

SEQUENCE OF CONSTRUCTION

A copy of the erosion and sediment control narrative shall be provided to the contractor. Contractor is to familiarize him/herself with the erosion and sediment control narrative and plans prior to construction.

Contractor shall contact Cumberland County Conservation District (717-240-7812), West Pennsboro Township (717-243-8220) and Frederick, Seibert and Associates (717-701-8111) at least seven (7) days prior to the start of construction to schedule a preconstruction meeting.

Contractor to notify the PA One Call System (1-800-242-1776) for the location of existing underground utilities at least three (3) days prior to starting any earth disturbance activities.

All earth disturbance activities shall proceed in accordance with the following sequence. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing and topsoil stripping shall be limited only to those areas described in each stage. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate the potential for accelerated erosion and/or sediment pollution. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment removal facility, over undisturbed vegetated areas. All embankment slopes shall be tracked prior to stabilization. As soon as slopes, channels, ditches and other disturbed areas reach final grade they must be stabilized. This site is in a special protection watershed, upon completion or temporary cessation of earth disturbance activity that portion of the site must be immediately stabilized. As disturbed areas within a project approval final grade, preparations should be made for seeding and mulching to begin. In no case should an area exceeding 15,000 square feet, which is to be stabilized by vegetation, reach final grade without being seeded and mulched.

- Field identify/stake the limits-of-disturbance (LOD) and proposed ESC/PCSM BMPs. Install protective fence around PCSM BMPs as shown. Avoid driving across Infiltration BMPs. It is recommended that the LOD be staked at minimum 50' intervals.
- Install rock construction entrance #1 and #2. Install Concrete Washouts.
- Install perimeter filter barriers (compost filter socks) #1, #2, #3, #4, #5, #6, #7, #8, #9, and #10.
- Critical Stage Sinkhole/Depression Repair (See "Critical Stages" Section).
- Notify Licensed Professional a minimum of five (5) working days prior to beginning work on Sinkhole/Depression repair.
- Repair the sinkholes that currently exist on site.
- Inspect the depressions as listed on the Existing Conditions plan and determine if they need repaired prior to any mass earthwork.
- Critical Stage Sediment Basins #1 and #2 (See "Critical Stages" Section).
- Notify Licensed Professional a minimum of five (5) working days prior to beginning work on Sediment Basins #1 and #2.
- Strip topsoil necessary to complete the construction of basins #1 and #2. Stockpile topsoil where shown, stabilize and place filter sock around lower side. Install Baffles #1, #2, #3, & #4 where shown.
- Grade in Swale #3 and install erosion control matting.
- Install the rock filter barrier. See Enlargement Plan #2.
- Strip topsoil necessary to complete rough grading of site. Stockpile topsoil, stabilize and place filter sock around lower side.
- Begin rough grading site beginning downstream by sediment basins and working toward access roads. Grade the entire site at once. Rough grade SWM Pond BMPs, removing soil to 1" above the proposed infiltration bottom of ponds.

NOTE: Do not grade in driveway & parking area located between Sediment Basin #1 and warehouse B to allow for sediment basin required capacity (North of Warehouse Building B) and limit total disturbance.

NOTE: Contractor shall limit earthwork activity to the maximum extent practicable in order to leave as little unstabilized area exposed at any given time as possible.

- Simultaneously with overall site grading, install bypass pipe systems E-27, E-2 to E-4 & E-5, E-16 to E-17 & E-18, and E-22 to E-23. Install starting at the outlet and work upstream. Install rip rap outlet protection at all outlets. Install diversion berms after bypass pipes are completed.
- Critical Stage Subsurface Infiltration Basins (See "Critical Stages" Section).

- Notify Licensed Professional a minimum of five (5) days prior to beginning work on Subsurface Infiltration Basins.
- Simultaneously with overall site grading, install Subsurface Infiltration Basin BMPs SS-1, SS-2, SS-3, SS-4, SS-5, SS-6, and SS-7. Contractor to contact Engineer of record to inspect basin bed prior to stone installation.
- Install the storm drain lines that connect to the subsurface infiltration basins. Install snouts and inlet filter bags simultaneously with inlet installation in the respective inlets as shown on the storm drain profiles.
- Install outlet structure starting downstream and working upstream to correction. Install roof drain collector pipes and cap at building. Install inlet filter bags and snouts in inlets immediately as inlet is installed. (See PCSM Details for Snout Detail).
- Grade roadways and install utilities and storm drains within the roadway. Road shall be stabilized with stone subbase once subgrade is complete. Install snouts and filter bags in the inlets once installed.
- Complete grading of the building pads and parking areas.
- Prepare building pads. Grading operations shall be performed in a manner that does not concentrate flow to perimeter control measures nor exceed the minimum drainage area to the sediment basins to the sediment basins.
- Once building pads and foundation are complete, building construction may begin.
- All concrete washing shall be in approved concrete washout areas.
- Install site water, sewer, and storm drain lines in accordance with the "Pipeline and Utility Erosion and Sediment Control Notes."
- Storm drain junctions for roof drains shall be temporarily blocked until connections are completed. Install snouts in all Roof drain junction boxes. Install inlet filter bags and snouts as inlets are brought to grade. Install rip rap outlet protection. (See PCSM Details for Snout Detail).
- Grade drive aisles and parking areas, including the area between Sediment Basin #1 and warehouse building B. Stone base shall be placed within four (4) days of subgrade being established. Dewater sediment basin #1 as needed in order to fill in basin #1 area.
- Grade and stabilize swales #1 and #2 with matting and per the permanent seeding specifications.
- Place topsoil and stabilize per the permanent seeding specifications.

- Critical Stage PCSM Pond BMP Installation (See "Critical Stages" Section).
- Notify a Licensed Professional a minimum of three (3) working days prior to beginning work on PCSM BMPs P-1, P-2, P-4, P-5, and P-7. Convert Sediment Basins #1 and #2 to PCSM BMPs P-3 and P-6 following the "Sediment Basin Conversion" Notes. PCSM BMPs shall be constructed after the upstream drainage area is stabilized. Infiltration BMPs shall be constructed during the growing season. See "PCSM Sequence of Construction" for construction of PCSM BMPs. A "Licensed Professional" is required to verify the following stages of construction:
 - Outlet Structure Construction
 - Berm and Core Trench Construction
 - Infiltration BMP Excavation
 - Stone and Underdrain Installation
 - Planting Soil Installation
- Clear Site of debris and all unwanted materials. All waste material shall be recycled or disposed of in accordance with the "Recycling & Disposal of Materials" notes.
- Disturbed areas shall be stabilized and any affected BMPs shall be repaired immediately. Temporary BMPs may not be removed until a minimum 70% perennial vegetative cover is well-established across the entire upslope contributing drainage area. All areas proposed to be paved must be paved or have compacted stone base in place.
- Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operators shall contact the Cumberland County Conservation District for a final inspection prior to the removal of any remaining BMPs. Any areas disturbed during BMP removal shall be immediately stabilized.

SEDIMENT BASIN CONVERSION

Notify Licensed Professional and Conservation District a minimum of three (3) working days prior to beginning sediment basin conversion. A "Licensed Professional" is required to verify the conversion to a permanent PCSM BMP.

- Note: Conversion of sediment basin to permanent stormwater facility shall be completed within the growing season. All sediment deposited within the culvert/storm drains shall be removed prior to conversion.
- The sediment storage zone shall be dewatered by pumping through a filter bag to a permanently stabilized area. Remove accumulated sediment according to the "Import/Export Fill" notes.
 - Install borehole soils to raise the bottom of the basin from the sediment elevation of 583.00 to the underdrain installation elevation of 585.00.
 - Install minimum 2 foot high stone filter berm and outlet structures.
 - Fine grade bottom of basin and berm.
 - Permanently stabilize the bottom of basins with the seed mix and plugs listed in the details.
 - After basins have a uniform perennial vegetative cover well established, remove necessary ESC BMPs.

Critical Stages:

A licensed Geotechnical professional or designee shall be present on-site to inspect the critical stages of implementation of the PCSM Plan. The following critical stages of implementation shall be inspected (see Sequence of Construction for proper implementation):

- Construction of Sediment Basin
- to ensure basin size and shape
 - to ensure berm length and height
 - to ensure subgrade to be uncompacted and at the correct depth
 - to ensure proper installation outlet structure
- Construction of Subsurface BMP
- to ensure basin size and shape
 - to ensure subgrade to be uncompacted
 - to ensure proper installation of underdrain system, outlet structure, and drain connection
 - to determine where a 2' soil media buffer is necessary at basin bottom
- Construction of Bio-Retention BMP
- to ensure basin size and shape
 - to ensure subgrade to be uncompacted
 - to ensure proper installation of underdrain system, outlet structure, and drain connection

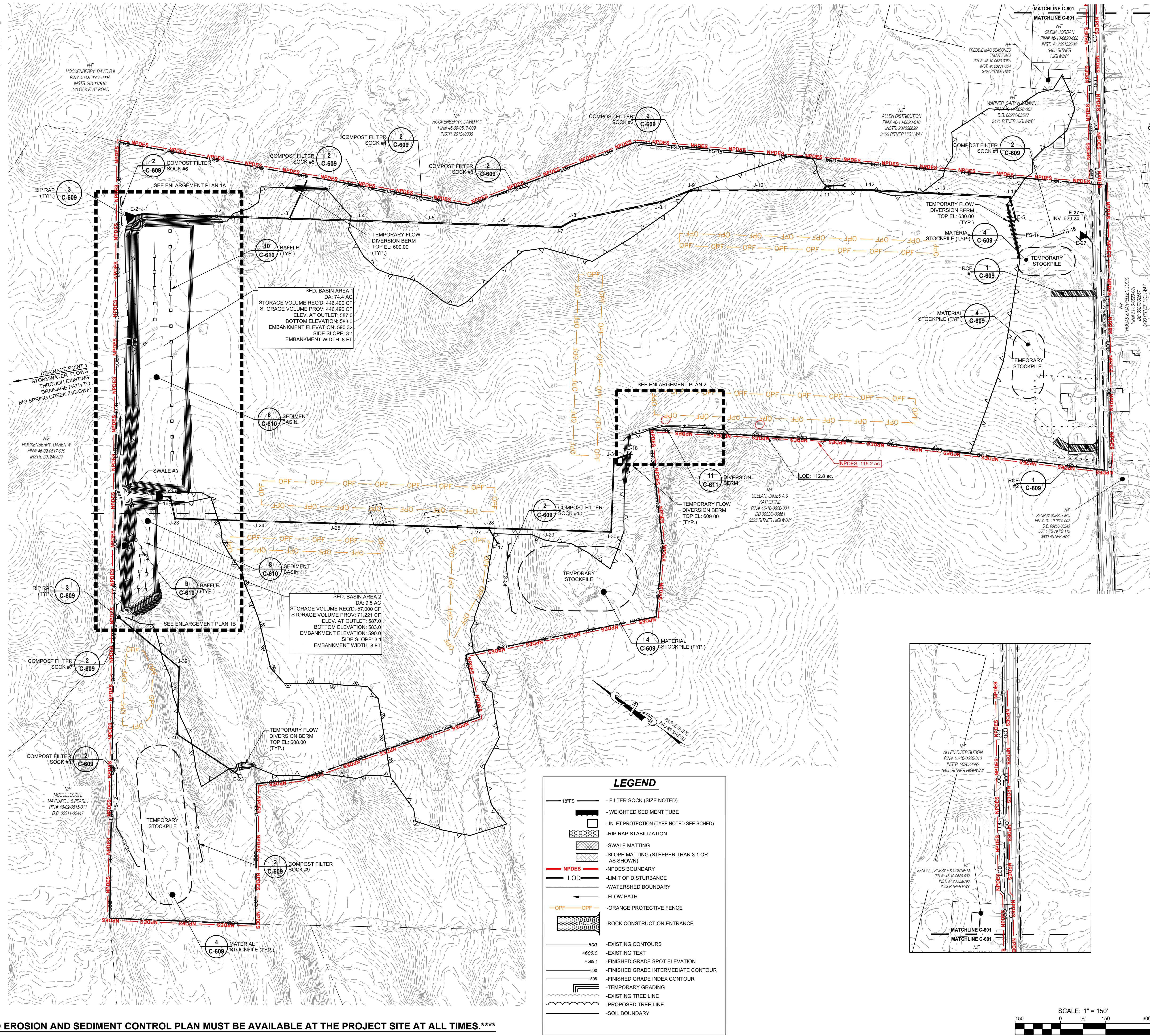
- Sinkhole/Depression Inspection and Repair
- to ensure depression is repaired properly
 - to monitor if any new depressions/sinkholes develop during construction

PIPELINE AND UTILITY LINE EROSION AND SEDIMENT CONTROL NOTES

- All excavated material must be placed on the high side of trench. subsoil and topsoil shall be kept in separate stockpiles. excess material shall be hauled away to a site with an approved erosion and sediment control plan.
- All erosion & sediment control measures that are disturbed/damaged shall be repaired the same day. The total length of excavated trench open at any one time should not be greater than the total length of pipeline/utility line that can be placed in the trench and back-filled in one working day.
- No more than 50 lineal feet of open trench should exist when pipeline/utility line installation ceases at the end of the workday.
- Soil supplements, seed and mulch shall be applied within four days after the pipeline/utility line is installed.
- Erosion & sediment control devices shall be inspected daily and maintained in working condition.

PROPOSED ELECTRIC LINES

- The proposed electric line location shall be provided to the franklin co. conservation district when known. If proposed lines are outside of the limits of disturbance an amendment to the npdes permit will be required.



COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL
JUSTIN DOTY
P.E.
03/22/2025

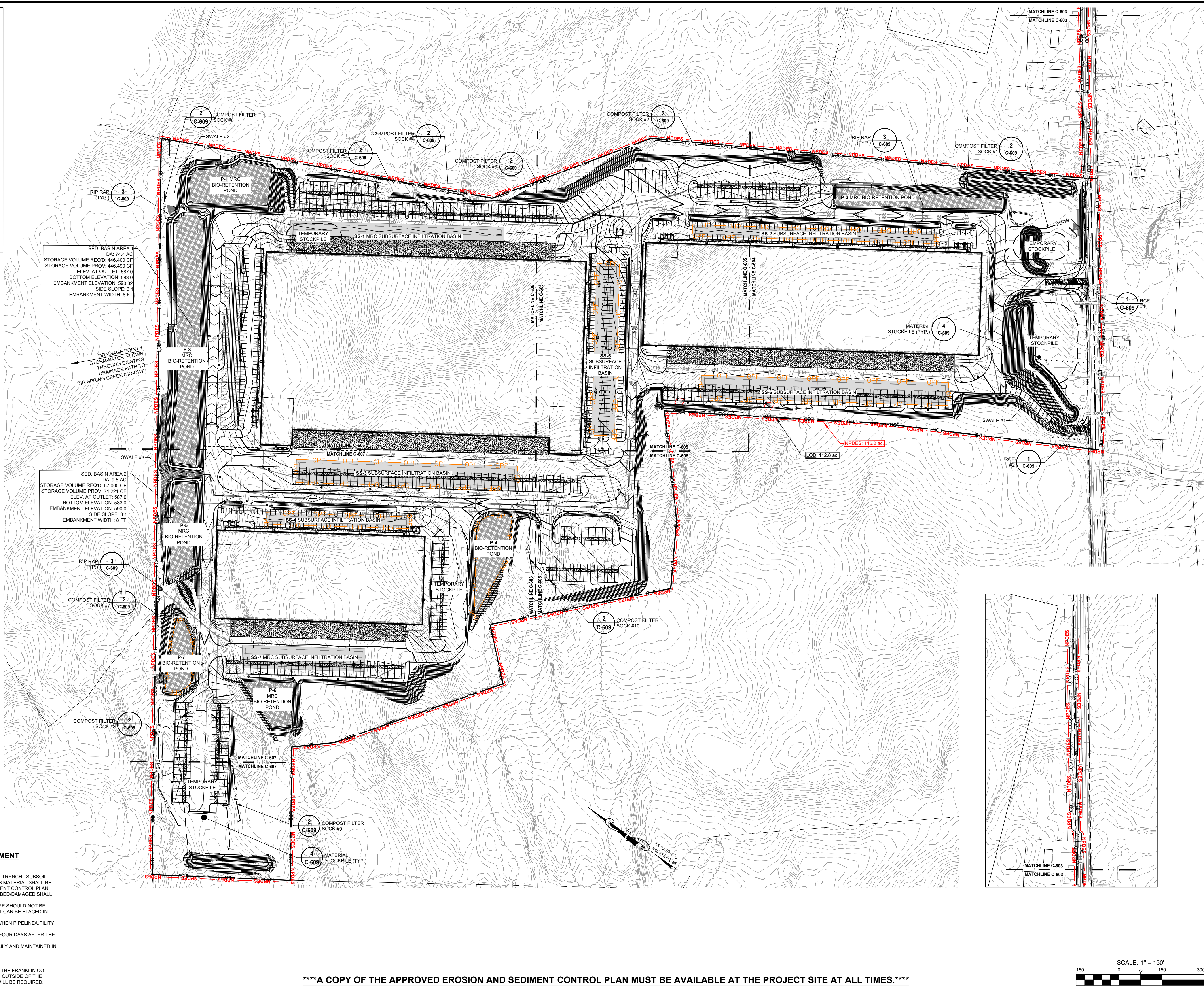
Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Pennsylvania. License # P380813
Expiration Date: 03-30-2029

Frederick, Seibert & Associates, Inc.
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS - LAND PLANNERS
1150 WEST MAIN STREET
SUITE 200
WEST PENNSBORO, PA 17257-2501
TEL: 717.791.8111
FAX: 717.791.8000

DATE	DESCRIPTION
03/28/24	Revised per CDD Admin Comments
12/22/24	Revised per DEP/CDD Tech Comments
03/27/25	Revised per Final Review Comments
03/28/25	Revised per 2nd Reviewed Review Comments

AAMPA HOLDINGS - RITNER HWY
SITUATED APPROXIMATELY 1 MILE E FROM SOUTHWEST OF THE INTERSECTION OF RITNER HIGHWAY (US-11) AND CENTERVILLE ROAD (PA-220)
WEST PENNSBORO TOWNSHIP
CUMBERLAND COUNTY, PENNSYLVANIA
15th WEST COMMERCIAL AVENUE, SUITE 200, CHARLISLE, PA 17013
(223) 538-4040

