

STREAM PROFILE

SCALE: HORIZ 1" = 20', VERT 1" = 5'

- GENERAL NOTES:
- TOPOGRAPHIC FEATURES SHOWN FROM ACTUAL FIELD SURVEY BY ASH ASSOCIATES FEBRUARY 23rd, 2022 AND LIMITED TO SHOWING FEATURES OF INTEREST ONLY.
 - VERTICAL DATUM IS NAVD 1988 AND ESTABLISHED BY GPS OBSERVATIONS REFERENCED TO THE NGS CORRS NETWORK. SITE BENCHMARK IS A CAPPED REBAR SET AS SHOWN. ELEVATION=310.42'.
 - HORIZONTAL DATUM IS NAD 83, STATE PLANE COORDINATES OF PENNSYLVANIA AND ESTABLISHED GPS OBSERVATIONS REFERENCED TO THE NGS CORRS NETWORK.
 - THIS IS NOT A BOUNDARY SURVEY. A COMPLETE BOUNDARY SURVEY WOULD BE REQUIRED TO SHOW ADDITIONAL DETAILS.
 - THIS PLAN WAS MADE AS PER INSTRUCTIONS OF APPLICANT AND WITHOUT THE BENEFIT OF A TITLE REPORT. OTHER RIGHTS TO PROPERTY MAY EXIST.
 - THIS PLAN DOES NOT SHOW ENVIRONMENTAL HAZARDS, OR ARCHEOLOGICAL SITES.
 - ENTIRE SITE IS LOCATED IN FLOOD ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. PER FEMA FLOOD INSURANCE RATE MAP (FIRM) OF CHESTER COUNTY, PANEL 200 OF 380, MAP # 42029C02006, REVISED SEPTEMBER 29, 2017.

- PA1CALL NOTES:
- THIS IS AN ABOVE-GROUND SURVEY. LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM ABOVE GROUND INSPECTION OF THE SITE, UTILITY COMPANY RECORDS.
 - COMPLETENESS OR ACCURACY OF THE TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED BY ASH ASSOCIATES, INC.
 - PURSUANT TO REQUIREMENTS OF THE PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.
 - PA1CALL SERIAL NUMBER 20220632844, WAS PLACED FOR DESIGN PURPOSES ONLY.
- UTILITY COMPANY: RESPONSE AS OF 3-16-2022:
- | | |
|--|------------------------|
| CD - COLUMBIA GAS TRANSMISSION DOWNTOWN | CLEAR - NO FACILITIES* |
| KF - PECO ENERGY | PLANS RECEIVED/PLOTTED |
| JZ - COMCAST CABLE COMMUNICATIONS INC | CLEAR - NO FACILITIES* |
| F01 - CALN TOWNSHIP | CLEAR - NO FACILITIES* |
| DMW - DOWNTOWN MUNICIPAL WATER AUTHORITY | CLEAR - NO FACILITIES* |
| Y1 - VERIZON PENNSYLVANIA LLC | CLEAR - NO FACILITIES* |
- * NO FACILITIES OR FACILITIES NOT INVOLVED BASED ON TICKET INFORMATION.

SOUTH LLOYD AVENUE PLAN VIEW

SCALE: HORIZ 1" = 10'

SCALE: 1" = 10'

EXISTING FEATURES LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	BUILDING SETBACK LINE
	PHYSICAL CENTER LINE
	5' CONTOUR LINE
	1' CONTOUR LINE
	EDGE OF DRIVEWAY
	FENCE AS NOTED
	WATER LINE
	STORM SEWER
	12.6' WIDE DEPRESSED CURB
	HEDGE ROW
	SIGN
	WATER VALVE
	MONUMENT FOUND
	CLEAN OUT
	PROPERTY MONUMENTATION FOUND AS NOTED
	ELECTRIC METER
	GAS METER
	ROOF DRAIN
	UTILITY MANHOLE
	UTILITY POLE
	MAILBOX
	SPOT ELEVATION
	TOP OF CURB ELEVATION
	BOTTOM OF CURB ELEVATION
	6 INCH DECIDUOUS TREE
	10 INCH CONIFEROUS TREE
	LANDSCAPED AREA
	BUSH

PROJECT DESCRIPTION
 THE PROPOSED PROJECT CONSISTS OF THE REPLACEMENT OF EXISTING CULVERT (53"x34") WITH A 53"x34" DIAMETER CULVERT WITH WINGWALLS UPSTREAM AND DOWNSTREAM. AN EXISTING GRAVEL BAR SHALL BE REMOVED AND STREAM BANK STABILIZATION SHALL BE PROVIDED USING THE SCOURLOK GABION BASKET SYSTEM OR EQUAL. THERE IS A NEGLIGIBLE CHANGE TO THE WATERWAY OPENING. IT IS ANTICIPATED THAT ALL WORK SHALL BE PERFORMED FROM THE STREAM BANK AND EXISTING ROADWAY.

