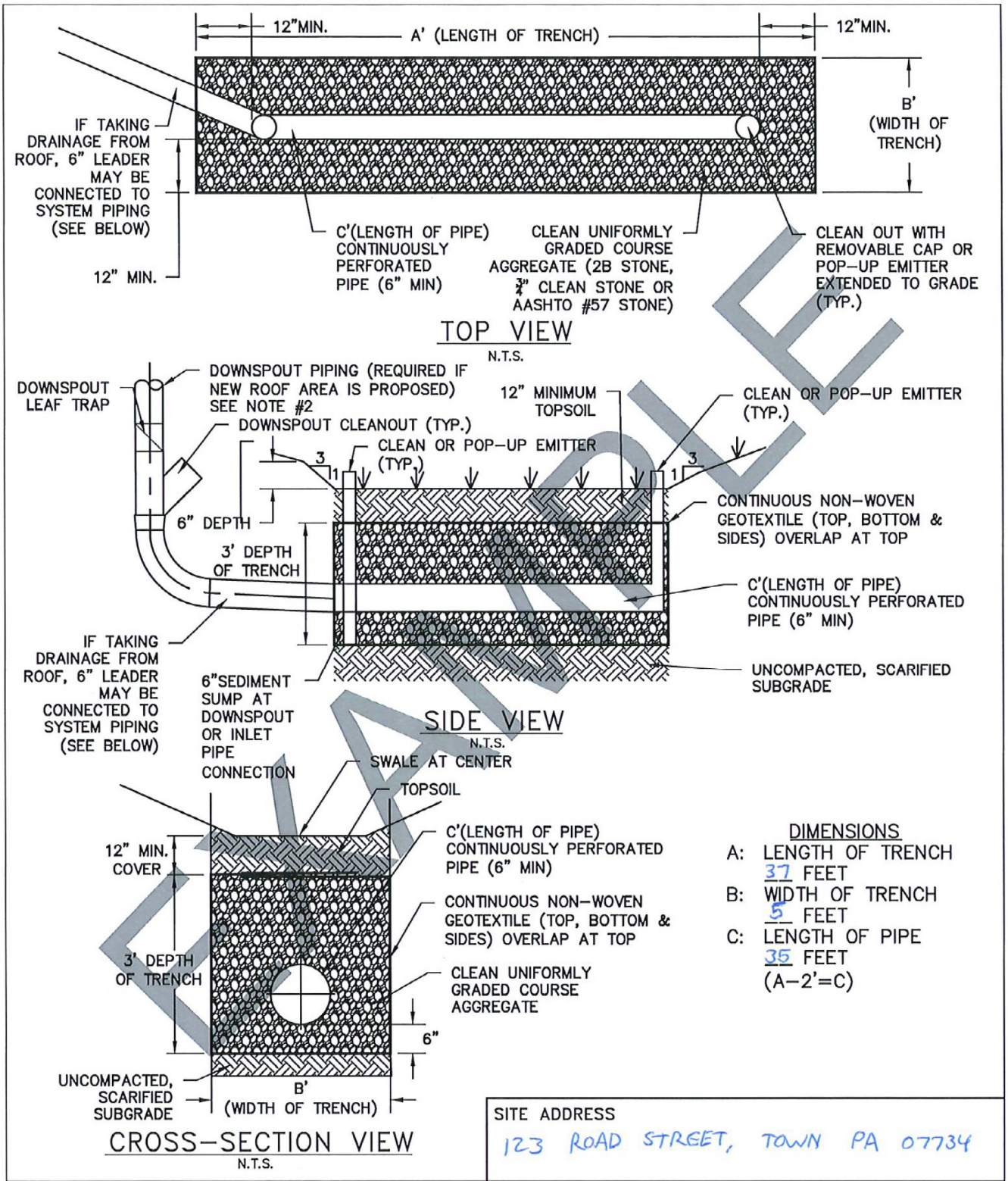
PLAN PREPARER
NAME:
ADDRESS: SAME AS ABOVE