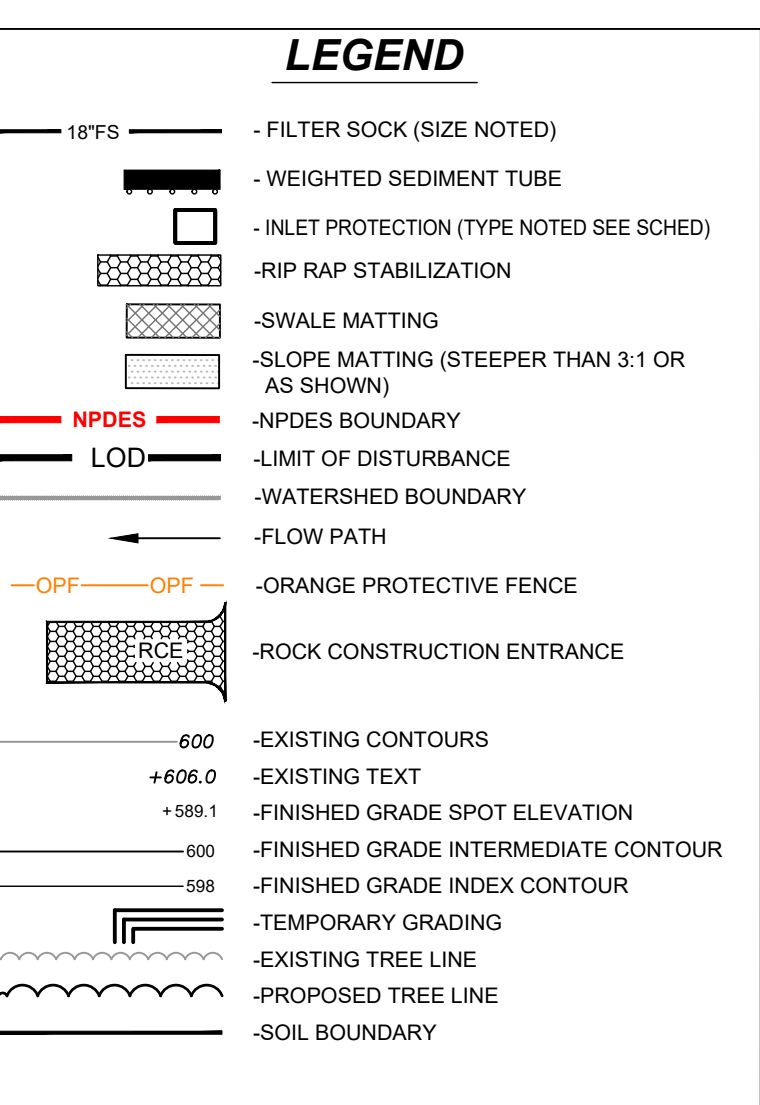
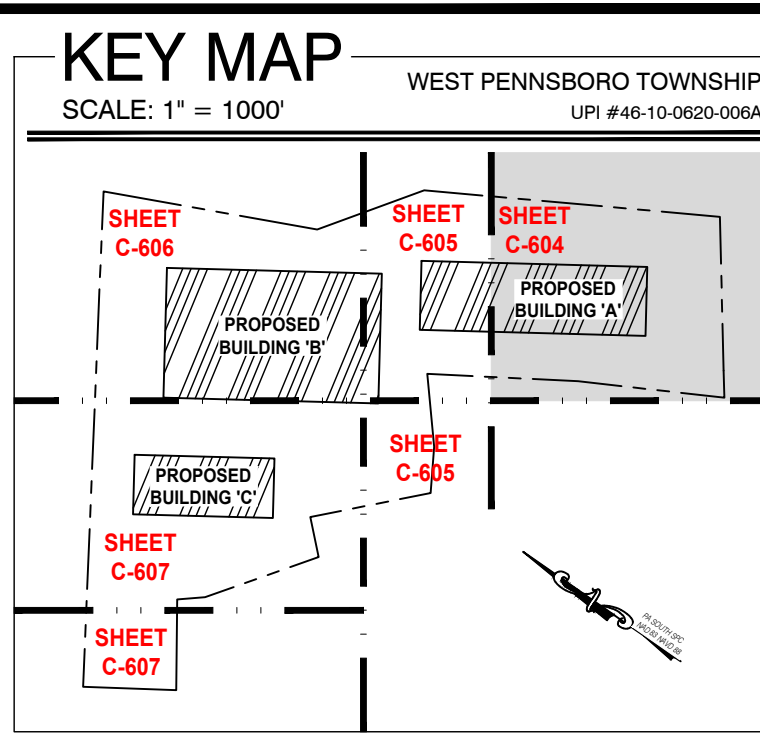
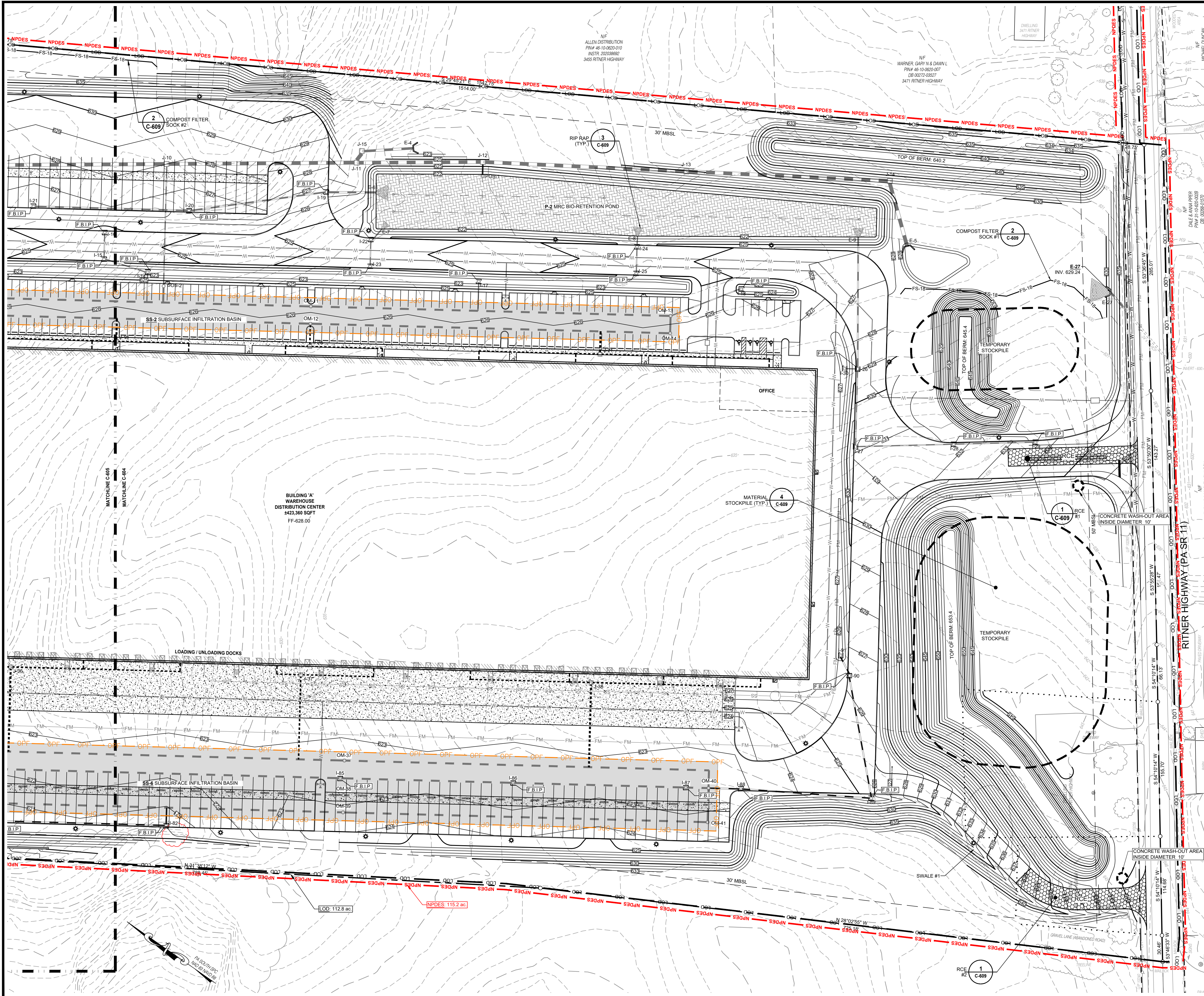
PROJECT NO: 2022-0251
DWN BY: CMH
DATE: 11-15-2023
PROJECT MANAGER: JTD
EMAIL: JDoty@fsa-inc.com
PROPERTY INFORMATION
46-10-0620-006A
SCALE: 1" = 150'
SHEET TITLE: E & S CONTROL PLAN
C-601
SHEET 40 OF 63



PROPOSED ELECTRIC LINES

7. THE PROPOSED ELECTRIC LINE LOCATION SHALL BE PROVIDED TO THE FRANKLIN CO. CONSERVATION DISTRICT WHEN KNOWN. IF PROPOSED LINES ARE OUTSIDE OF THE LIMITS OF DISTURBANCE AN AMENDMENT TO THE NPDES PERMIT WILL BE REQUIRED.

SCALE: 1" = 150'



****A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.****

COMMONWEALTH OF PENNSYLVANIA

PROFESSIONAL JUSTIN DOTY

03/27/2025

Professional Certification

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Pennsylvania. License # PE000013

Expiration Date: 03-30-2025

Frederick Seibert & Associates, Inc.

CIVIL ENGINEER • SURVEYOR • LANDSCAPE ARCHITECTS • LAND PLANNERS

108 SOUTH POTOMAC STREET
2ND FLOOR
FREDERICKSBURG, VA 22401
703.791.8300
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DATE

12/22/24

03/07/25

03/07/25

REVISION

Revised per DEP/DCD Text Comments

Revised per Erosion Review Comments

Revised per 2nd Erosion Review Comments

PROJECT NO.

2022-0251

DATE

11-15-2023

DWN BY

CMH

PROJECT MANAGER

JTD

EMAIL

JDoty@fsa-inc.com

PROPERTY INFORMATION

46-10-0620-006A

SCALE

1" = 50'

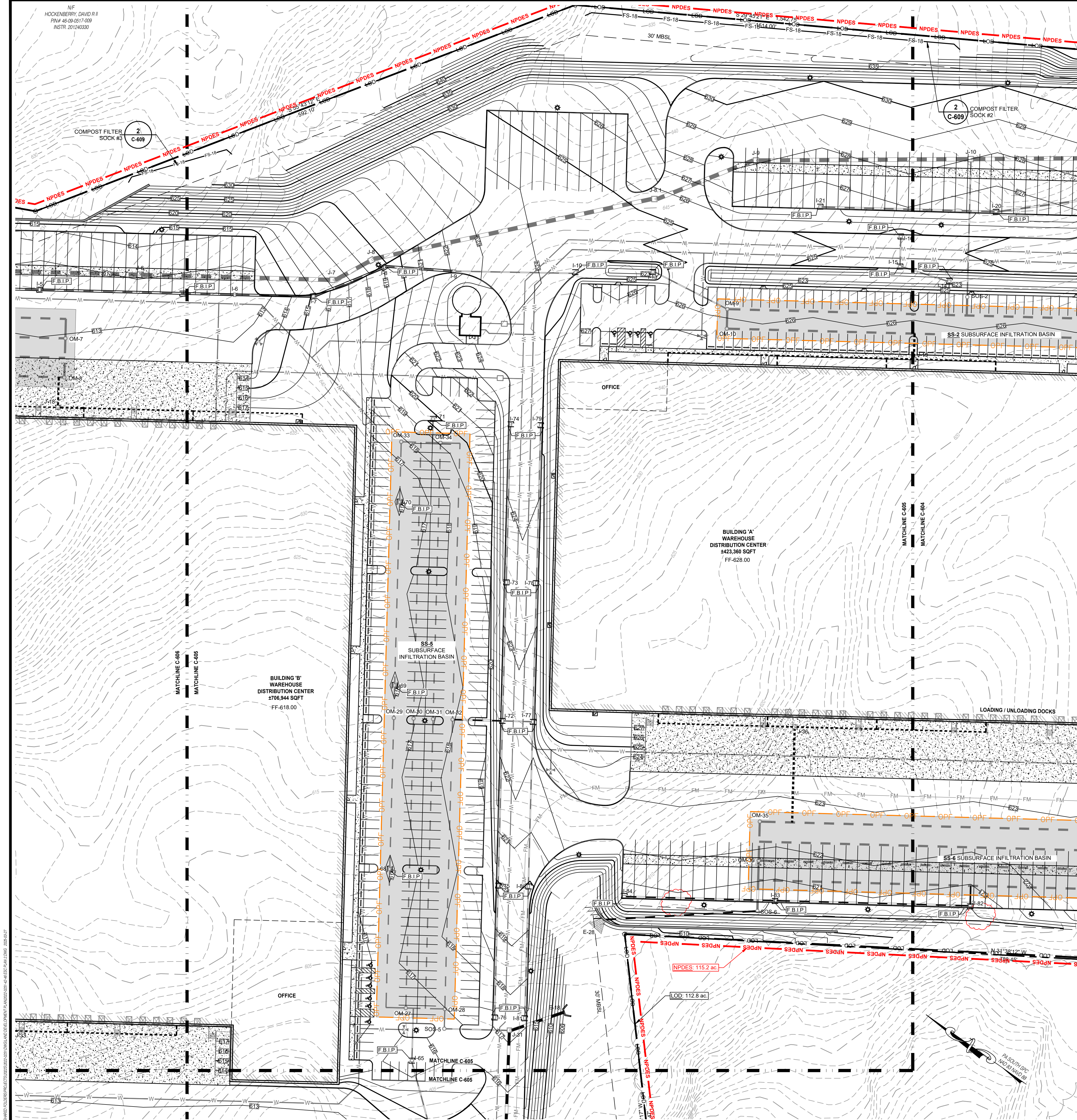
SHEET TITLE

E & S CONTROL PLAN

E & S CONTROL PLAN

C-604

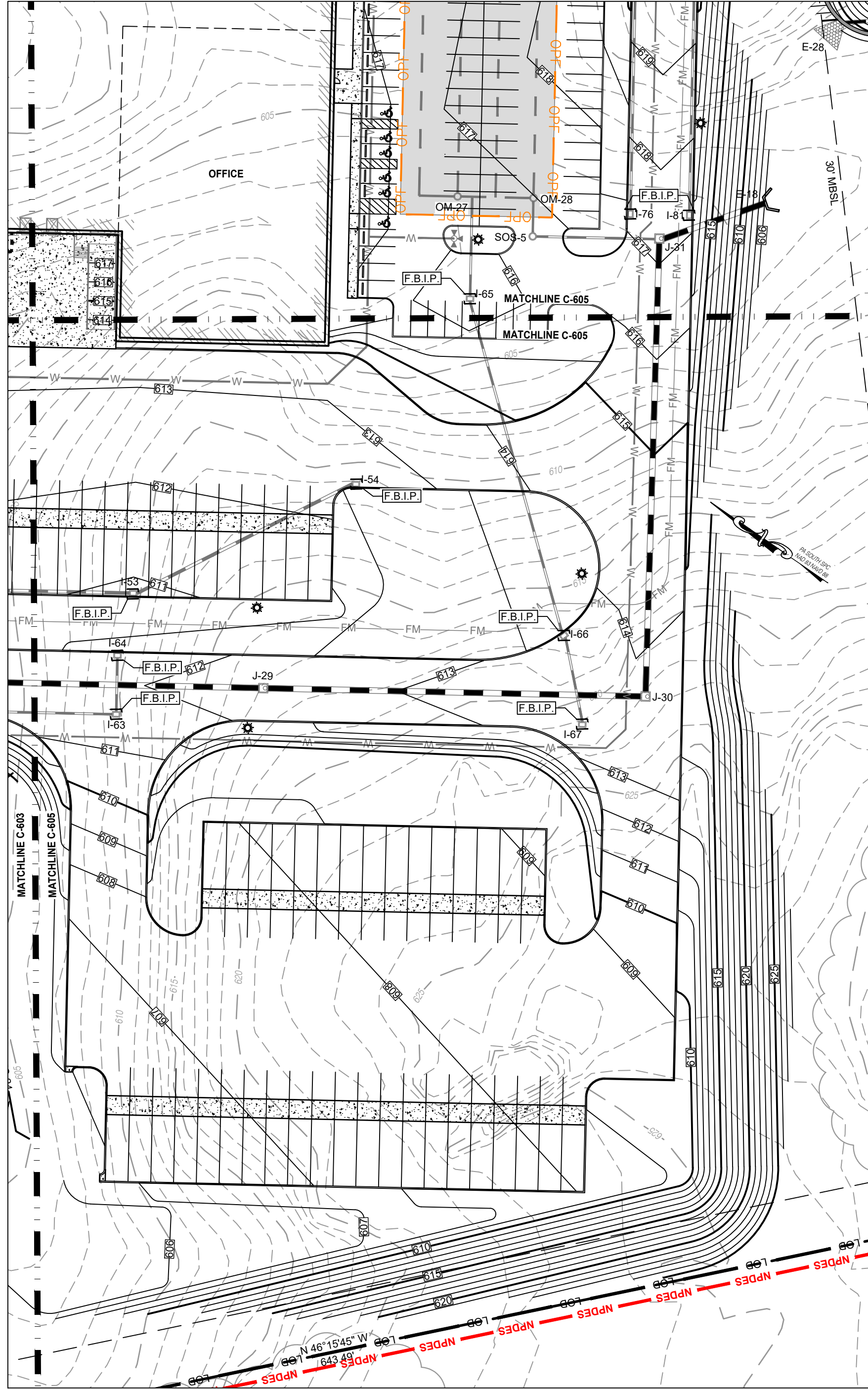
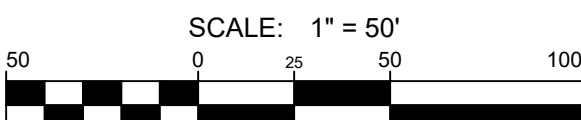
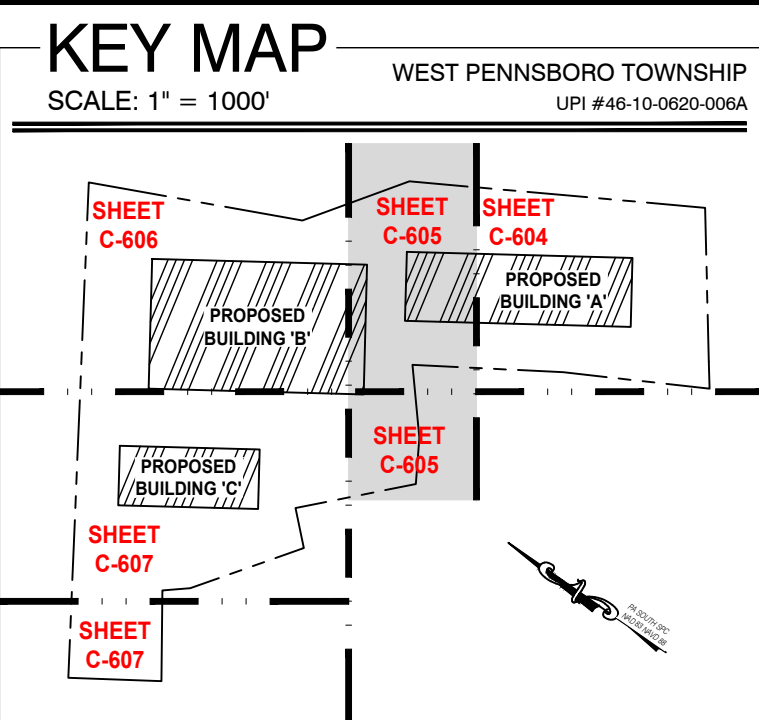
SHEET 43 OF 63



LEGEND

- 18"FS - FILTER SOCK (SIZE NOTED)
- WEIGHTED SEDIMENT TUBE
- INLET PROTECTION (TYPE NOTED SEE SCHED)
- RIP RAP STABILIZATION
- SWALE MATTING
- SLOPE MATTING (STEEPER THAN 3:1 OR AS SHOWN)
- NPDES BOUNDARY
- LIMIT OF DISTURBANCE
- WATERSHED BOUNDARY
- FLOW PATH
- ORANGE PROTECTIVE FENCE
- ROCK CONSTRUCTION ENTRANCE
- EXISTING CONTOURS
- EXISTING TEXT
- FINISHED GRADE SPOT ELEVATION
- FINISHED GRADE INTERMEDIATE CONTOUR
- FINISHED GRADE INDEX CONTOUR
- TEMPORARY GRADING
- EXISTING TREE LINE
- PROPOSED TREE LINE
- SOIL BOUNDARY

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COMMONWEALTH OF PENNSYLVANIA

JUSTICE OF THE PEACE

03/27/2025

Professional Certification
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Expiration Date: 03-30-2025

FSA

FREDERICK SEIBERT & ASSOCIATES, INC.

CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS

108 SOUTH POTOMAC STREET
PHILADELPHIA, PA 19103
771.761.8000
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DATE

DATE	DESCRIPTION
12/22/24	Revised per DEP/DCD Text Comments
03/07/25	Revised per Elevated Review Comments
03/28/25	Revised per 2nd Elevated Review Comments

PROJECT NO. 2022-0251

DWN BY CMH

DATE 11-15-2023

PROJECT MANAGER JTD

EMAIL JDoty@fsa-inc.com

PROPERTY INFORMATION

46-10-0620-006A

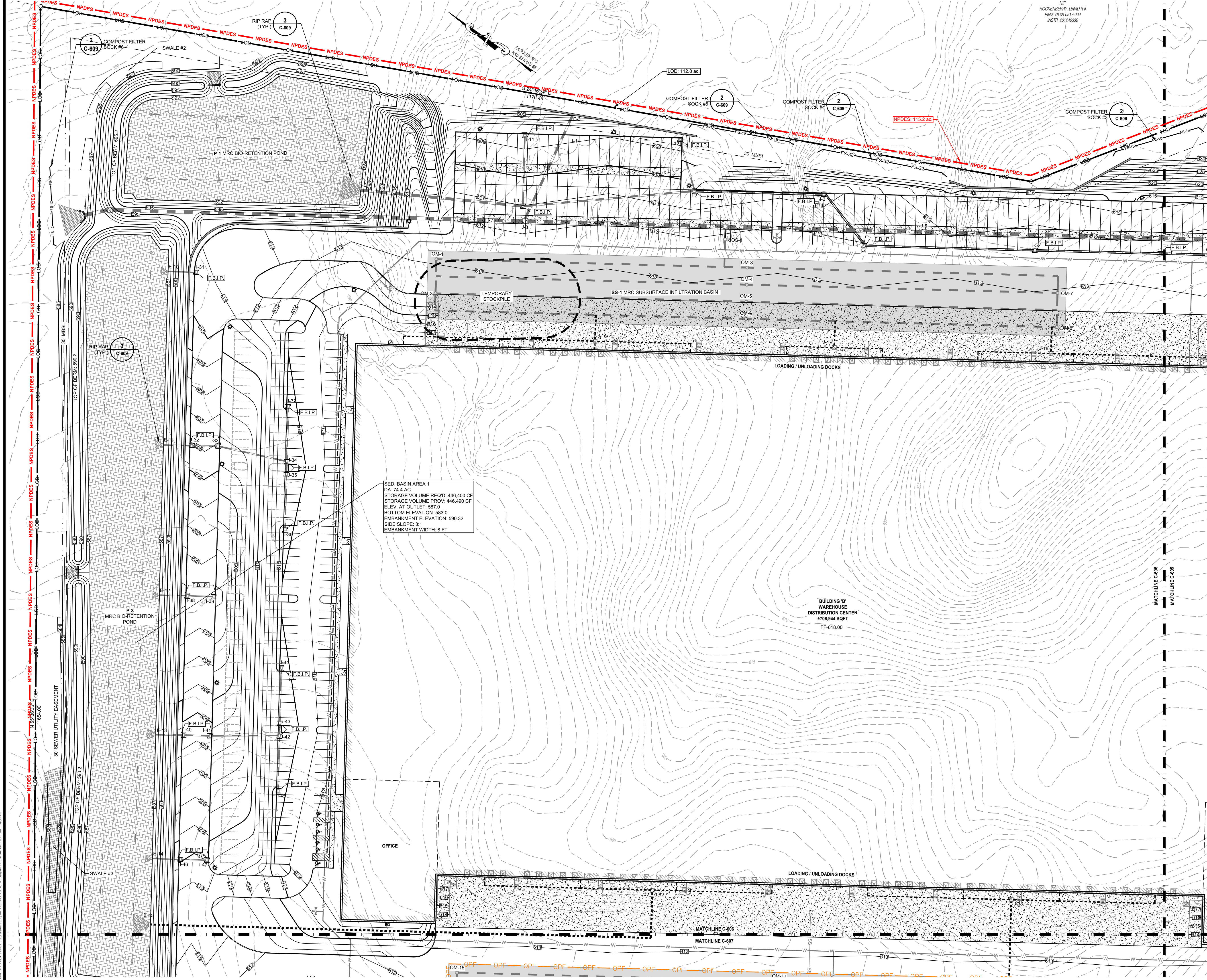
SCALE 1" = 50'

SHEET TITLE

E & S CONTROL PLAN

C-605

SHEET 44 OF 63



KEY MAP

SCALE: 1" = 1000'

WEST PENNSBORO TOWNSHIP

UPI #46-10-0620-006A

SHEET C-606

SHEET C-605

SHEET C-604

SHEET C-607

SHEET C-608

PROPOSED BUILDING 'B'

PROPOSED BUILDING 'A'

PROPOSED BUILDING 'C'

LEGEND

18"FS

WEIGHTED SEDIMENT TUBE

INLET PROTECTION (TYPE NOTED SEE SCHED)

RIP RAP STABILIZATION

SWALE MATTING

SLOPE MATTING (STEEPER THAN 3:1 OR AS SHOWN)

NPDES BOUNDARY

NPDES

LOD

WATERSHED BOUNDARY

FLOW PATH

OPF

OPF

ROCK CONSTRUCTION ENTRANCE

EXISTING CONTOURS

EXISTING TEXT

FINISHED GRADE SPOT ELEVATION

FINISHED GRADE INTERMEDIATE CONTOUR

FINISHED GRADE INDEX CONTOUR

TEMPORARY GRADING

EXISTING TREE LINE

PROPOSED TREE LINE

SOIL BOUNDARY

****A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.****

COMMONWEALTH OF PENNSYLVANIA

PROFESSIONAL ENGINEER

JUSTIN DOTY

09/27/2025

Professional Certification

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Pennsylvania.

License # PE000813

Expiration Date 06-30-2029

FSA

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108 SOUTH POTOMAC STREET

20 WEST BALTIMORE STREET

PHILADELPHIA, PA 19103

772.275.2541

772.275.2541

PROJECT NO

2022-0251

DWN BY

CMH

DATE

11-15-2023

PROJECT MANAGER

JTD

EMAIL

JDoty@fss-inc.com

PROPERTY INFORMATION

46-10-0620-006A

SCALE

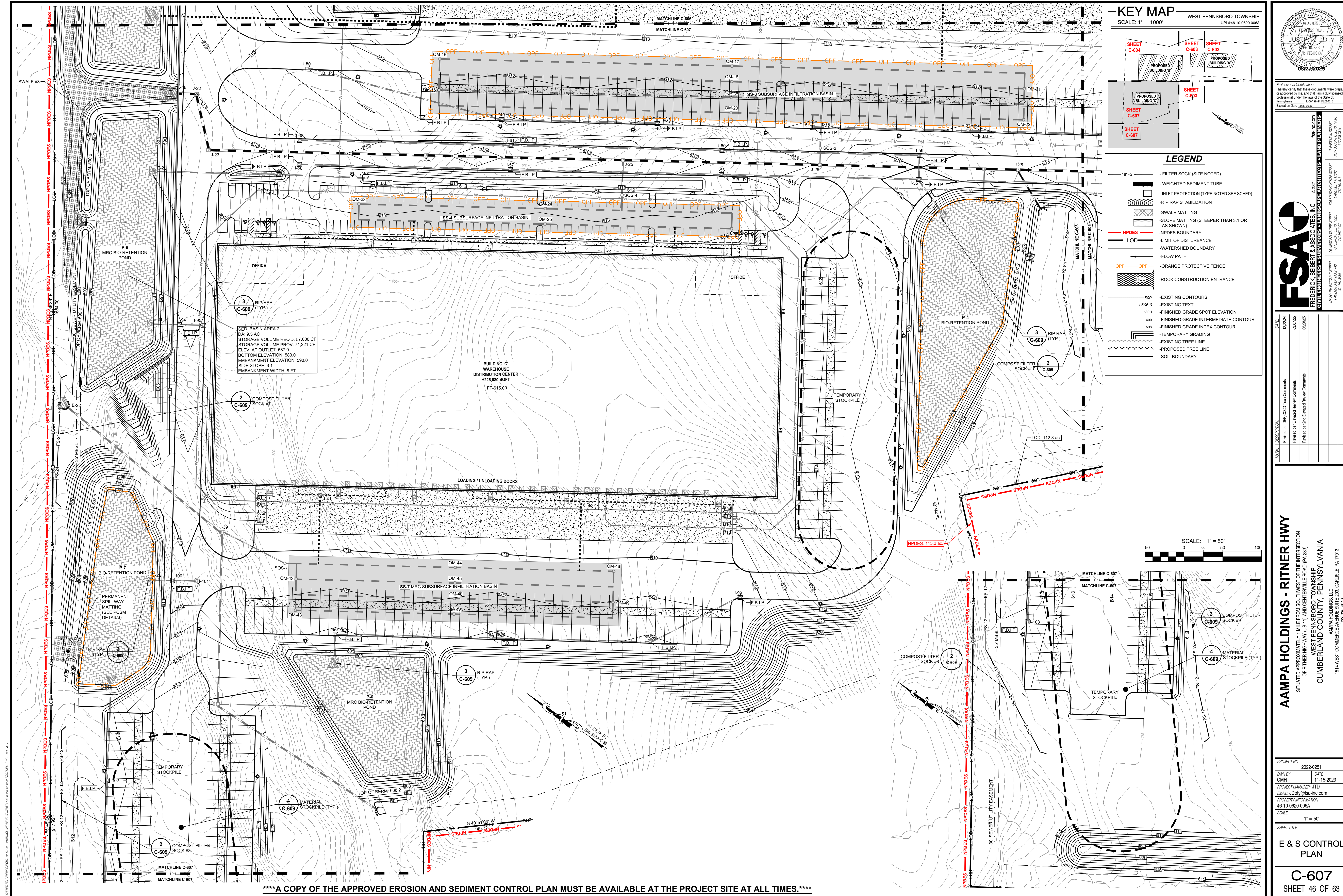
1" = 50'

SHEET TITLE

E & S CONTROL PLAN

C-606

SHEET 45 OF 63



KEY MAP

SCALE: 1" = 1000'

WEST PENNSBORO TOWNSHIP
UPI #46-10-0620-006A

SHEET C-604
SHEET C-602
SHEET C-603
SHEET C-607

LEGEND

18"FS - FILTER SOCK (SIZE NOTED)
WEIGHTED SEDIMENT TUBE
INLET PROTECTION (TYPE NOTED SEE SCHED)
RIP RAP STABILIZATION
SWALE MATTING
SLOPE MATTING (STEEPER THAN 3:1 OR AS SHOWN)
NPDES BOUNDARY
LIMIT OF DISTURBANCE
WATERSHED BOUNDARY
FLOW PATH
ORANGE PROTECTIVE FENCE
ROCK CONSTRUCTION ENTRANCE

EXISTING CONTOURS
EXISTING TEXT
FINISHED GRADE SPOT ELEVATION
FINISHED GRADE INTERMEDIATE CONTOUR
FINISHED GRADE INDEX CONTOUR
TEMPORARY GRADING
EXISTING TREE LINE
PROPOSED TREE LINE
SOIL BOUNDARY

COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE ATTORNEY GENERAL
JULIA E. RYAN, ATTORNEY GENERAL
03/27/2025

Professional Certification
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Expiration Date 06-30-2025

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108 SOUTH POTOMAC STREET
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860.633.1100
717.275.1007

DATE	DESCRIPTION	REVIEWED BY	REVIEWED FOR
12/22/24	Revised per DEP/PCDD Test Comments	Reviewed by	Reviewed for
03/07/25	Revised per Elevated Review Comments	Reviewed by	Reviewed for
03/28/25	Revised per 2nd Elevated Review Comments	Reviewed by	Reviewed for

AMPA HOLDINGS - RITNER HWY

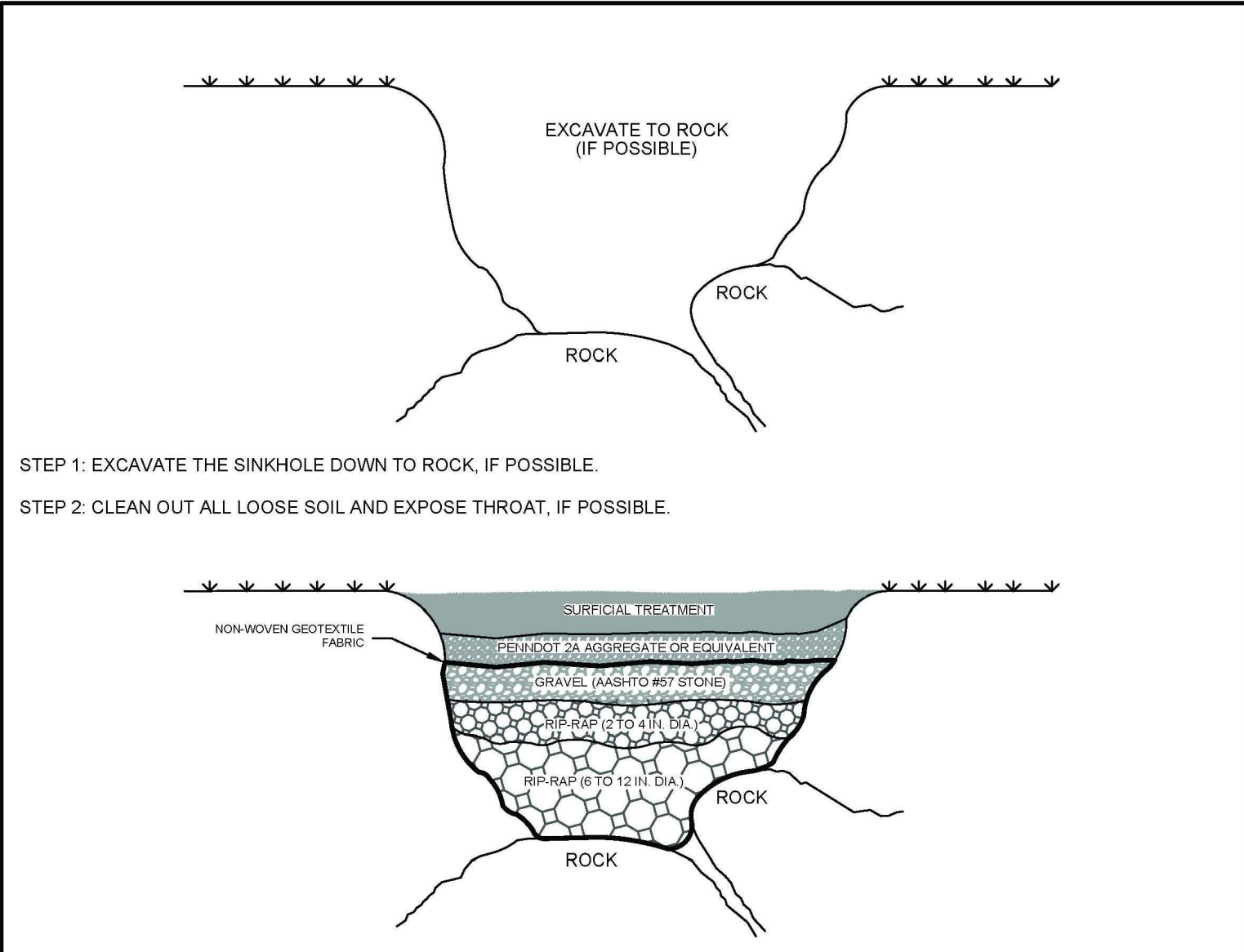
SITUATED APPROXIMATELY 1 MILE FROM SOUTHWEST OF THE INTERSECTION OF RITNER HIGHWAY (US-11) AND CENTERLINE ROAD (PA-230)

WEST PENNSBORO TOWNSHIP
CUMBERLAND COUNTY, PENNSYLVANIA

AMPA HOLDINGS, LLC
1514 WEST COMMERCE AVENUE SUITE 203 CARLISLE, PA 17013
(717) 336-4500

PROJECT NO.	2022-0251
DWN BY	CMH
DATE	11-15-2023
PROJECT MANAGER	JTD
EMAIL	JDoty@sa-inc.com
PROPERTY INFORMATION	46-10-0620-006A
SCALE	1" = 50'
SHEET TITLE	E & S CONTROL PLAN

C-607
SHEET 46 OF 63



- STEP 1: EXCAVATE THE SINKHOLE DOWN TO ROCK, IF POSSIBLE.
- STEP 2: CLEAN OUT ALL LOOSE SOIL AND EXPOSE THROAT, IF POSSIBLE.
- STEP 3: LINE THE EXCAVATION WITH NON-WOVEN GEOTEXTILE FABRIC (MIRAFI 140N OR EQUIVALENT.
- STEP 4: PLACE A LAYER OF LARGE STONE IN THE EXCAVATION. STONE SHOULD BE APPROXIMATELY 6 TO 12 INCHES IN DIAMETER.
- STEP 5: PLACE A LAYER OF SMALLER STONE ON TOP. THIS LAYER SHOULD CONSIST OF STONES APPROXIMATELY 2 TO 4 INCHES IN DIAMETER.
- STEP 6: PLACE A LAYER OF GRAVEL ON TOP OF THE SMALLER STONES. THE GRAVEL SHOULD BE AASHTO #57 STONE OR EQUIVALENT.
- STEP 7: COVER THE GRAVEL WITH THE GEOTEXTILE FABRIC. THIS WILL PREVENT THE FINES FROM THE NEXT LAYER FROM BEING LOST IN THE VOID SPACE OF THE GRAVEL/STONE.
- STEP 8: PLACE A LAYER OF PENNDOT 2A AGGREGATE OR EQUIVALENT ON TOP OF THE GEOTEXTILE FABRIC. COMPACT TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (MDD) AS OBTAINED BY ASTM D698 (OR 92% OF THE MDD AS OBTAINED BY ASTM D1557.)
- STEP 9: FILL THE REMAINDER OF THE HOLE WITH SOIL TO MATCH GRADE. THIS CAN BE LAYERED TO MATCH THE EXISTING SOIL PROFILE.

NOTE: IDEALLY EACH LAYER IS APPROXIMATELY 6 INCHES TO 2 FEET THICK. HOWEVER, THICKER LAYERS ARE SOMETIMES WARRANTED DEPENDING ON THE DEPTH OF THE FEATURE. ALL SINKHOLE REPAIRS SHOULD BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER EXPERIENCED WITH CARBONATE GEOLOGY AND SINKHOLE REPAIR PROCEDURES. DETAILS CAN BE MODIFIED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER BASED ON THE ENCOUNTERED CONDITIONS. POSITIVE DRAINAGE AWAY FROM THE OPEN EXCAVATION SHOULD BE MAINTAINED.



PNDI AVOIDANCE MEASURES

The proposed project is located within the vicinity of northern long-eared bat spring staging/fall swarming habitat. To ensure take is not reasonably certain to occur, do not conduct tree removal from May 15 to August 15. The U.S. Fish and Wildlife Service determined take is not reasonably certain to occur from tree removal if activities are avoided during the pup season (i.e., the range of time when females are close to giving birth (i.e., two weeks prior to birth) and have non-volant (i.e., unable to fly) young). For more information, see the Interim Voluntary Guidance for the Northern Long-Eared Bat: Forest Habitat Modification.

GEOTECHNICAL NOTES (from report by ECS Mid Atlantic, LLC Report dated May 20, 2023)

- The time observed for the excavation of the sinkhole was used to verify that suitable conditions are present.
- The construction of basins may encounter conditions that were not anticipated as a result of subsurface exploration. As a result, the following sequence of items is to address these construction related difficulties or discrepancies with the design assumptions.
 - If redoximorphic features (soil mottling and coloration patterns formed by the reduction of iron and/or manganese from saturated conditions in soil) are encountered:
 - A qualified professional should determine if the features observed are associated with a historic condition (associated with fill, previous site condition, or natural coloration) or are associated with conditions that could presently occur (seasonal variations in the water table).
 - Evaluate the elevation of the features relative to the proposed design elevation of the SWM feature and determine if the size and elevation of the SWM feature can be adjusted to alleviate the conflict.
 - Retain ECS and Civil Engineer to evaluate alternate design concepts. Alternate design proposed by the Professional should be submitted to the Township for approval.
 - If the field verified infiltration rates are excessively high (greater than 6 inches per hour):
 - Determine the extent of the materials exhibiting the high infiltration rates through a combination of visual-manual classification, hand probing, density testing, or other suitable methods as determined by ECS.
 - Overexcavate the materials to the depth where the material type changes or a maximum depth of 2 feet, whichever is encountered first.
 - If excessive rates are associated with weathered or broken rock, the rock surface should be examined by ECS, prior to replacement of suitable material.
 - Replace the excavated material with finer grained materials approved by ECS. Suitable soil mixtures can consist of a blend of on-site and/or off-site materials available to the Contractor generally conforming to the table below, with field infiltration rates post placement determined by ECS.

Permissible Soil Types for Soil Media, based on USDA Classification	RECOMMENDED SOIL MEDIA BLEND						Typical Infiltration Rates for Permissible Soil Types (in/hr)*	
	Ranges of USDA Particle Size Percentages							
	Sand		Silt		Clay		Min	Max
	Min	Max	Min	Max	Min	Max		
Sand, Loamy Sand, Sandy Loam, Loam	50	100	0	50	0	20	0.5	6.0

- Materials should be lightly tracked into place in non-structural areas.
- If material replacement is required in structural areas (Ex: below-grade SWM facilities in paved areas), material placement specifications, including materials type, mix ratio, compactive effort and required density should be determined by ECS. Technical recommendations should be sealed by ECS and submitted to the Township for approval.
 - If the field verified infiltration rates are excessively low (less than 0.1 inches per hour):
 - Determine the extent of the materials exhibiting the low infiltration rates through a combination of visual-manual classification, hand probing, density testing, or other suitable methods as determined by ECS.
 - Overexcavate the materials to the depth where the material type changes or a maximum depth of 2 feet, whichever is encountered first.
 - If bedrock is encountered, the rock should be removed to a minimum depth of 2 feet below the bottom of basin and should be blended by ECS, prior to replacement of suitable material.
- Replace the excavated material with more coarsely grained materials approved by ECS. Suitable soil mixtures can consist of a blend of on-site and/or off-site materials available to the Contractor, and subject to testing and approval by ECS.
- Suitable soil mixtures may consist of materials blended by volume ratios as determined by ECS.
- Materials should be lightly tracked into place in non-structural areas.
- If material replacement is required in structural areas (Ex: below-grade SWM facilities in paved areas), material placement specifications, including materials type, mix ratio, compactive effort and required density should be determined by ECS. Suitable soil mixtures can consist of a blend of on-site and/or off-site materials available to the Contractor generally conforming to the table above, with field infiltration rates post placement determined and approved by ECS.