THE PROJECT DRAINS TO THE UNNAMED TRIBUTARY TO THE BEAVER CREEK WHICH HAS A CHP. 93 CLASSIFICATION OF CWF, MF.

CERTIFICATION
 I, DAVID KEE, P.E., DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA. C.S.A. SEC. 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS, AND REPORTS HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE, IS TRUE AND CORRECT, AND IS IN CONFORMANCE WITH CHAPTER 105 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

				DAVID T. KEE, P.E. RELEASED BY				SEAL	CLIENT & PROJECT CALN TOWNSHIP MUNICIPAL AUTHORITY 253 MUNICIPAL DRIVE THORNDALE, PENNSYLVANIA 19426				TITLE	
				DESIGN D. KEE				SEAL	SOUTH LLOYD AVENUE STREAM BANK RESTORATION PROJECT CALN TOWNSHIP, CHESTER COUNTY, PA				321 N.Furnace Road, Suite 200 Birdsboro, Pennsylvania 19508 Tel 610.374.5285	
				DRAWN M. COLLINS									SCALE: 0 5' 10' 20' 30' SCALE: 1" = 10'	
				DATE MAY 2022									PROJECT NO. 11193.59	
				CHECKED									SHEET NO. 1 OF 5	
				CHECKED									REV. A	
				SURVEY DATE									DWG. NO. C1	
				FIELD BOOK										

EROSION & SEDIMENTATION CONTROL NARRATIVE & NOTES

THIS NARRATIVE AND THE ATTACHED PLANS AND DETAILS CONSTITUTE THE EROSION & SEDIMENTATION CONTROL PLANS FOR EXISTING STORM SEWER PIPE REPLACEMENT AND STREAM BANK RESTORATIONS LOCATED IN CALN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA.

A. GENERAL STATEMENT OF THE PROJECT

1. THE PROPOSED PROJECT CONSISTS OF REPLACEMENT OF PIPE AND REHABILITATION OF PIPE.
2. SOIL EROSION AND SEDIMENT POLLUTION CONTROL PRACTICE IN THE PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL", MOST RECENT EDITION, PUBLISHED BY PA DEP.
3. ACCELERATED EROSION AND SEDIMENTATION SHALL BE LIMITED BY STABILIZATION OF THE DISTURBED AREA AS SOON AS POSSIBLE (SEE D, SEQUENCE OF CONSTRUCTION).
4. SEDIMENTATION SHALL BE CONTROLLED BY INLET SILT SOCKS. ALL DISTURBED AREAS SHALL BE GRASSED, SEEDED AND MAINTAINED IMMEDIATELY AFTER FINAL GRADING.
5. ALL SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ALL AREAS ARE FULLY STABILIZED.
6. AFTER FINAL SITE STABILIZATION HAS OCCURRED, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMMEDIATELY RESTABILIZED.
7. SHOULD ANY ADDITIONAL EROSION OR SEDIMENTATION OCCUR DURING CONSTRUCTION, OR SHOULD QUESTIONS ARISE REGARDING THE MAINTENANCE CONTROL PRACTICES, CONTACT THE CHESTER COUNTY CONSERVATION DISTRICT, 610-925-4920. ADDITIONAL FACILITIES/MEASURES SHALL BE INSTALLED WHERE NECESSARY OR WHERE DIRECTED BY THE CONSERVATION DISTRICT OR DEP. THE CONTRACTOR SHALL NOTIFY THE CHESTER COUNTY CONSERVATION DISTRICT THREE (3) DAYS PRIOR TO THE START OF EARTH MOVING ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE CONSERVATION DISTRICT WHEN EARTH MOVING ACTIVITIES CEASE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL FACILITIES.
9. DURING CONSTRUCTION ACTIVITIES, ALL PUBLIC & PRIVATE PROPERTY INCLUDING EXISTING VEGETATION, LANDSCAPE FEATURES & MONUMENTS WITHIN, ALONG AND ADJACENT TO THE WORK AREA, SHALL BE PROTECTED AND PRESERVED TO THE MAXIMUM DEGREE POSSIBLE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, PRECAUTIONS TAKEN TO MINIMIZE DAMAGE, EROSION, INJURY, OR DESTRUCTION; PREVENT POLLUTION; PROVIDE PROTECTION OF ALL TREES & OTHER WOODY PLANTS; SPECIAL CARE BEING TAKEN TO PROTECT THE NATURAL VEGETATION; AND STORAGE OF MATERIALS IN SUCH MANNER TO PREVENT LEACHING WHICH WOULD BE INJURIOUS TO SOILS AND TO PLANTS. PRECAUTIONS SHOULD BE TAKEN TO PREVENT DAMAGE TO PIPES, CONDUITS AND OTHER UNDERGROUND STRUCTURES.
10. WORK SHALL BE DONE IN COMPLIANCE WITH CHAPTER 102 OF THE DEPARTMENT'S RULES AND REGULATIONS (RELATING TO EROSION CONTROL).
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING FROM THE SITE ALL USED AND UNUSED CONSTRUCTION MATERIALS AND ANY EXISTING MATERIALS THAT HAVE BEEN REPLACED AND/OR UPGRADED. DISPOSAL OF SUCH MATERIAL SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, & LOCAL REGULATIONS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS FILL MATERIAL RESULTING FROM THE EXCAVATION FOR THE PROPOSED STRUCTURES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING A SUITABLE LOCATION TO PLACE SUCH SOIL. THE LOCATION SHALL BE SUBJECT TO THE CHESTER COUNTY CONSERVATION DISTRICT'S APPROVAL.
13. THE DEVELOPER(S) SHALL SECURE ALL OTHER APPROVALS THAT MAY BE NECESSARY UNDER FEDERAL, STATE, OR LOCAL LAWS OR REGULATIONS.