FOR USE BY MUNICIPAL ENGINEER

CHESTER COUNTY PENNSYLVANIA

SIMPLIFIED SITE PLAN

SHEET NO. 1 OF 4


12"MIN.
A' (LENGTH OF TRENCH)
12"MIN.
B' (WIDTH OF TRENCH)
IF TAKING DRAINAGE FROM ROOF, 6" LEADER MAY BE CONNECTED TO SYSTEM PIPING (SEE BELOW)
12" MIN.
C'(LENGTH OF PIPE) CONTINUOUSLY PERFORATED PIPE (6" MIN)
CLEAN UNIFORMLY GRADED COURSE AGGREGATE (2B STONE, ¾" CLEAN STONE OR AASHTO #57 STONE)
CLEAN OUT WITH REMOVABLE CAP OR POP-UP EMITTER EXTENDED TO GRADE (TYP.)
TOP VIEW
N.T.S.
DOWNSPOUT LEAF TRAP
DOWNSPOUT PIPING (REQUIRED IF NEW ROOF AREA IS PROPOSED) SEE NOTE #2
DOWNSPOUT CLEANOUT (TYP.)
12" MINIMUM TOPSOIL
CLEAN OR POP-UP EMITTER (TYP.)
CLEAN OR POP-UP EMITTER (TYP.)
3
1
3
1
6" DEPTH
3' DEPTH OF TRENCH
CONTINUOUS NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES) OVERLAP AT TOP
C'(LENGTH OF PIPE) CONTINUOUSLY PERFORATED PIPE (6" MIN)
IF TAKING DRAINAGE FROM ROOF, 6" LEADER MAY BE CONNECTED TO SYSTEM PIPING (SEE BELOW)
6"SEDIMENT SUMP AT DOWNSPOUT OR INLET PIPE CONNECTION
UNCOMPACTED, SCARIFIED SUBGRADE
SIDE VIEW
N.T.S.
SWALE AT CENTER
TOPSOIL
C'(LENGTH OF PIPE) CONTINUOUSLY PERFORATED PIPE (6" MIN)
12" MIN. COVER
CONTINUOUS NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES) OVERLAP AT TOP
3' DEPTH OF TRENCH
CLEAN UNIFORMLY GRADED COURSE AGGREGATE
6"
UNCOMPACTED, SCARIFIED SUBGRADE
B' (WIDTH OF TRENCH)
CROSS-SECTION VIEW
N.T.S.
DIMENSIONS
A: LENGTH OF TRENCH 37 FEET
B: WIDTH OF TRENCH 5 FEET
C: LENGTH OF PIPE 35 FEET (A-2'=C)
SITE ADDRESS
123 ROAD STREET, TOWN PA 07734
DATE: 10/31/22
SCALE: NOT TO SCALE
REMINGTON & VERNICK ENGINEERS
Croton Road Corporate Center 555 Croton Road, Suite 401 King of Prussia, PA 19406
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CHESTER COUNTY PENNSYLVANIA
INFILTRATION TRENCH DETAIL
SHEET NO.
2 OF 4

NOTES

§345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

§345-306.M: WHERE SEDIMENT TRANSPORT IN THE STORMWATER RUNOFF IS ANTICIPATED TO REACH THE INFILTRATION SYSTEM, APPROPRIATE PERMANENT MEASURES TO PREVENT OR COLLECT SEDIMENT SHALL BE INSTALLED PRIOR TO DISCHARGE TO THE INFILTRATION SYSTEM.

§345-306.N: WHERE ROOF DRAINS ARE DESIGNED TO DISCHARGE TO INFILTRATION PRACTICES, THEY SHALL HAVE APPROPRIATE MEASURES TO PREVENT CLOGGING BY UNWANTED DEBRIS (FOR EXAMPLE, SILT, LEAVES AND VEGETATION). SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO LEAF TRAPS, GUTTER GUARDS AND CLEANOUTS.

§345-306.Q: THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF ALL INFILTRATION TRENCHES:

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(2) THE BOTTOM OF THE INFILTRATION TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
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(6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

TRENCH LENGTH (< 1000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

IMPERVIOUS SURFACE (sq ft)	4' WIDE TRENCH	5' WIDE TRENCH	6' WIDE TRENCH	7' WIDE TRENCH	8' WIDE TRENCH
	LENGTH OF TRENCH (ft)	LENGTH OF TRENCH (ft)	LENGTH OF TRENCH (ft)	LENGTH OF TRENCH (ft)	LENGTH OF TRENCH (ft)
451-500	23.00	18.25	15.25	13.25	11.50
501-550	25.25	20.25	16.75	14.50	12.75
551-600	27.50	22.00	18.25	15.75	13.75
601-650	29.75	23.75	20.00	17.00	15.00
651-700	32.00	25.75	21.50	18.25	16.00
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951-999	45.75	36.50	30.50	26.25	23.00

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* TRENCH SHOULD BE SIZED BASED ON SQUARE FEET OF ROOF AREA DIRECTED TO THE PROPOSED TRENCH, WHICH MAY NOT EQUAL THE REGULATED IMPERVIOUS SURFACE PROPOSED.

SITE ADDRESS
123 ROAD STREET, TOWN PA 07734

DATE: 10/31/22

SCALE: NOT TO SCALE

RVE 1901
REMINGTON & VERNICK ENGINEERS
Croton Road Corporate Center 555 Croton Road, Suite 401 King of Prussia, PA 19406
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CHESTER COUNTY PENNSYLVANIA

INFILTRATION TRENCH NOTES

SHEET NO. 3A OF 4

NOTES

§345-306.M: DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

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§345-306.Q: THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF ALL INFILTRATION TRENCHES:

(1) EXCAVATION FOR THE INFILTRATION TRENCH SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE INFILTRATION TRENCH.
(2) THE BOTTOM OF THE INFILTRATION TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
(3) ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
(4) THE TOPS AND SIDES OF ALL INFILTRATION TRENCH SHALL BE COVERED WITH DRAINAGE FABRIC. FABRIC SHALL BE NON-WOVEN FABRIC ACCEPTABLE TO THE MUNICIPAL ENGINEER.
(5) STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE SEEPAGE BED/TRENCH OR LIKE FACILITY AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED IN ALL FACILITIES.
(6) PA ONECALL IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES COMMENCE.