NPDDES PERMIT EFFLUENT LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

- 2. MONITORING AND REPORTING REQUIREMENTS**
 - Visual Inspections The permittee and co-permittee must ensure that visual site inspections are conducted bi-weekly, and after each precipitation event by qualified personnel. Trained and experienced in erosion and sediment control, to ascertain that the BMPs are operational and effective in preventing pollution to the waters of the Commonwealth. A written report of each inspection shall be kept, and include:
 - a summary of site conditions, BMPs, and compliance; and
 - the date, time, and the name of the person conducting the inspection.
 - Noncompliance Reporting Where BMPs are found to be inoperative or ineffective during an inspection, or any other time, the permittee and co-permittee shall immediately contact the reviewing entity, by phone or personal contact, followed by the submission of a written report within 5 days of the initial contact. Noncompliance reports shall include the following information:
 - (1) Any condition on the project site which may endanger public health, safety, or the environment, or involve incidents which cause or threaten pollution;
 - (2) the period of noncompliance, including exact dates and times and/or anticipated time when the activity will return to compliance;
 - (3) steps being taken to rectify, eliminate, and prevent recurrence of the noncompliance; and
 - (4) the date or schedule of dates, and identifying remedies for correcting noncompliance conditions.
 - 3. RECORD KEEPING**
 - Retention of Records The permittee and co-permittee shall retain records of all monitoring information including copies of all monitoring and inspection reports required by this permit, and any correspondence to complete the Notice of intent for this permit, for a period of three years from the date of the termination of coverage under this permit.
 - Reporting of Monitoring Reports Monitoring results shall be submitted to the reviewing entity upon request.
- PART B STANDARD REQUIREMENTS**
 - 1. MANAGEMENT REQUIREMENTS**
 - Duty to Provide Information
 - (1) The permittee or co-permittee shall furnish to the Department, or the local county conservation district when acting as the reviewing entity, within 30 days of the date of request, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or coverage approved under this permit, or to determine compliance with this permit.
 - (2) The permittee or co-permittee shall furnish, upon request, to the Department, or the local county conservation district when acting as the reviewing entity, copies of records required to be kept by this permit.
 - (3) When the permittee or co-permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, PPC Plan, E&S Control Plan, or in any other report to the Department, or the local county conservation district when acting as the reviewing entity, the permittee or co-permittee shall promptly submit or correct such facts or information.
 - (4) The permittee or co-permittee shall give seven calendar days advance notice to the Department, or the local county conservation district when acting as the reviewing entity, of any planned physical alterations or additions to the permitted facility which could, in any way, substantially affect the quality and/or quantity of stormwater discharged from the activity.
 - Facilities Construction, Operation, and Maintenance
 - The permittee and co-permittee shall design, build, implement, and at all times operate and maintain BMPs, including PPC Plans, E&S Control Plans, and any other stormwater pollution prevention and management measures.
 - Adverse Impact
 - The permittee and co-permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
 - Reduction, Loss, or Failure of the BMPs
 - Upon reduction, loss or failure of the BMPs, the permittee and co-permittee shall take immediate action to restore the BMPs or provide an alternative method of treatment.
 - 2. COMPLIANCE RESPONSIBILITIES**
 - Duty to Comply
 - The permittee and co-permittee must comply with all terms and conditions of this general permit. Any permit noncompliance constitutes a violation of the Pennsylvania Clean Streams Law and the federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit or permit renewal.
 - Penalties for Violations of Permit Conditions
 - The permittee and co-permittee may be subject to criminal and/or civil penalties for violations of the terms and conditions of this general permit under Section 602 and 605 of the Clean Streams Law, 35 P.S. Sections 691.602 and 691.605, and under the Clean Water Act as specified in 40 C.F.R. Sections 122.41 (a)(2) and (3), which are incorporated by reference.
 - PART C OTHER CONDITIONS**
 - 2. EROSION AND SEDIMENT CONTROL PLANS**
 - An Erosion and Sediment Control Plan, must be prepared, developed, and implemented for each activity covered by this permit in accordance with the Department's Chapter 102 Rules and Regulations, and Department guidelines. Each plan must be submitted to the Department or local county conservation district when acting as the reviewing entity. E&S Control Plans, BMPs, and revisions thereof, which meet the requirements of Chapter 102, are conditions of this permit and incorporated by reference.
 - Erosion and Sediment Control Plans for activities covered by this permit are considered reports that shall be available to the public under Section 607 of the Clean Streams Law, and 25 Pa. Code, Chapter 32 of the Department's regulations. The owner or operator of a facility with stormwater discharges covered by this permit shall make plans available to the public upon request by the public. Erosion and Sediment Control Plans must be made available at the site of the construction activity at all times.
 - The staging of earth disturbance activities and maintenance requirements contained in the E&S Plan must be followed.
 - 3. RECYCLING AND DISPOSAL OF BUILDING MATERIALS AND WASTES**
 - All building materials and wastes must be removed from the site and recycled or disposed in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code section 260.1 et seq., section 271.1 et seq., and section 287.1 et seq. No building material or wastes or unused building materials shall be burned, dumped, or discharged at the site.
 - 5. PREPAREDNESS, PREVENTION AND CONTINGENCY PLANS**
 - If the potential exists for causing accidental pollution of air, land, and water, or for causing endangerment of public health and safety through accidental release of toxic, hazardous, or other polluting materials, the permittee or co-permittee must develop a Preparedness, Prevention, and Contingency (PPC) Plan. The PPC Plan shall be developed in accordance with Department regulations. The PPC Plan shall identify areas which may include, but are not limited to, waste management areas, raw material storage areas, temporary and permanent solid storage areas, maintenance areas, and any other areas that may have the potential to cause noncompliance with the terms and conditions of this permit due to the storage, handling, or disposal of any toxic or hazardous substances, such as oil, gasoline, pesticides, herbicides, solvents, etc. BMPs shall be developed and implemented for each identified area. The PPC Plan shall be maintained on site at all times and shall be made available for review at the Department's or county conservation districts' request.
 - 6. PRE-CONSTRUCTION CONFERENCES**
 - The permittee or co-permittee shall contact the reviewing entity at least seven days before construction is to begin to determine if a pre-construction conference is required. The permittee, co-permittee and others undertaking the earth disturbance activity must attend a pre-construction conference if requested by the reviewing entity.
 - 7. SPOIL OR BORROW AREA**
 - The Erosion and Sediment Control Plan, shall be prepared, developed and implemented for all spoil and borrow areas, regardless of their location.
 - 9. PHASED PROJECTS** Prior to the commencement of earth disturbance activities for additional phases or portions of the project, the permittee or co-permittee shall submit an Erosion and Sediment Control Plan for each additional phase or portion of the project for review and authorization by the reviewing entity. Coverage under this permit is only granted for those phases or portions of a project for which an Erosion and Sediment Control Plan has been submitted to and authorized by the reviewing entity.
 - 10. WETLAND PROTECTION** If hydric soils are present, a wetland determination must be conducted in accordance with Department procedures. All wetlands identified must be included on the E&S Control Plan.

IMPORT/EXPORT FILL ENVIRONMENTAL DUE DILIGENCE

Any fill material required for the site or access material to be wasted from the site is required to be hauled from or to, as applicable, a site with an approved soil erosion and sediment control plan.

The Owner/Developer and/or Operator is responsible to perform environmental due diligence and determine that all fill imported to the site or exported from the site meets the D-E.P. definition of clean fill.

Clean Fill: 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 for re-use.)

Environmental due diligence: Investigative techniques, including, but not limited to visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance.

RECYCLING & DISPOSAL OF MATERIALS

Wastes generated during the construction of this project shall be recycled if at all possible. This shall include the erosion control berms. Any materials that cannot be recycled or reused shall be disposed of at a NPDES permitted site. If soil and/or rock disposal or borrow areas are required, approved erosion and sedimentation controls shall be implemented at these areas that meet chapter 102 and/or other state and federal regulations.

All building materials and wastes must be removed from the site and recycled or disposed 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 waste unused building materials shall be burned, buried, dumped or discharged at the site.

ANTICIPATED CONSTRUCTION WASTES

Anticipated construction wastes requiring recycling or disposal are:

- Demolished building material.
- Road and building construction waste.
- Utility construction waste.
- Concrete wash water.
- Construction worker's trash.

EXISTING SOILS/HYDRIC RATING

DuB	DUFFIELD SILT LOAM, 3-8% SLOPES, (NOT HYDRIC) (PRIME FARMLAND)
HuB	HAGERSTOWN SILT LOAM, 3-8% SLOPES, (NOT HYDRIC) (PRIME FARMLAND)
HuB	HAGERSTOWN SILT LOAM, ROCKY, 3-8% SLOPES, (NOT HYDRIC) (PRIME FARMLAND)
HcC	HAGERSTOWN SILT LOAM, ROCKY, 9-15% SLOPES, (NOT HYDRIC) (PRIME FARMLAND)
HuB	HAGERSTOWN-ROCK OUTCROP COMPLEX, 0-8% SLOPES, (NOT HYDRIC)
HuB	HAGERSTOWN-ROCK OUTCROP COMPLEX, 3-25% SLOPES, VERY ROCKY, (NOT HYDRIC)
HuA	HUNTINGTON SILT LOAM, 0-5% SLOPES, (NOT HYDRIC) (PRIME FARMLAND)

STANDARD E&S PLAN NOTES

- A copy of the stamped approved drawings signed and dated by the Cumberland County Conservation District must be available at the project site at all times.
- 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 post construction stormwater management plan preparer, and a representative from the Cumberland County Conservation District to an on-site preconstruction meeting.
- 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 1-800-242-1778 for the location of existing underground utilities.
- 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 Cumberland County Conservation District or by DEP prior to implementation.
- 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 Construction Sequence for that stage or phase has been installed and are functioning as described in this document.
- 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.
- Stockpile heights must not exceed 35 feet. Stockpile slopes must be 2H:1V or flatter.
- Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate BMPs to minimize the potential for erosion and sediment pollution and notify the Cumberland County Conservation District and/or the regional office of DEP.
- All building materials and wastes must be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code Chapter 260, §260.1 et seq., 271.1 et seq., and 287.1 et seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
- All off-site waste and borrow areas used have an E&S Plan approved by the Cumberland County Conservation District or DEP fully implemented prior to being activated.
- The contractor is responsible for ensuring that any material brought on site is Clean Fill. Form FP-001 must be retained by the property owner if material affected by a spill or release of a regulated substance not qualifying as Clean Fill due to analytical testing.
- All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
- Vehicles and equipment may neither enter directly nor exit directly from Lots onto Public Streets except where shown.
- Until the site is stabilized, all E&S BMPs must be maintained properly. Maintenance must include inspections of all E&S BMPs after each runoff event and on a weekly basis for remedial maintenance work, including clean out, repair, replacement, re-grading, re-seeding, re-mulching and re-netting must be performed immediately. If E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
- A written report 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.
- 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.
- All sediment removed from BMPs shall be disposed of in the manner described in the plan drawings.
- Areas which are to be topsoiled shall be scarified to a minimum depth of 4 inches 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 outcrops shall have a minimum of 2 inches of topsoil.
- 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.
- All fills shall be placed in compacted layers not to exceed 9 inches in thickness.
- Fill materials shall be free of frozen particles, brush, roots, soil, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
- Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills.
- Fill shall not be placed on saturated or frozen surfaces.
- Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
- All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated.
- 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.
- 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 movement.
- E&S BMPs must remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the Cumberland County Conservation District or DEP.
- Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the Cumberland County Conservation District for an inspection prior to removal/conversion of the E&S BMPs.
- After final site stabilization has been achieved, temporary E&S BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs must be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal/conversions should be done only during the germinating season.
- Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the Cumberland County Conservation District to schedule a final inspection.
- Failure to correctly install E&S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate or corrective action to resolve failure of E&S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Pennsylvania Department of Environmental Protection 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.
- Upon temporary cessation of an earth disturbance activity or any stage or phase of an activity where a cessation of earth disturbance activities will exceed 4 days, the site shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities.

ADDITIONAL NOTES

- All channels shall be kept free of obstructions including but not limited to fill, rocks, leaves, woody debris, accumulated sediment, excess vegetation, and construction materials/wastes. The channel shall be initially over excavated to allow for the placement of topsoil.
- Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross-section and protective lining. Any base flow within the channel shall be conveyed past the work area in the manner described in this plan until such restoration is complete.
- Channels having a sloped bottom, Reno Mattress, or Gabion linings must be sufficiently over-excavated so that the design dimensions will be provided after placement of the protective lining.

SEEDING/STABILIZATION NOTES

- As disturbed areas within a project approach final grade, preparations should be made for seeding and mulching to begin. In no case should an area exceeding 15,000 square feet, which is to be stabilized by vegetation, reach final grade without being seeded and mulched.
- 2. TEMPORARY SEEDING (TEMPORARY STABILIZATION)**
 - Seed: Annual Rye 40 lbs/acre
 - Fertilizer: 10-10-10 @ 500 lbs/acre
 - Mulch: Straw 3 tons/acre (Straw and hay mulch should be anchored immediately after application to prevent being windblown. A tractor-drawn implement may be used to "tump" the straw or hay into the soil. This method is limited to slopes no steeper than 3:1. The machinery should be operated on the contour. Note: Crimping of hay or straw by running over it with tracked machinery is not recommended.
 - Lime: One ton/acre
- All diversions, channels, sediment traps and stockpiles shall be stabilized immediately. Any disturbed area on which activity has ceased and which will remain exposed shall be stabilized immediately. During non-germinating periods, mulch shall be applied at the recommended rates. Disturbed areas which are not at finished grade and which will be redistributed within 1 year may be stabilized in accordance with the Temporary Seeding Specifications. Disturbed areas which are not at finished grade or will not be redistributed within 1 year shall be stabilized in accordance with the Permanent Seeding Specifications.

- 3. PERMANENT SEEDING (PERMANENT STABILIZATION)**
 - Nurse Crop: Annual Ryegrass 10 lbs/acre (PLS)
 - Seed (Mix 2): Kentucky bluegrass 25 lbs/acre or Perennial ryegrass 15 lbs/acre (PLS)
 - Critical areas (Mix 3): Birdstrof trefoil 6 lbs/acre, plus Tall Fescue 30 lbs/acre (PLS)
 - Lime: Six tons/acre
 - Fertilizer: Soil tests are recommended. In the absence of a soil test apply at the rate of 10-10-20 @ 1000 lbs/acre
 - Mulch: Straw 3 Tons/acre
 - Asphalt: SS-1 or Equivalent 150 Gal/acre

- 4. SEED DATES**
 - March 15th - May 15th
 - August 15th - October 15th
- All areas shall be permanently seeded and mulched within one (1) week of reaching final grade, if in seeding season, otherwise temporary seeding requirements shall be met. All areas seeded with a temporary mixture will receive a permanent seed mixture during the first growing season following the finished grading. Areas with permanent slopes of 2:1 or greater shall be stabilized using crown vetch, as per the requirements of standard and specifications for critical areas stabilization (with ground covers, vines, shrub, and trees).

- 5. FINAL STABILIZATION**
 - Any remaining non-graded, but unstabilized areas, including existing agricultural areas within the limits of disturbance should be stabilized as per the permanent stabilization specifications.

MULCH APPLICATION RATES				Notes
Mulch Type	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Straw	3 Tons	140 lb.	1,240 lb.	Either wheat or oat straw. Free of weeds, not chipped or finely broken
Hay	3 Tons	140 lb.	1,240 lb.	Do not use straw in winter, during hot and dry weather or on steep slopes (3:1 or steeper)
Wood Chulkose	1,500 lb.	35 lb.	310 lb.	When used over straw or hay
Wood	1,000 lb. Chulkose	25 lb.	210 lb.	When used over straw or hay
Wood Chips	4-6 Tons	165-275 lb.	1,660-2,500 lb.	May prevent germination of grasses and legumes

Tacking Notes:
Straw and hay mulch should be anchored immediately after application to prevent being windblown. A tractor-drawn implement may be used to "tump" the straw or hay into the soil. This method is limited to slopes no steeper than 3:1. The machinery should be operated on the contour. Note: Crimping of hay or straw by running over it with tracked machinery is not recommended.

Polymeric and gum tackifiers mixed and applied according to manufacturer's recommendations may be used to tack mulch.

Synthetic binders, or chemical binders, may be used as recommended by the manufacturer to anchor mulch provided sufficient documentation is provided to show they are non-toxic to native plant and animal species.

CRITICAL AREA: CHANNELS & BASINS

- PERMANENT SEEDING**
- Nurse Crop: Annual Rye 10 lbs/Ac. Pure Live Seed (PLS)
Mix 3 Seed: Birdstrof trefoil 6 lbs/Ac. PLS plus
Tall Fescue 30 lbs/Ac. PLS
Fertilizer: 10-10-20 1,000 lb. per acre
Mulch: 3 Tons straw per acre
Asphalt: SS-1 or Equivalent 150 Gal. per acre
Lime: Six tons dolomitic limestone per acre
Re: Penn State Erosion Control & Conservation Plantings on Non-Cropland

MAINTENANCE AND REPAIR OF EROSION AND SEDIMENT CONTROL FEATURES

Until the site is stabilized, all erosion and sediment control BMPs shall be maintained properly. All temporary control measures and facilities shall be inspected weekly and after measurable storm events (i.e. at least 0.25 inch). A written report of each inspection shall be kept per the "NPDES Permit Notes". Required repairs shall be made immediately, and shall be made by the site contractor. Disposal of all material cleaned from various sediment control devices shall be placed on the approved soil stockpile, which shall have filter fabric installed on the downwind side.

ROCK CONSTRUCTION ENTRANCE (ALTERNATE)
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. All sediment deposited on paved roadways shall be removed and returned to the construction site immediately. If excessive amounts of sediment are being deposited on roadway, extend length of rock construction entrance by 50 feet increments until condition is alleviated or install wash rack. Washing the roadway or sweeping the deposits into roadway ditches, sewer, culverts, or other drainage ways is not acceptable.

COMPOST FILTER SOCK
Traffic shall not be permitted to cross filter socks.
Accumulated Sediment shall be removed when it reaches 1/2 the above ground height of the filter sock and disposed in the manner described elsewhere in the plan. Alternatively, rather than cause a soil disturbing activity, the Conservation District may call for additional filter sock to be added at areas of high sedimentation, place immediately on top of the existing sediment laden filter sock.
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.
Biodegradable filter sock shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.
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.

PUMPED WATER FILTER BAG
A suitable means of accessing the bag with machinery required for disposal purposes shall be provided. Filter bags shall be replaced when they become 3/4 full of sediment. Spare bags shall be kept available for replacement of those that have failed or are filled. Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

CONCRETE WASHOUT
All concrete washout facilities should be inspected daily. Damaged or leaking washouts should be deactivated and repaired or replaced immediately. Accumulated materials should be removed when they reach 75% capacity. Plastic liners should be replaced with each cleaning of the washout facility.

FILTER BAG INLET PROTECTION
Sediment shall be removed when the filter bag is half full or when flow capacity has been reduced so that flooding occurs. Damaged or clogged installations shall be repaired or replaced immediately.

VEGETATED CHANNELS
All channels must be kept free of obstructions such as fill ground, fallen leaves & woody debris, accumulated sediment, and construction materials/wastes.
Channels should be kept mowed and/or free of all weeds, brushy or woody growth.
Any underground utilities running across/through the channel(s) should be immediately backfilled and the channel(s) repaired and stabilized per the channel cross-section detail.

STABILIZATION MATTING
Stabilization matting is required in all channels. The matting will either be jute or permanent matting (North American Green EuroNet P300 or equal), as shown on the plans.

WEIGHTED SEDIMENT TUBE
Sediment must be removed when the sediment reaches 2/3 the height of the tube. Damaged tubes shall be repaired or replaced within 24 hours of required inspection. A supply of tubes shall be kept on site for this purpose.

RIPRAP APRON
Riprap apron outlet protection will be used for all culverts and for the storm drain outlets.

SKIMMER (Sediment Basin)
In the inlet clogs and there is water in the basin, pull the inlet to the side of the basin and clean the inlet.
If sediment restricts skimmer movement, pull the skimmer to one side and excavate under it.
Try to keep ice broken up at the inlet and around the barrel to keep water flowing, making it less likely the inlet will freeze. Spray paint the float black to absorb heat.
Keep unauthorized persons that may do damage off the site.

SEDIMENT BASIN (Sediment Basin)
Sediment will be removed from a sediment basin when the elevation of the bottom of the basin is at the designated clean-out elevation. Sediment will not be allowed to enter waters of the Commonwealth during sediment removal or disposal operations. Embankments shall be maintained with a grassy vegetative cover, free of brush and trees. Sediment basin shall be protected from unauthorized acts of third parties.