B. FEATURES OF THE PROJECT

1. THE LOCATIONS OF AFFECTED PROPERTY LINES, AND THE OTHER SIGNIFICANT PHYSICAL FEATURES HAVE BEEN SHOWN ON THE ATTACHED PLANS.

C. GENERAL SEQUENCE OF CONSTRUCTION - ALSO SEE DETAILED SEQUENCE OF CONSTRUCTION ON THIS DRAWING

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE DETAILED CONSTRUCTION SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
2. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL INVITE THE LANDOWNERS, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE CHESTER COUNTY CONSERVATION DISTRICT TO A SCHEDULED ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR INVOLVED IN THESE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITY LOCATION.
3. BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE CONTRACTOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE EASTTOWN TOWNSHIP AUTHORITY.
4. THE CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 280.1 ET SEQ., AND 287.1 ET SEQ.
5. BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE CONTRACTOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS.
6. THE CONTRACTOR SHOULD CONSIDER USING TRUCKS TO TEMPORARILY STORE SOME OF THE SUITABLE BACKFILL MATERIAL IF TRUCKS ARE NOT UTILIZED, THE EXCAVATED MATERIAL SHALL BE PLACED ON THE UPSTREAM SIDE OF THE SLOPE.
7. INSTALL FILTER SOCK WHERE INDICATED ON PLANS.
8. LIMIT MECHANICAL, ELECTRICAL, AND STRUCTURAL COMPONENTS THAT ARE EXTERNAL TO THE WET WELL.
9. UTILITY LINE TRENCH EXCAVATION NOTES:
 - A. LIMIT ADVANCED CLEARING & GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
 - B. WORK CREWS & EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION & BACKFILLING WILL BE SELF CONTAINED & SEPARATE FROM CLEARING & GRUBBING & SITE RESTORATION OPERATIONS.
 - C. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
 - D. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION & BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
 - E. WATER THAT ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
 - F. ON THE DAY FOLLOWING PIPE PLACEMENT & TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS & IMMEDIATELY STABILIZED.
 - G. EXCAVATE TRENCH, REMOVE EXISTING SEWER AND INSTALL NEW SANITARY SEWER PIPING (REMOVING EXISTING PIPING, BACKFILL, AND STABILIZE) CONTINUE EXCAVATION AND PIPING INSTALLATION AT A LENGTH THAT CAN BE BACKFILLED AND STABILIZED ON A DAILY BASIS OR BEFORE A STORM EVENT. NO MORE THAN 100 FEET OF TRENCH SHALL BE EXCAVATED PRIOR TO PIPE INSTALLATION, BACKFILLING AND STABILIZING.
 - H. UPON COMPLETION OF TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
 - I. ONCE TRENCHING, PIPE INSTALLATION, BACKFILL AND GRADING ARE COMPLETE, INSTALL EROSION CONTROL MATTING WHERE INDICATED ON THE PLANS AS WELL AS ANY DISTURBED AREAS WITH A SLOPE OF 3:1 OR GREATER ALONG THE PIPELINE THAT APPEAR TO HAVE A CONCENTRATED FLOW.
 - J. COMPLETE FINAL GRADING, SEEDING, AND MULCHING. REMOVE ALL EROSION AND SEDIMENTATION CONTROLS ONCE THE SITE IS FULLY STABILIZED. RESTABILIZE ANY DISTURBED AREAS IMMEDIATELY.
 - K. FOR WORK WITHIN ROADWAY RIGHT-OF-WAY, CONTRACTOR SHALL REMOVE EXCAVATED MATERIAL AND HAUL AWAY FROM SITE. BACKFILL SHALL BE IN ACCORDANCE WITH DETAILS. CONTRACTOR SHALL CLEAN AWAY ANY DEBRIS FROM THE ROAD.
10. CONNECT NEW PIPE TO EXISTING PIPING AT UPSTREAM AND DOWNSTREAM ENDS. PROVIDE BYPASS PUMPING AS REQUIRED.
11. REMOVE ALL EROSION AND SEDIMENTATION CONTROLS ONCE FINAL SITE STABILIZATION HAS BEEN ACHIEVED. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
12. AREAS DISTURBED DURING REMOVAL OF THE EROSION AND SEDIMENTATION CONTROLS MUST BE STABILIZED IMMEDIATELY.
13. FINAL SITE CLEAN-UP.