TRENCH LENGTH (1000-2000 SQUARE FEET OF REGULATED IMPERVIOUS SURFACE)

IMPERVIOUS SURFACE (sq ft)	4' WIDE TRENCH LENGTH OF TRENCH(ft)	5' WIDE TRENCH LENGTH OF TRENCH(ft)	6' WIDE TRENCH LENGTH OF TRENCH(ft)	7' WIDE TRENCH LENGTH OF TRENCH(ft)	8' WIDE TRENCH LENGTH OF TRENCH(ft)
1000	45.75	36.50	30.50	26.25	23.00
1001-1050	46.75	37.50	31.25	26.75	23.50
1050-1100	48.00	38.50	32.00	27.50	24.00
1100-1150	49.25	39.25	32.75	28.25	24.75
1151-1200	50.25	40.25	33.50	28.75	25.25
1201-1250	54.75	44.00	36.50	31.50	27.50
1250-1300	59.50	47.50	39.75	34.00	29.75
1301-1350	61.75	49.25	41.25	35.25	31.00
1351-1400	64.00	51.25	42.75	36.50	32.00
1401-1450	66.25	53.00	44.25	38.00	33.25
1451-1500	68.50	54.75	45.75	39.25	34.25
1501-1550	70.75	56.75	47.25	40.50	35.50
1551-1600	73.00	58.50	48.75	41.75	36.50
1601-1650	75.25	60.25	50.25	43.00	37.75
1651-1700	77.75	62.25	51.75	44.50	39.00
1701-1750	80.00	64.00	53.25	45.75	40.00
1751-1800	82.25	65.75	54.75	47.00	41.25
1801-1850	84.50	67.50	56.25	48.25	42.25
1851-1900	86.75	69.50	58.00	49.75	43.50
1901-1950	89.00	71.25	59.50	51.00	44.50
1951-1999	91.25	73.00	61.00	52.75	45.75

* DIMENSIONS IN THIS TABLE HAVE BEEN DETERMINED FOR MANAGING THE DIFFERENCE BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT, 2-YEAR FREQUENCY, 24-*HOUR DURATION RAINFALL RUNOFF VOLUME
* TRENCH SHOULD BE SIZED BASED ON SQUARE FEET OF ROOF AREA DIRECTED TO THE PROPOSED TRENCH, WHICH MAY NOT EQUAL THE REGULATED IMPERVIOUS SURFACE PROPOSED.

SITE ADDRESS
123 ROAD STREET, TOWN PA 07734

DATE: 10/31/22

SCALE: NOT TO SCALE

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CHESTER COUNTY PENNSYLVANIA

INFILTRATION TRENCH NOTES

SHEET NO. 3B OF 4

STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PLAN

THE PROPERTY OWNER WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF ALL STORMWATER BEST MANAGEMENT PRACTICES AND CONVEYANCE FACILITIES. THE FACILITIES WILL INCLUDE THE INFILTRATION TRENCH ON THE PROPERTY AS WELL AS ANY YARD OR ROOF DRAINS, PIPING, POP-UP EMMITERS OR CLEAN-OUTS SHOWN ON THIS PLAN.

MAINTENANCE AND OPERATION WILL BE AS FOLLOWS:

1. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE INSPECTED ANNUALLY OR AS NEEDED FOLLOWING SIGNIFICANT PRECIPITATION EVENTS TO ASCERTAIN IF ANY SEDIMENT IS ENTERING THE FACILITIES. THE INFILTRATION TRENCH AND CONVEYANCES DESCRIBED IN THIS PLAN SHALL BE CLEANED IF NECESSARY. CLEANING WILL CONSIST OF REMOVING THE ACCUMULATED SILT, DEBRIS OR SEDIMENT.
2. THE OVERLYING VEGETATION ON THE INFILTRATION TRENCH SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS RE-VEGETATED AS SOON AS POSSIBLE.
3. VEHICULAR ACCESS ON THE INFILTRATION TRENCH SHOULD BE PROHIBITED, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. REPAIR ALL DAMAGED PIPING, CLEAN-OUTS, AND POP-UP EMITTERS PROMPTLY TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. SPECIAL CARE SHOULD BE TAKEN TO AVOID DAMAGING EXPOSED ELEMENTS WITH MOWERS AND/OR STRING TRIMMERS.
5. GRASSES OVER THE INFILTRATION TRENCH SHALL BE MOWED AT LEAST TWICE EACH YEAR. TREES AND SHRUBS SHOULD NOT BE PERMITTED TO GROW ABOVE THE INFILTRATION TRENCH.

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SCALE: NOT TO SCALE		INFILTRATION TRENCH OPERATION & MAINTENANCE NOTES	4 OF 4