TOPSOIL APPLICATION

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 provide a roughened surface to prevent topsoil from sliding down slope.

Topsoil should be uniformly distributed across the disturbed area to a depth of 4 to 8 inches minimum (2 inches on fill outcrops). Spreading should be done in such a manner that sodding of seedling can proceed with a minimum of additional preparation of 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 Post Construction Stormwater Management Plan.

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.

TOPSOIL TESTING

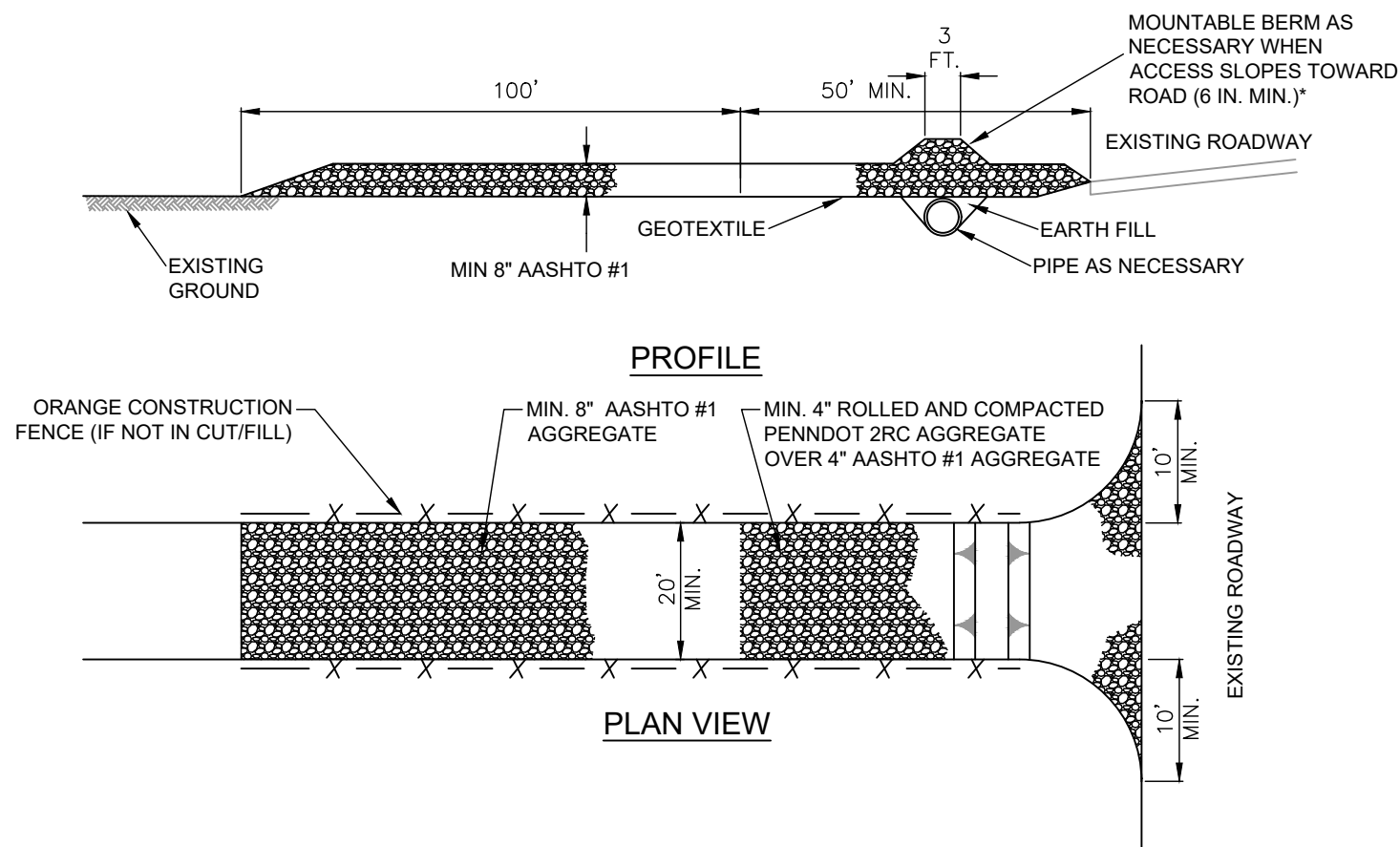
The Cumberland Co. Conservation District-Soil Use Limitations indicates the existing soils are rated Poor for Topsoil. It is recommended the existing topsoil be tested for suitability by a qualified soil-testing agency. If testing indicates the existing topsoil is unsuitable for establishing lawns, suitable topsoil shall be hauled to the site or the existing topsoil shall be amended per recommendations by the soil-testing agency.

EROSION CONTROL MATTING SPECIFICATIONS

- On slopes steeper than 3:1 or where concentrated flow occurs, an erosion control blanket shall be installed. No slope shall be cut steeper than 2:1.
- The erosion control blanket required for channels, swales, or ditches shall be as shown in the respective channel, swale, or ditch detail.
- The erosion control blanket required for stabilization of general slopes steeper than 3:1 shall be: North American Green S150.
- North American Green S150 is an erosion control blanket product which is adequate to stabilize a 2:1 slope which is up to 50 feet in length. Any disturbed slope steeper than 3:1 which is longer than 50 feet may require a different erosion control blanket product. Should this situation occur, contact the Cumberland County Conservation District for direction.

SOIL NAME	CUTBANKS CAVE		DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	HYDRIC/HYDRIC INCLUSIONS	LOW STRENGTH/ LANDS PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK - SWELL	POTENTIAL SINKH
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P:\SHARED\DESIGN\PROJECTS\2022\2022-001\PA DEP\PA DEP\DETAILS\2022-001-001.dwg 2/28/23



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

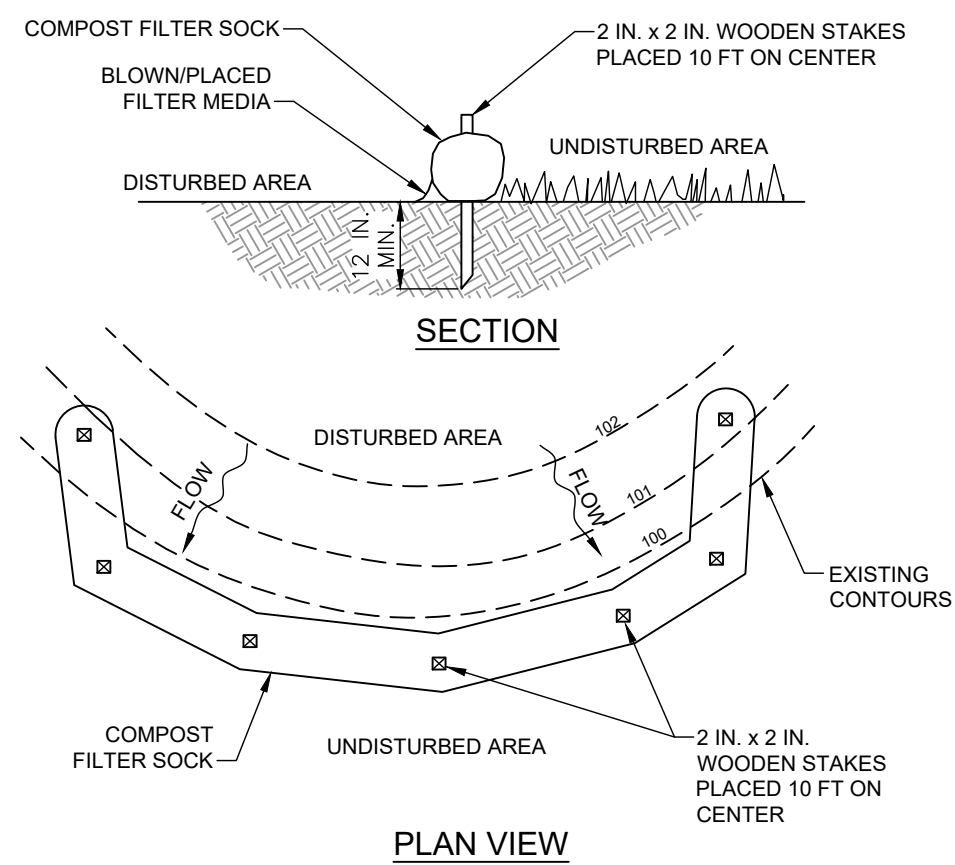
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

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. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ALTERNATE ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:

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.

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.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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.

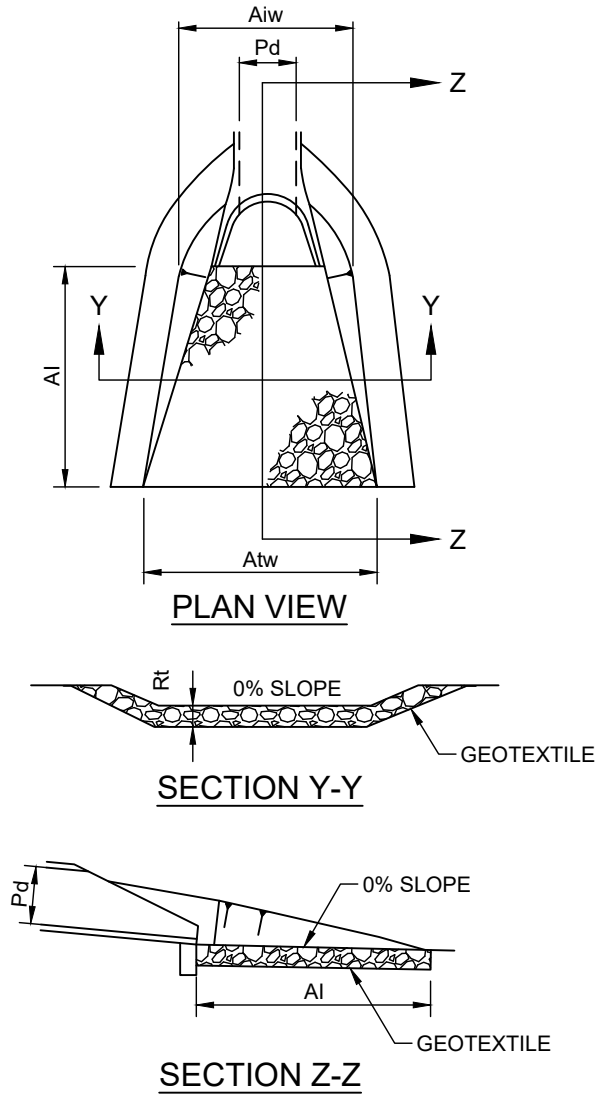
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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.

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.

STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

NOT TO SCALE



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP			APRON	
		SIZE R _L	THICK. Rt (IN)	LENGTH AI (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
E1	36	5	27	20	9	29
E2	48	6	36	26	12	38
E6	24	4	18	12	6	18
E7	12	3	9	6	3	9
E8	12	3	9	6	3	9
E9	18	4	18	8	4.5	12.5
E10	12	3	9	6	3	9
E11	18	4	18	8	4.5	12.5
E12	12	3	9	6	3	9
E13	18	5	27	8	4.5	12.5
E14	12	3	9	6	3	9
E15	24	5	27	18	6	24
E16	36	5	27	20	9	29
E19	18	4	18	8	4.5	12.5
E20	18	4	18	8	4.5	12.5
E21	12	3	9	8	3	9
E22	24	4	18	12	6	18
E24	21	4	18	14	4.5	18.5
E25	12	3	9	6	3	9
E26	18	4	18	10	4.5	14.5
E27	24	6	36	22	6	28
E28	21	4	18	12	4.5	16.5

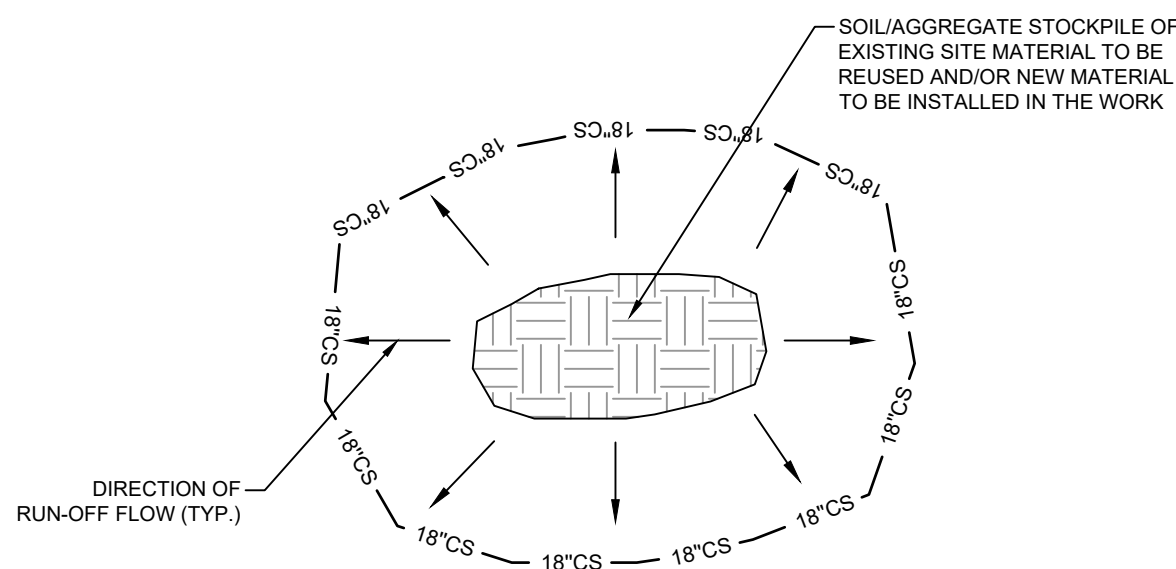
NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE

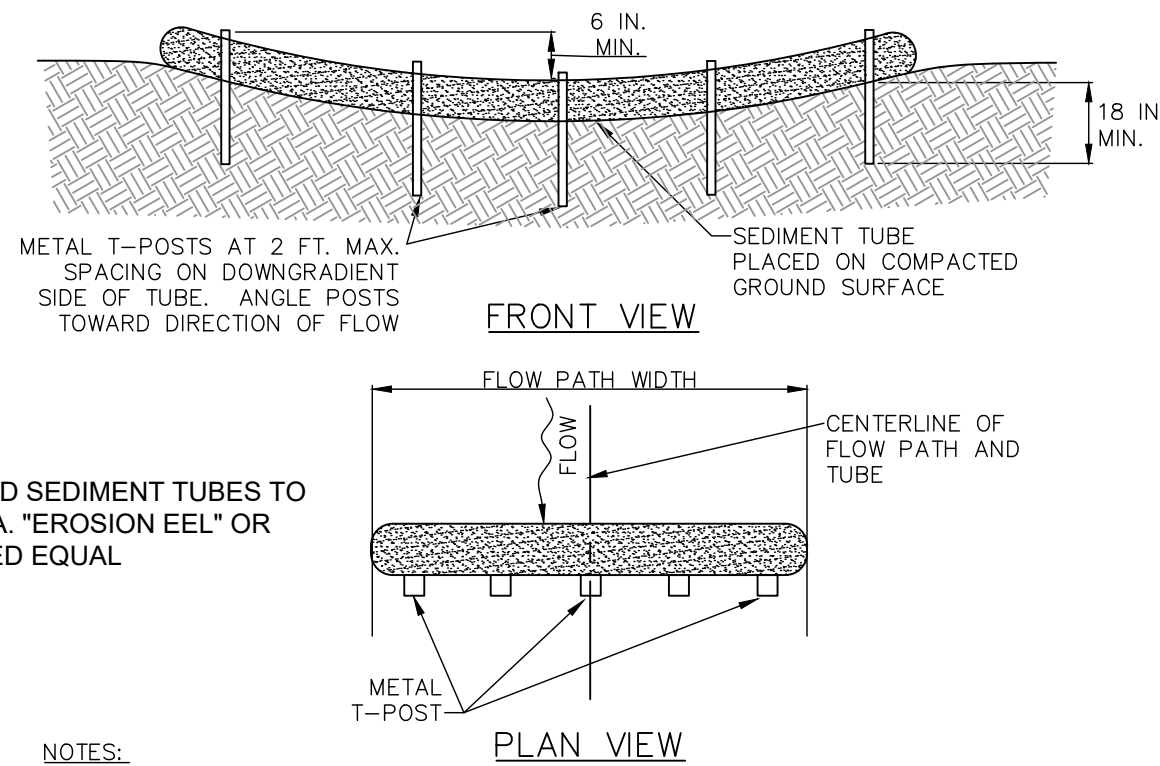


NOTES:

- All existing excavated material that is not to be reused in the work is to be immediately removed from the site and properly disposed of.
- Soil/Aggregate stockpile sites to be where shown on the drawings.
- Restore stockpile sites to pre-existing project condition and reseed as required.
- All topsoil stockpiles to be seeded immediately with a temporary seed mixture.
- Stockpiles shall not exceed 35 feet in height with 2:1 side slopes or flatter.

TOPSOIL STOCKPILE

NOT TO SCALE

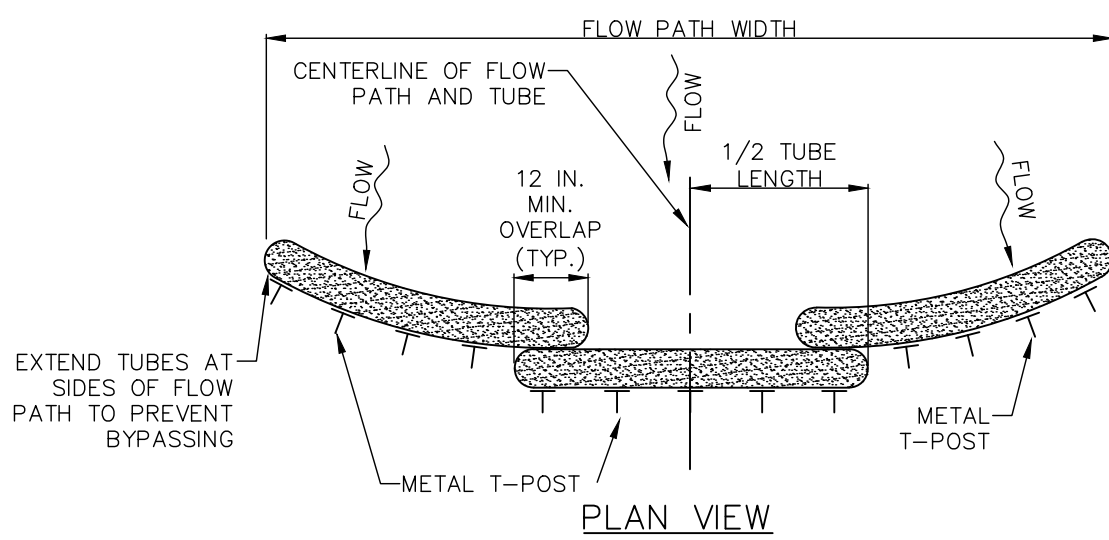


NOTE:
WEIGHTED SEDIMENT TUBES TO BE 20" DIA. "EROSION EEL" OR APPROVED EQUAL

NOTES:

THIS DETAIL APPLICABLE TO FLOW PATHS WITH WIDTHS LESS THAN OR EQUAL TO ONE TUBE LENGTH.

STANDARD CONSTRUCTION DETAIL #4-4 WEIGHTED SEDIMENT FILTER TUBE INSTALLATION CONCENTRATED FLOW AREA



NOTES:

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. SLIGHTLY ANGLE STAKES WITH TOP FACING TOWARDS DIRECTION OF FLOW.

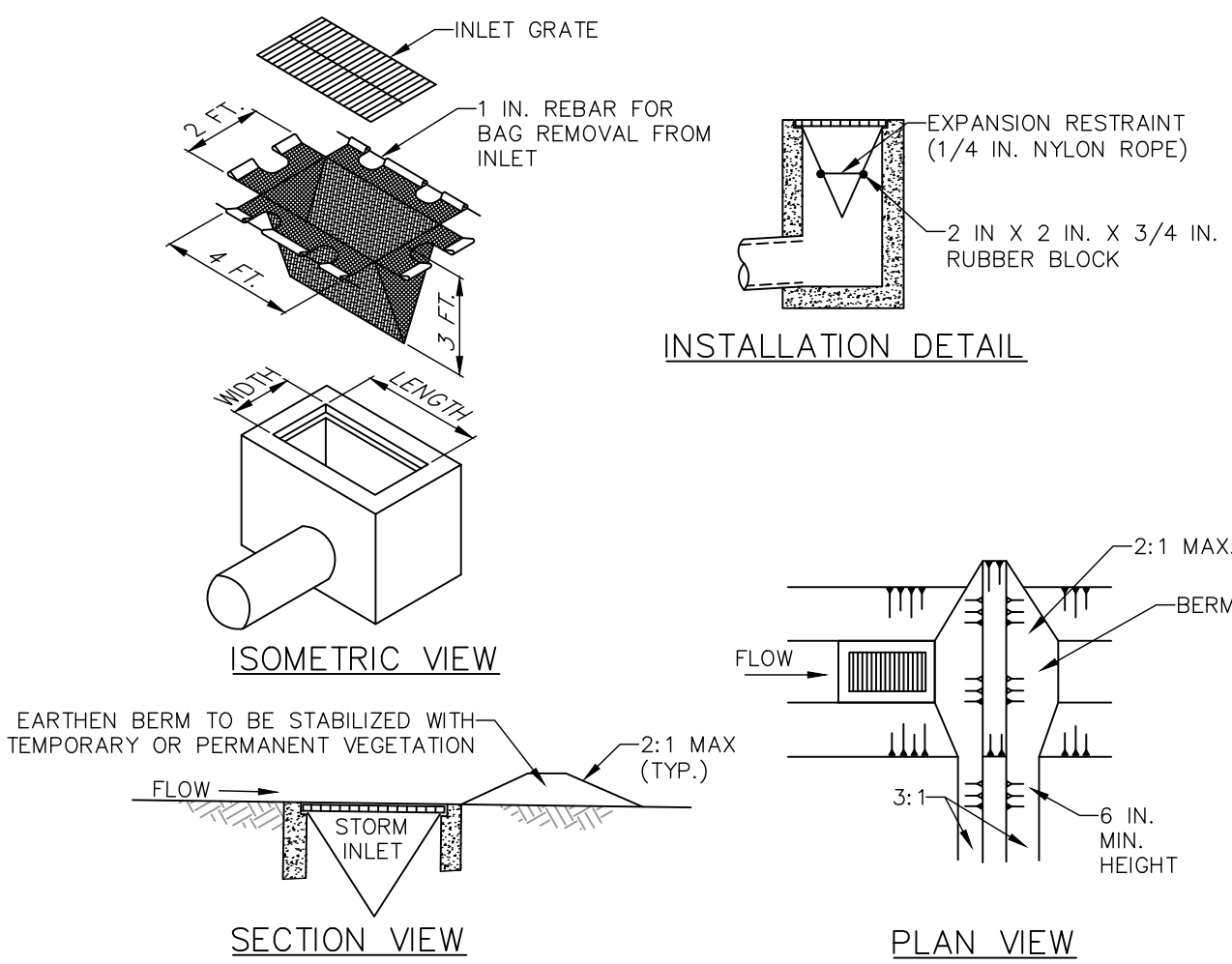
SEDIMENT TUBES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE TUBE AND DISPOSED AS DIRECTED ELSEWHERE IN THE E&S PLAN.

DAMAGED TUBES SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF TUBES SHALL BE KEPT ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-5 WEIGHTED SEDIMENT FILTER TUBE INSTALLATION ACROSS A WIDE FLOW PATH

NOT TO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSF, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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 ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

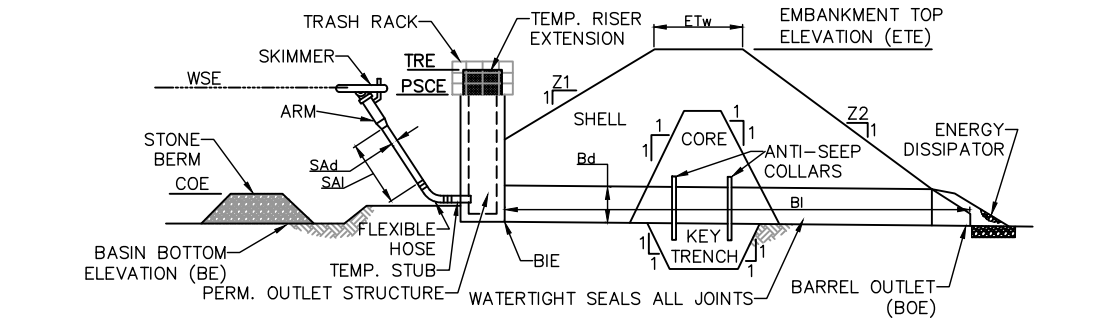
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16 FILTER BAG INLET PROTECTION - TYPE M INLET



Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Pennsylvania. License # PE00013
Expiration Date 03/22/2025

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
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BASIN NO.	Z1 (FT)	Z2 (FT)	TEMP RISER EXT. ELEV TRE (FT)	EMBANKMENT TOP ELEV ETE (FT)	CLEAN OUT ELEV COE (FT)	BOTTOM ELEV BE (FT)
1	3	3	N/A	590.32	585.00	583.00
2	3	3	N/A	590.00	585.00	583.00

SKIMMER			OUTLET BARREL			
DIA SAG (IN)	LENGTH SA (FT)	MAT'L	DIA B4 (IN)	INLET ELEV BIE (FT)	LENGTH B1 (FT)	OUTLET ELEV BOE (FT)
6.5	6	PVC	N/A	N/A	N/A	N/A
4	5	PVC	N/A	N/A	N/A	N/A

NOTES:

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE EAS PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 8 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

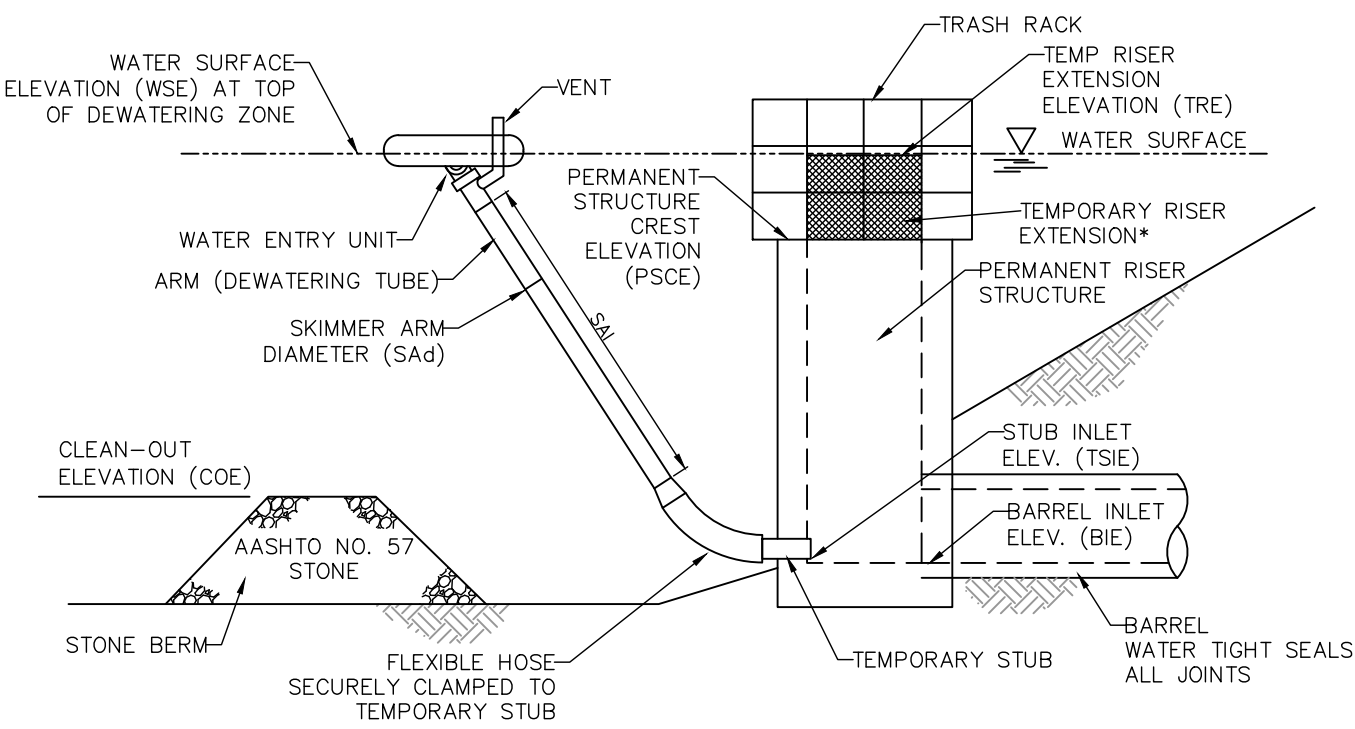
UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE EAS PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE EAS PLAN.

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATOR SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-18 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

6 C-610 STANDARD CONSTRUCTION DETAIL #7-4 SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER NOT TO SCALE



SECTION VIEW

SEE MANUFACTURER DETAIL ON SHEET C-611

BASIN NO.	WATER SURFACE ELEV. WSE (FT)	ORIFICE			SKIMMER			FLEXIBLE HOSE		
		DIA. (IN)	HEAD (FT)	LENGTH (IN)	DIA. (IN)	LENGTH (IN)	MAT'L	DIA. (IN)	LENGTH (IN)	MAT'L
1	587.34	6.5	0.07	6.5	6	5	PVC	MANF.	MANF.	MANF.
2	586.68	4	0.00	4	5	5	PVC	MANF.	MANF.	MANF.

TEMPORARY STUB	INVERT ELEV TSIE (FT)	DIA. (IN)	PERMANENT RISER		RISER EXTENSION		BARREL	
			CREST ELEV PSCE (FT)	HORIZ. OPENING EI (IN)	CREST ELEV TRE (FT)	HORIZ. OPENING EW (IN)	INLET ELEV BIE (FT)	LENGTH (FT)
6.5	585.00	CONC.	N/A	N/A	N/A	N/A	N/A	N/A
4	585.00	CONC.	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

ALL ORIFICES ON PERMANENT RISER BELOW TEMPORARY RISER EXTENSION SHALL HAVE WATER-TIGHT TEMPORARY SEALS PROVIDED. TEMPORARY STUB INVERT ELEVATION SHALL BE SET AT OR BELOW SEDIMENT CLEAN-OUT ELEVATION.

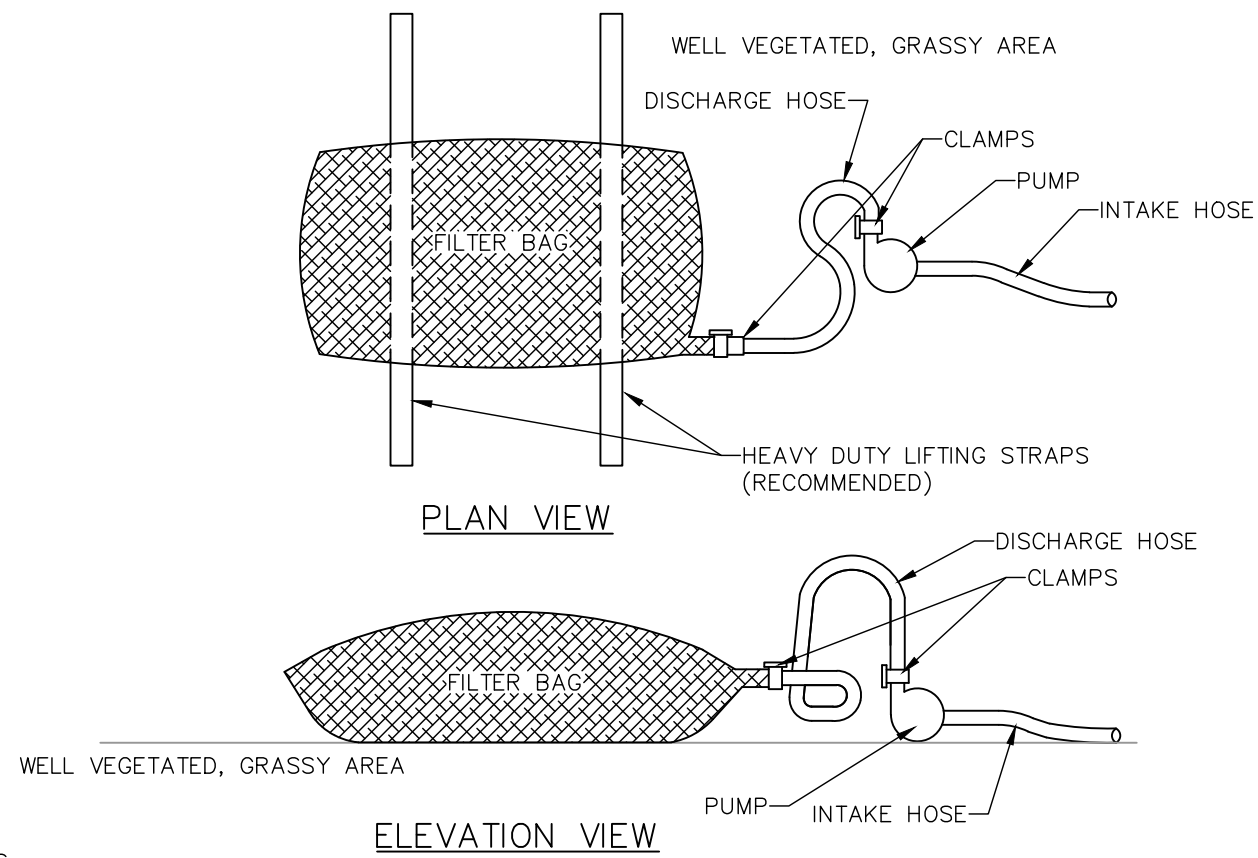
A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE STONE BERM. SEE STANDARD CONSTRUCTION DETAIL #7-3 FOR CONFIGURATION OF STONE BERM.

STANDARD CONSTRUCTION DETAIL #7-2 SKIMMER ATTACHED TO PERMANENT RISER NOT TO SCALE



NOTES:

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

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 FILLED OR ARE FILLED. BAGS SHALL 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.

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.

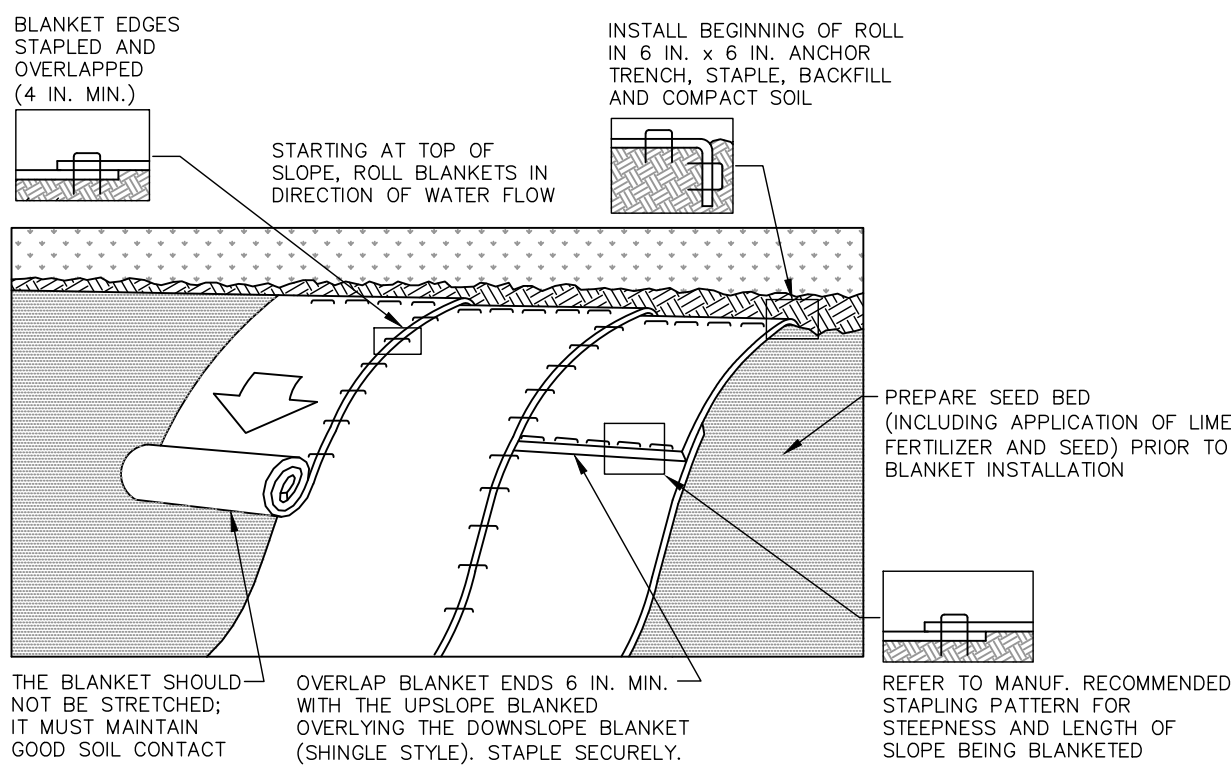
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HO OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

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.

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.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG NOT TO SCALE



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

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.

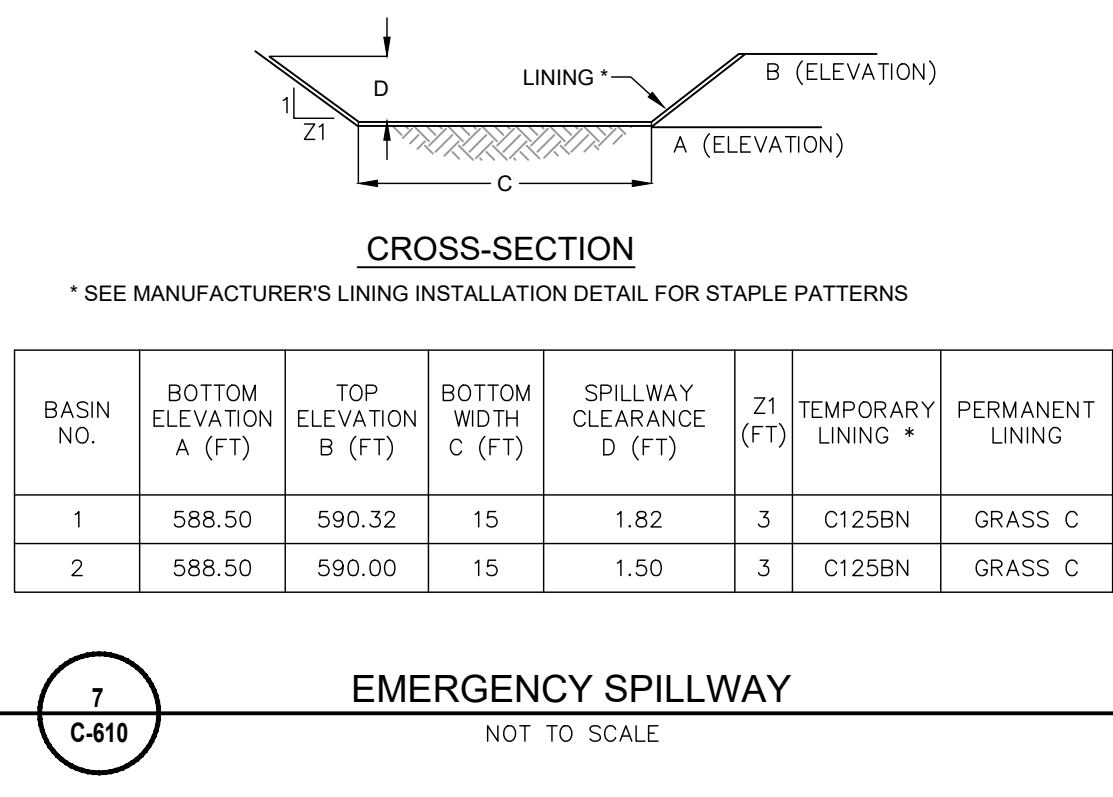
THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

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.

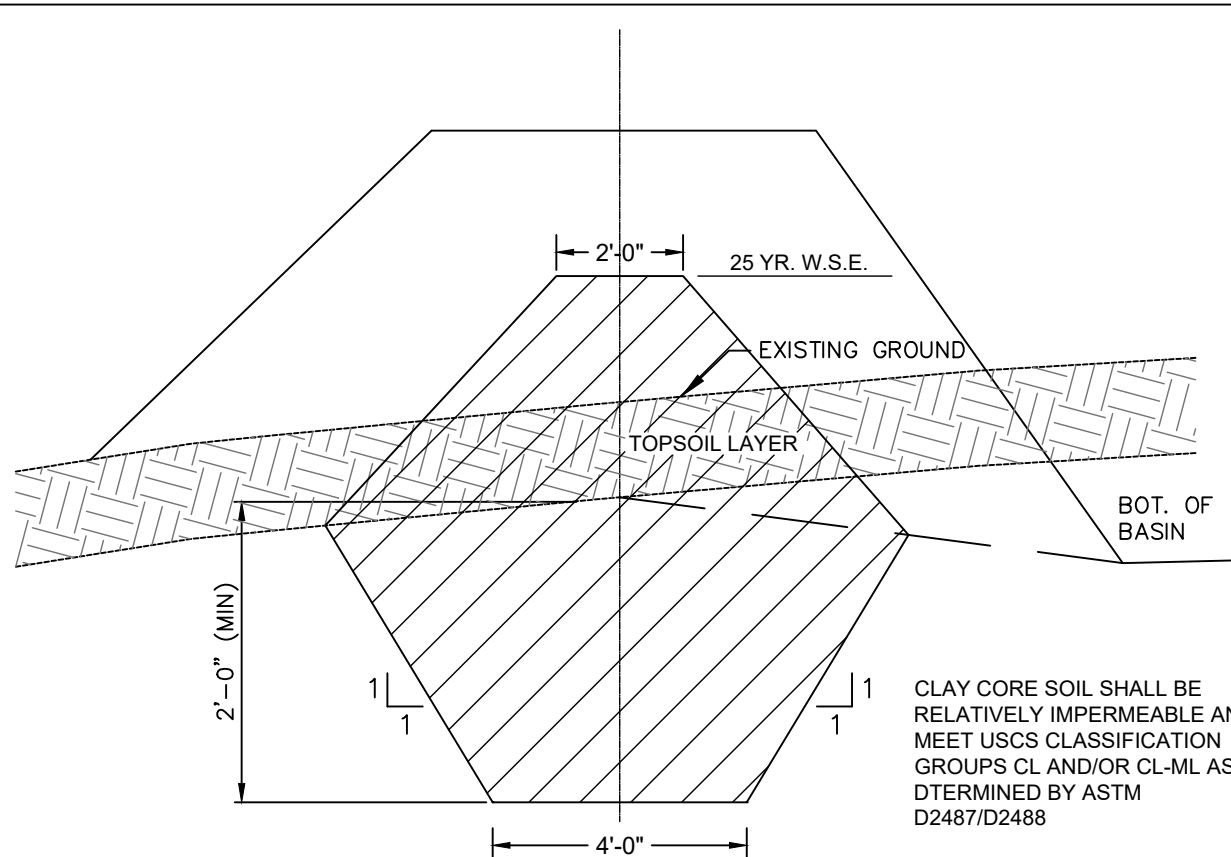
STANDARD CONSTRUCTION DETAIL #11-1 EROSION CONTROL BLANKET INSTALLATION NOT TO SCALE

EROSION CONTROL MATTING SPECIFICATIONS

- On slopes steeper than 3:1 or where concentrated flow occurs, an erosion control blanket shall be installed. No slope shall be cut steeper than 2:1.
- The erosion control blanket required for channels, swales, or ditches shall be as shown in the respective channel, swale, or ditch detail.
- The erosion control blanket required for stabilization of general slopes steeper than 3:1 shall be: North American Green S150.
- North American Green S150 is an erosion control blanket product which is adequate to stabilize a 2:1 slope which is up to 50 feet in length. Any disturbed slope steeper than 3:1 which is longer than 50 feet may require a different erosion control blanket product. Should this situation occur, contact the Cumberland County Conservation District for direction.



EMERGENCY SPILLWAY NOT TO SCALE



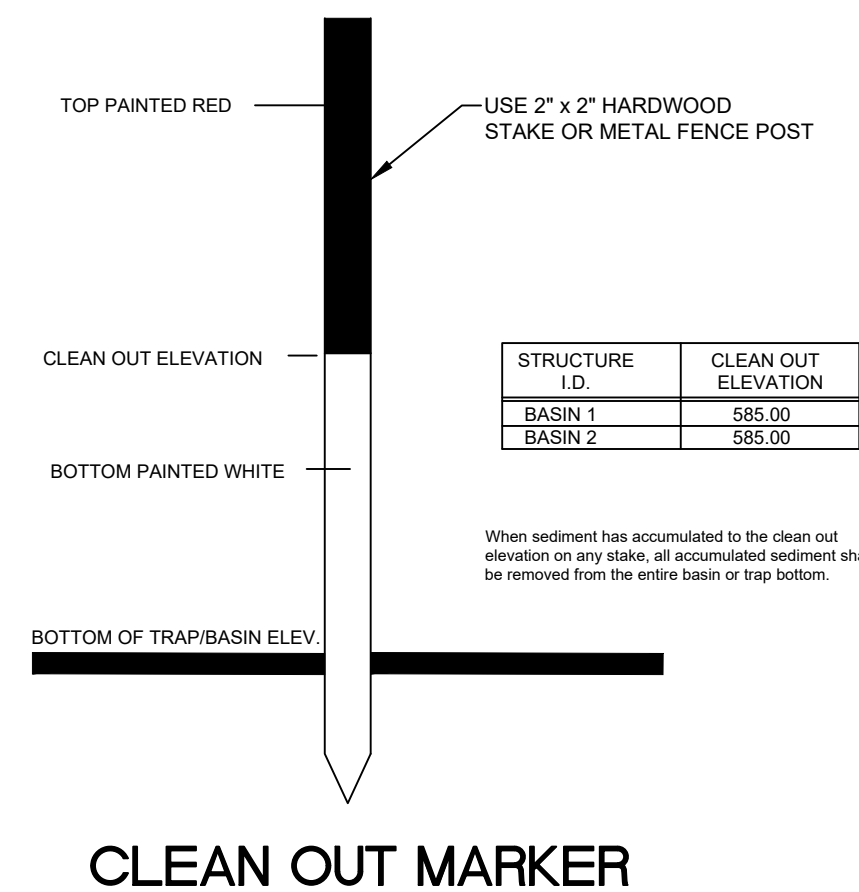
8 C-610 CLAY CORE/CUTOFF KEY TRENCH NOT TO SCALE

EMBANKMENT NOTES:

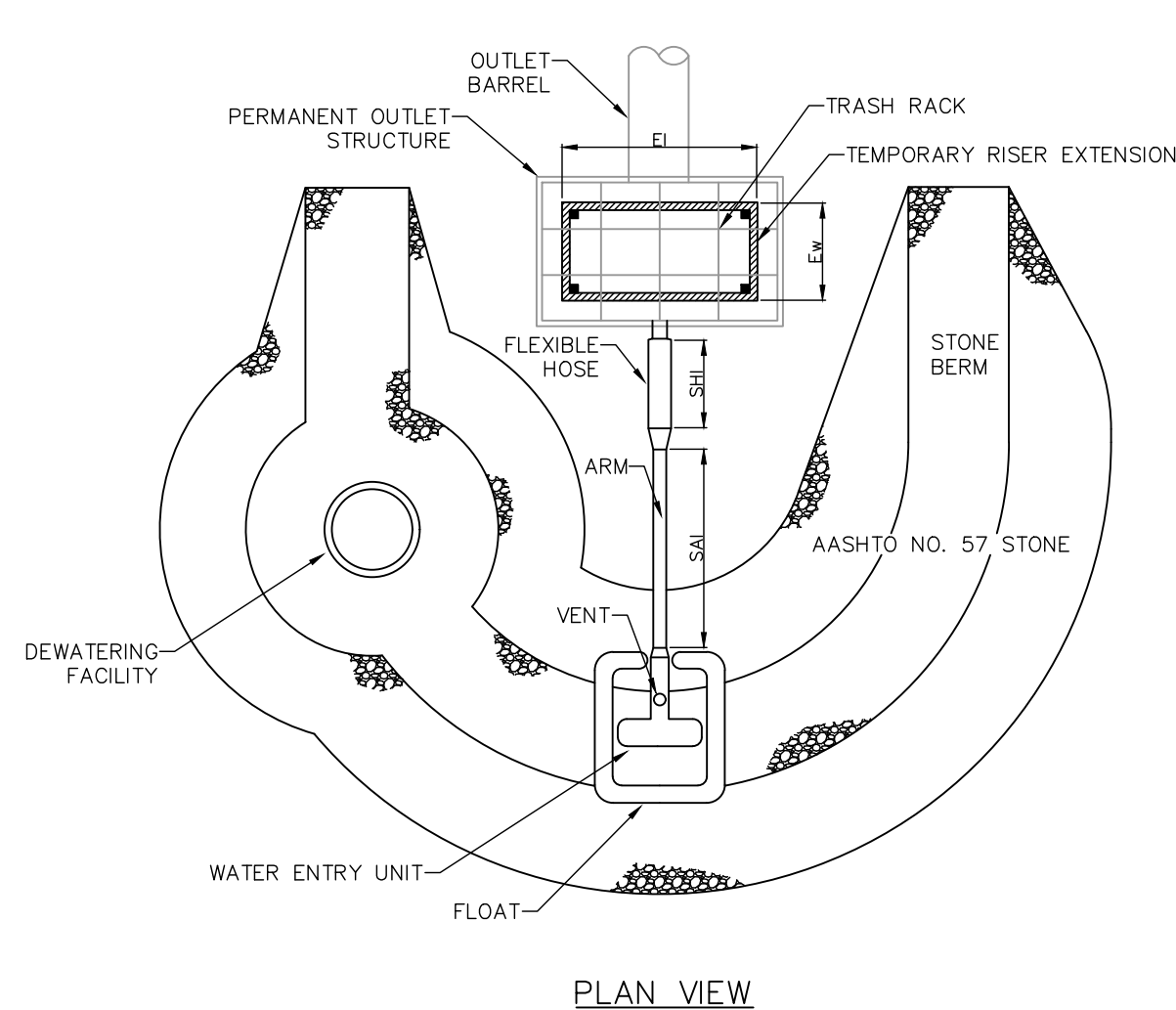
All basin embankments should be compacted by sheepfoot or pad roller. The loose thickness should be 9 inches or less, depending on roller size, and the maximum particle size is 6 inches or less - 2/3 lift thickness. Five passes of the compaction equipment over the entire surface of each lift is required. Embankment compaction to visible non-movement is also required.

Embankment material used for basin construction shall be comprised of either on-site or imported fill which meets the following criteria:

- Free of organic material, ash, cinders and demolition debris.
- Particle size distribution that is well graded.
- Plasticity index less than 10, liquid limit less than 30.
- Less than 15% by weight rock fragments larger than 3 inches, less than 30% by weight larger than 3/4 inch and less than 30% smaller than No. 200 sieve.



CLEAN OUT MARKER

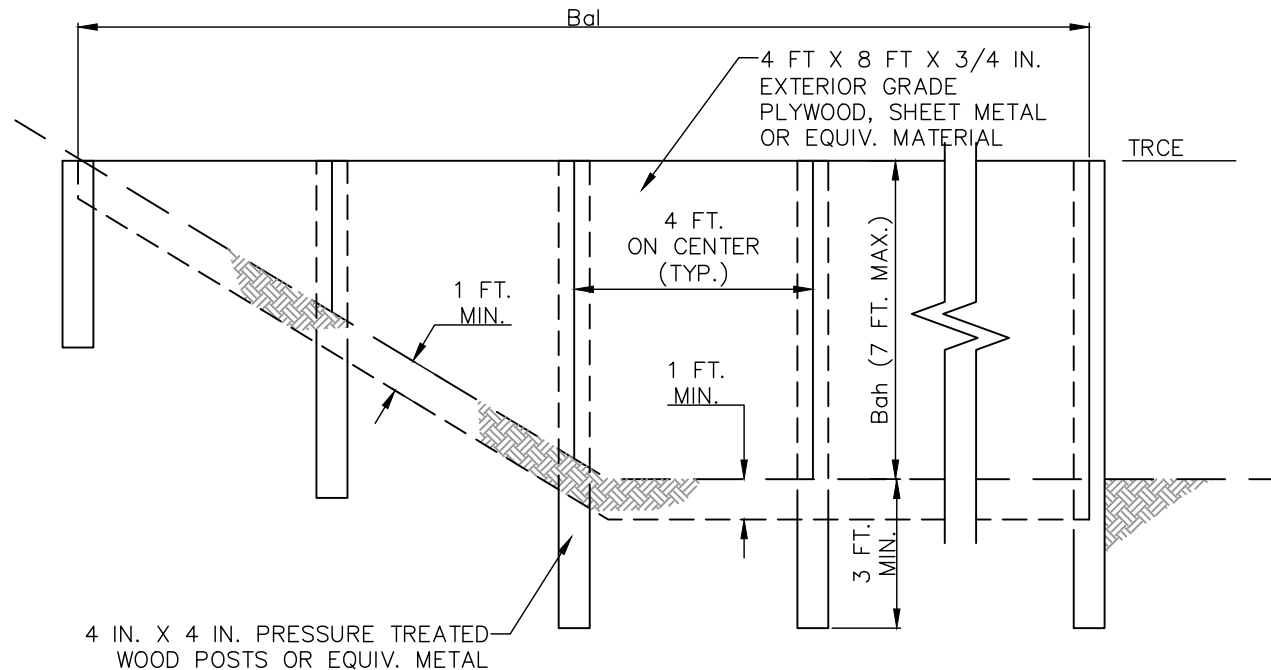


NOTES:

NO GUIDE RAILS SHALL BE REQUIRED FOR THIS INSTALLATION.

THIS DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD CONSTRUCTION DETAILS #7-2 AND #7-4.

9 C-610 STANDARD CONSTRUCTION DETAIL #7-3 SKIMMER WITH STONE LANDING BERM NOT TO SCALE



BASIN OR TRAP NO.	BAFFLE LENGTH Bal (FT)	BAFFLE HEIGHT Bsh (FT)	TEMPORARY RISER CREST ELEV. TRCE (FT)	BOTTOM ELEV BE (FT)
1	789	5.50	588.50	583.00
2	399	5.50	588.50	583.00
3	258	5.50	588.50	583.00
4	221	5.50	588.50	583.00

NOTES:

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

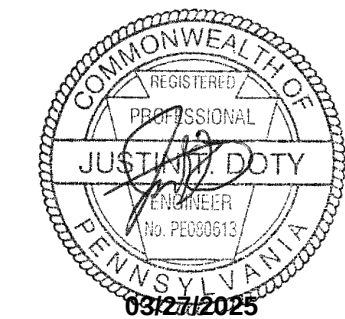
BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

10 C-610 STANDARD CONSTRUCTION DETAIL #7-14 BAFFLE NOT TO SCALE



Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Pennsylvania. License # PE000013
Expiration Date 03/22/2025

Frederick Seibert & Associates, Inc.
CIVIL ENGINEERS • SURVEYORS • LAND PLANNERS
1500 SOUTH HANOVER STREET
PHILADELPHIA, PA 19102
215.576.1111
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DATE	DESCRIPTION	APPROVED BY
06/10/24	Reviewed per CCD Admin Comments	
12/22/24	Reviewed per DEPCDD Tech Comments	
03/27/25	Reviewed per Elected Review Comments	
03/26/25	Reviewed per 2nd Elected Review Comments	

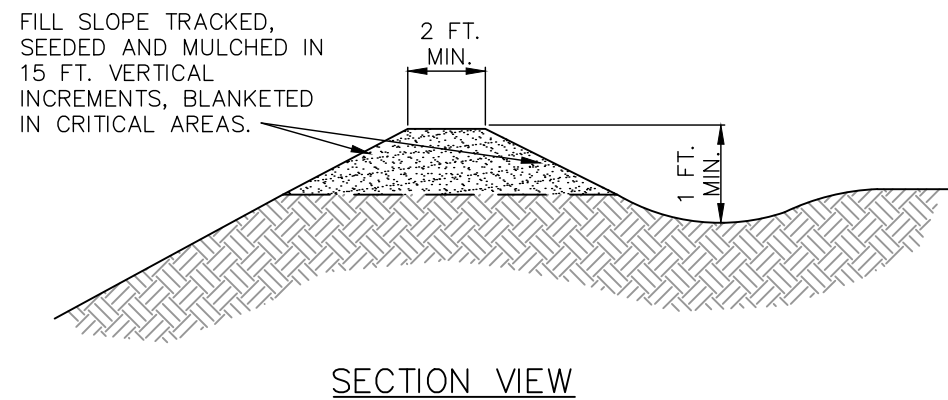
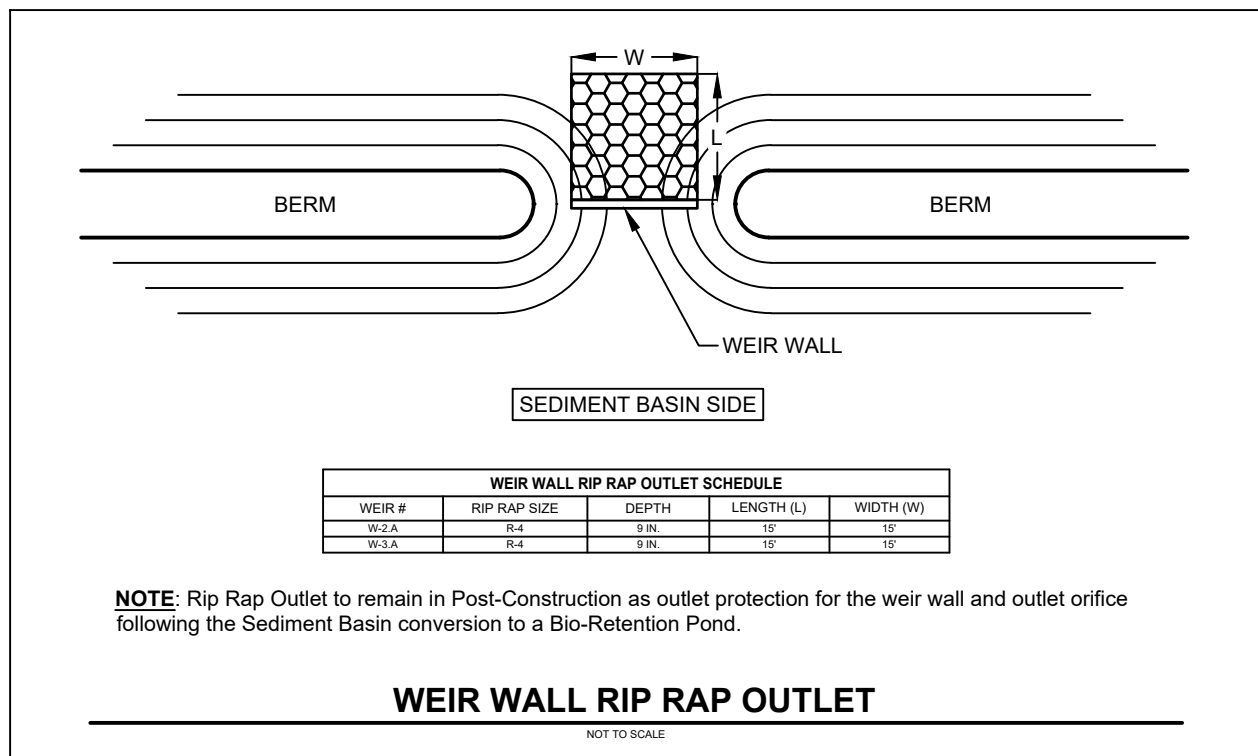
AAMPA HOLDINGS - RITNER HWY

SITUATED APPROXIMATELY 1 MILE FROM SOUTHWEST OF THE INTERSECTION OF RITNER HIGHWAY (US-11) AND CENTREVILLE ROAD (PA-283)
WEST PENNSBORO TOWNSHIP
CUMBERLAND COUNTY, PENNSYLVANIA
AAMPA HOLDINGS, LLC
1514 WEST COMMERCE AVENUE, SUITE 202, CHARLISLE, PA 17013
(223) 336-4040

PROJECT NO.	2022-0251
DRAWN BY	CMH
DATE	11-15-2023
PROJECT MANAGER	JTD
EMAIL	JDoty@sa-inc.com
PROPERTY INFORMATION	46-10-0620-006A
SCALE	N.T.S.
SHEET TITLE	

ESC DETAILS

C-610 SHEET 49 OF 63



NOTES:

TEMPORARY BERMS SHALL BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.

BERMS SHALL OUTLET TO SLOPE PIPES, CHANNELS, OR OTHER APPROVED MEANS OF CONVEYING RUNOFF TO A SEDIMENT TRAP, SEDIMENT BASIN, OR COLLECTOR CHANNEL.

CHANNEL BEHIND BERM SHALL HAVE POSITIVE GRADE TO OUTLET AND AN APPROPRIATE PROTECTIVE LINING.

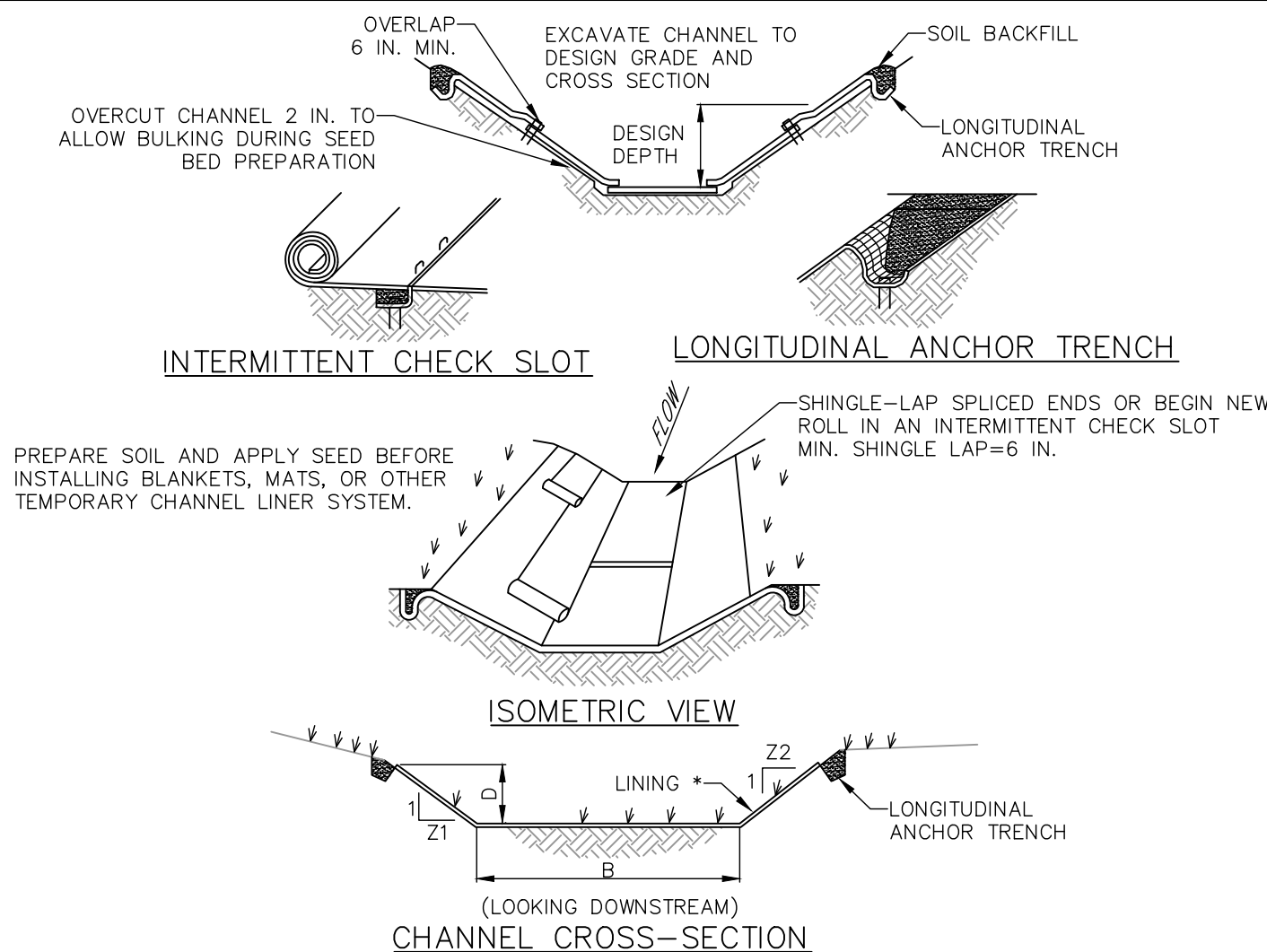
BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.

AN ACCEPTABLE ALTERNATIVE TO TOP-OF-SLOPE BERM IS TO CONTINUOUSLY GRADE THE TOP OF FILL TO DIRECT RUNOFF AWAY FROM THE FILL/SLOPE TO A COLLECTOR CHANNEL, SEDIMENT TRAP, OR SEDIMENT BASIN.

STANDARD CONSTRUCTION DETAIL #6-4 TOP OF SLOPE BERM

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C-611

NOT TO SCALE



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
1	3+44.45	2	1.5	11	3	3	GRASS C
2	2+60.12	9	2	21	3	3	GRASS C
3	3+92.21	8	3	26	3	3	GRASS C

INSTALL N.A.G. MATTING PER THE STAPLE PATTERN GUIDE ON THIS SHEET

NOTES:

ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

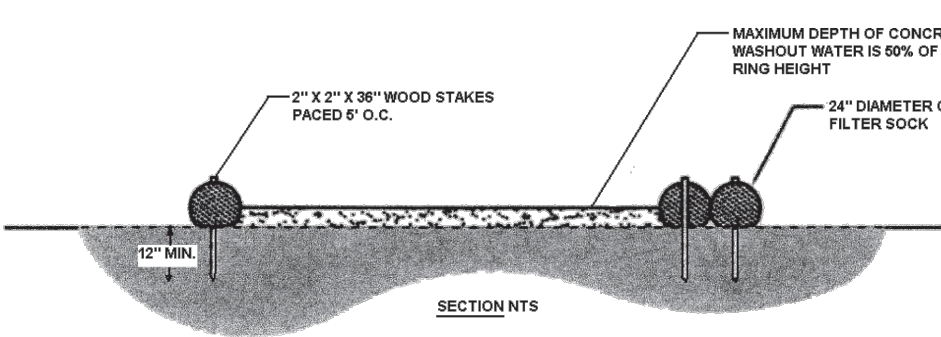
STANDARD CONSTRUCTION DETAIL #6-1 VEGETATED CHANNEL

12
C-611

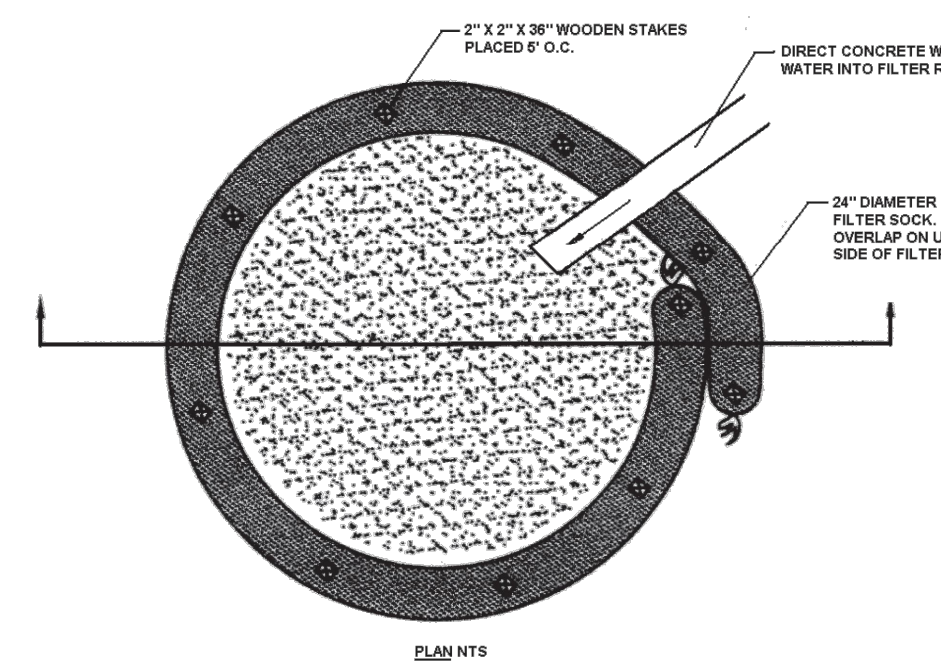
NOT TO SCALE



FIGURE 3.18
Typical Compost Sock Washout Installation

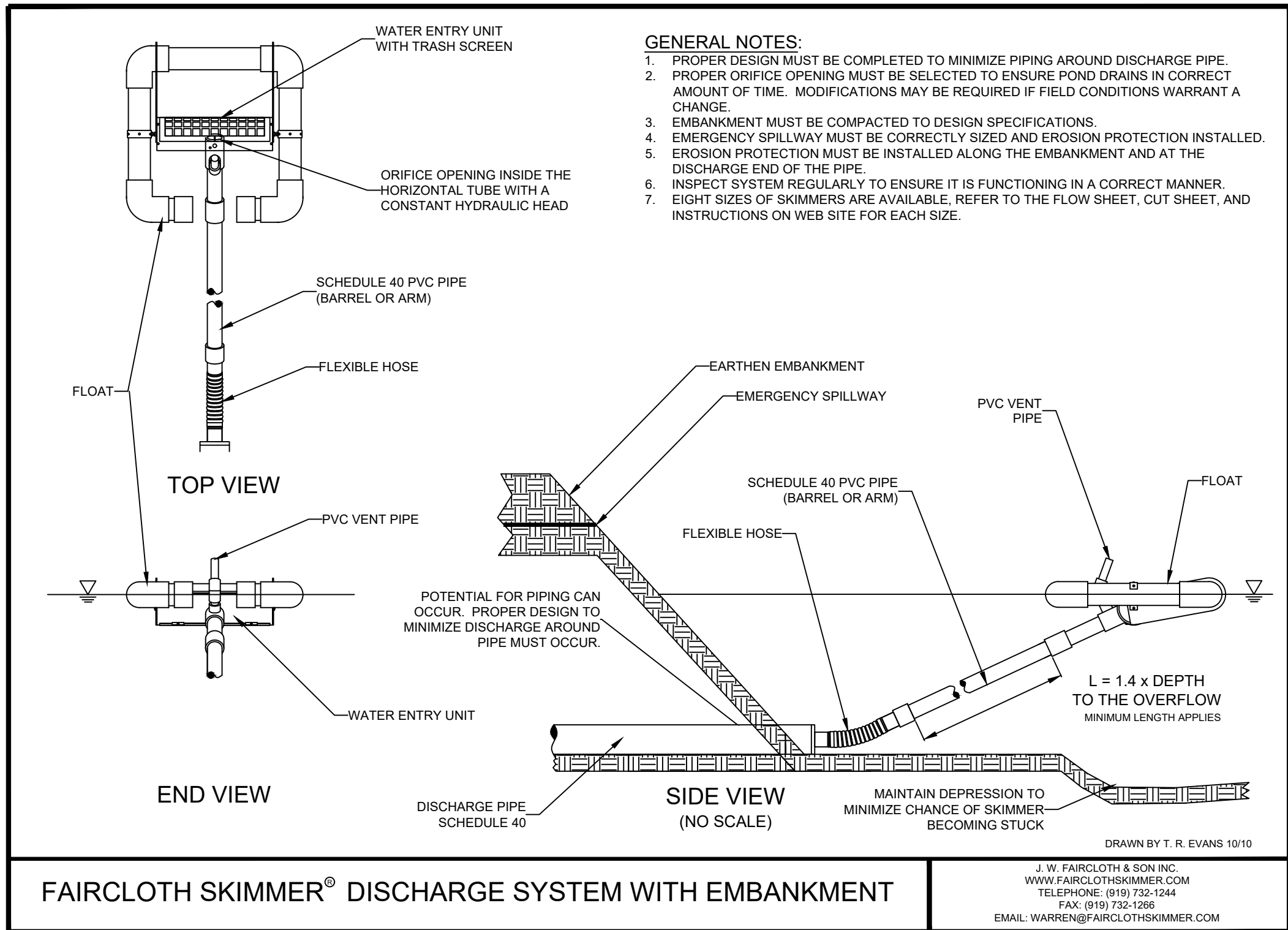
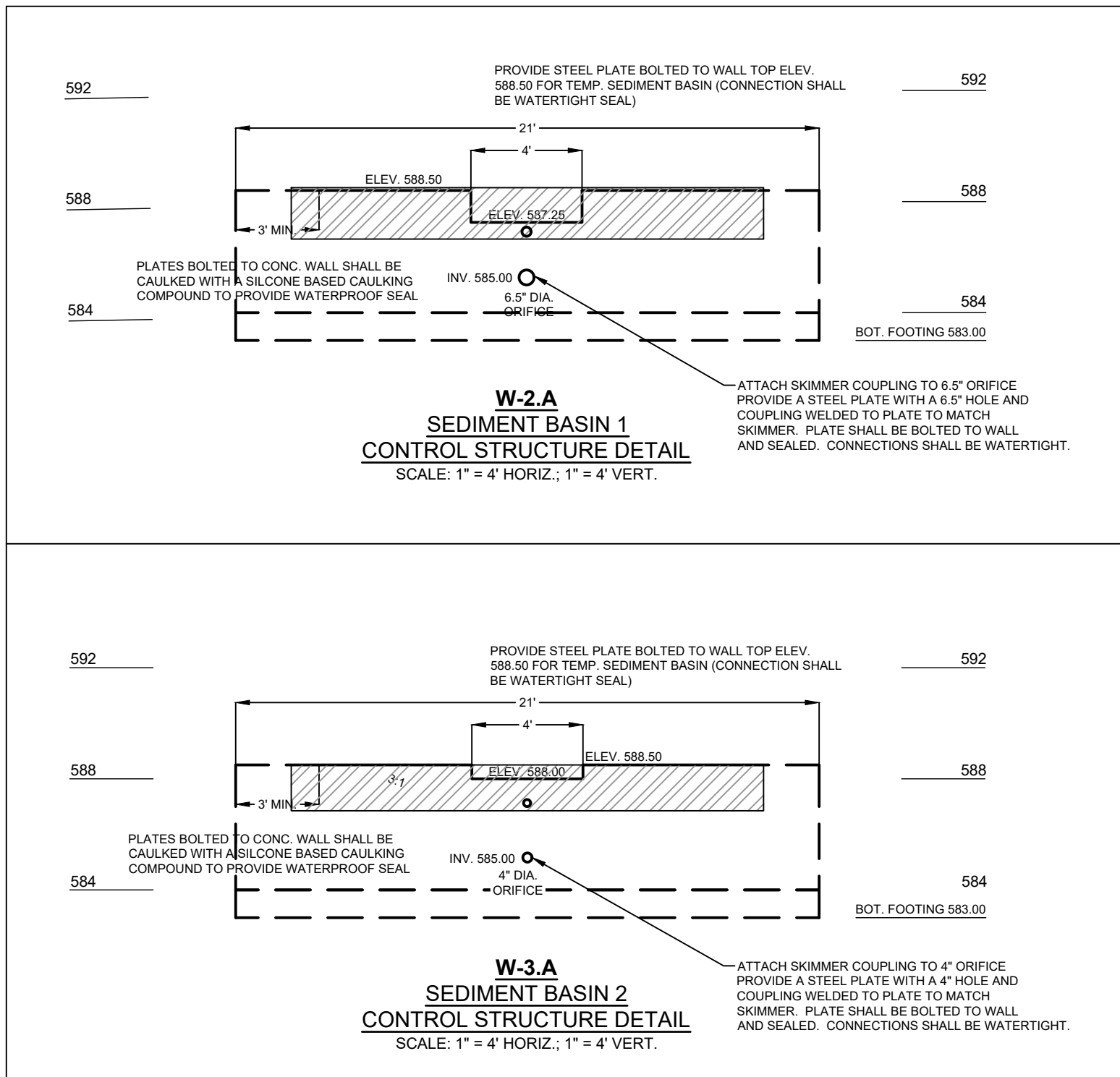
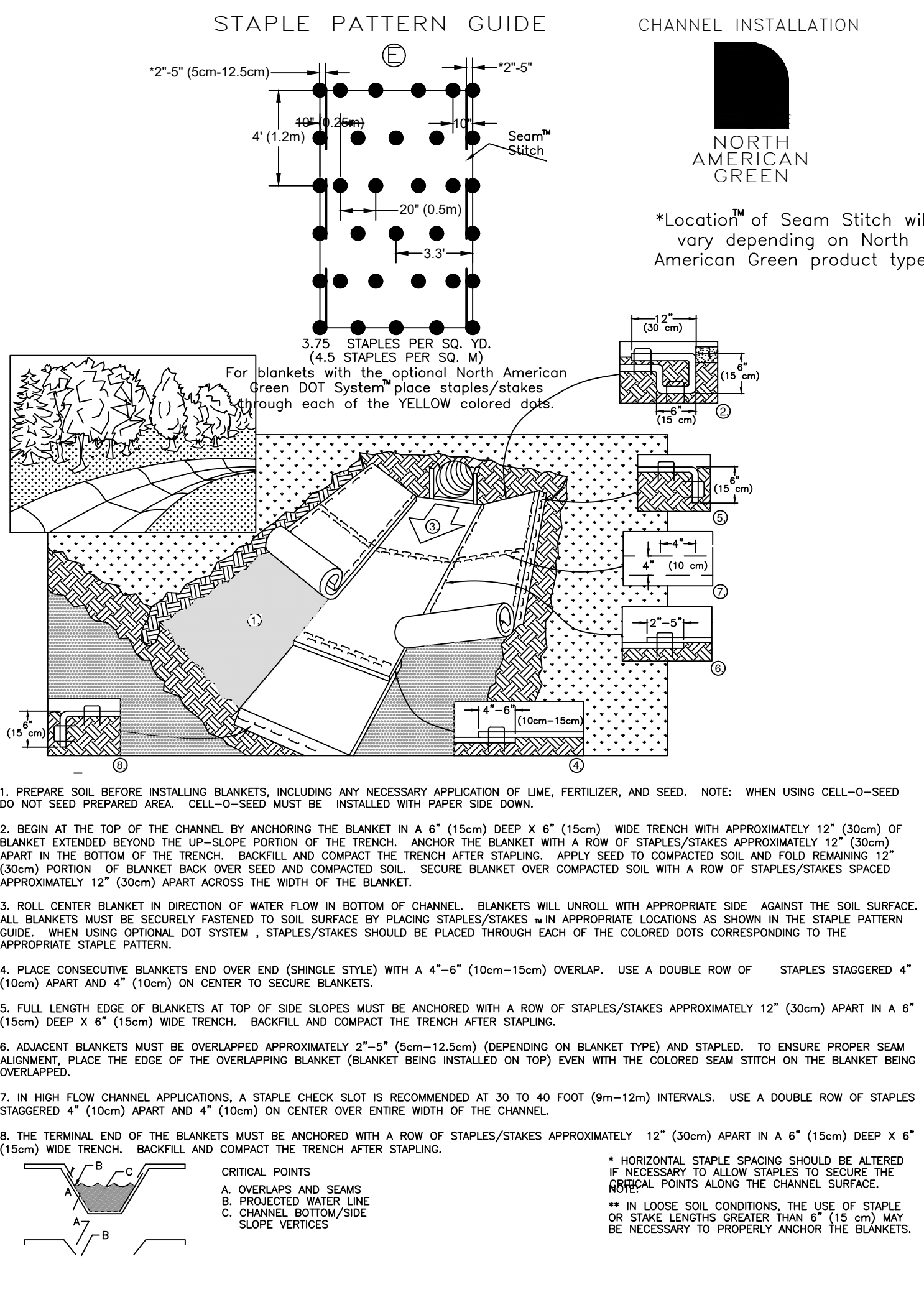


NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 36" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

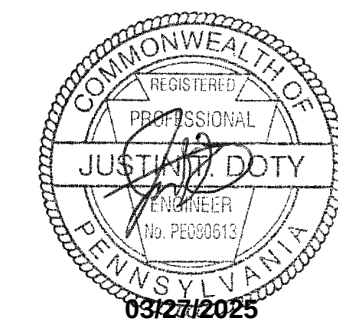


A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrrex

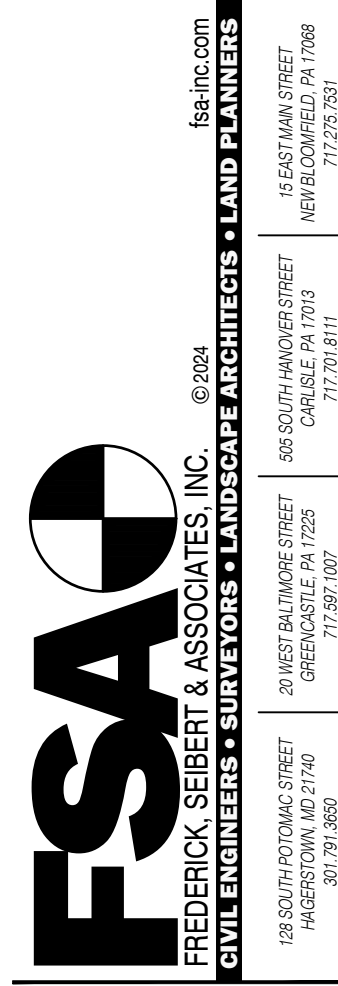
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****A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.****



Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Pennsylvania. License # 0000000000
Expiration Date 03/22/2025



DATE	DESCRIPTION
08/10/24	Revised per CCD Admin Comments
12/22/24	Revised per DEP/CCD Tech Comments
03/07/25	Revised per Elevation Review Comments
03/26/25	Revised per 2nd Elevation Review Comments

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ESC DETAILS
C-611
SHEET 50 OF 63