E. TEMPORARY CONTROL MEASURES

1. SILT FENCES/FILTER SOCKS
 - A) SILT FENCES/FILTER SOCKS SHALL BE LOCATED AT THE DOWN SLOPES OF ALL EMBANKMENTS OF DISTURBED, ERODIBLE SURFACES. THE PURPOSE FOR THE INSTALLATION OF SILT FENCES/FILTER SOCKS IS TO SLOW RUNOFF FROM DRAINAGE WAYS AND EXPOSED BANKS AND TO PREVENT SEDIMENT FROM FLOWING ONTO ADJACENT PROPERTIES AND INTO STREAM.
 - B) SILT FENCE SHALL BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF THE SILT FENCE SECTION SHALL EXTEND AT LEAST EIGHT (8) FEET UPSLOPE AT A 45-DEGREE ANGLE TO THE MAIN FENCE ALIGNMENT.

F. PERMANENT CONTROL MEASURES

1. PERMANENT GRASS OR LEGUME COVER
 - A) ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED OR STONED SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION. THE GRASS OR LEGUME SHALL AS NEARLY AS POSSIBLE MATCH THE GROUND COVER THAT EXISTED PRIOR TO CONSTRUCTION. SEED SHALL BE SELECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
 - B) AREAS WHICH ARE TO BE TOP-SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES (6 TO 2 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MIN. 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING, I.E. YARDS.

G. MULCH

1. ALL AREAS EXPOSED SHALL RECEIVE A LAYER OF MULCH.
 - A) HAY OR STRAW MULCH SHALL BE APPLIED TO SEEDING AREAS TO HELP ESTABLISH A PERMANENT GRASS COVER & TO PREVENT EROSION.
 - B) MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE (ENOUGH TO LIGHTLY COVER 75 TO 90 PERCENT OF THE DISTURBED AREA) MULCH SHALL BE ANCHORED TO PREVENT BLOWING AWAY, ANCHOR WITH WOOD CELLULOSE FIBER @ 150 LBS/ACRE. OTHER MEANS OF MULCHING MAY BE USED IN CONFORMANCE WITH COUNTY CONSERVATION DISTRICT STANDARDS.
 - C) MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHALL BE USED ON ALL SLOPES GREATER THAN 3:1.

H. MAINTENANCE

1. ALL SEDIMENT AND EROSION CONTROL FACILITIES SHALL BE CHECKED FOR DAMAGE WEEKLY & AFTER EACH STORM. ALL PREVENTATIVE & REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIRS, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, & RENETTING MUST BE PERFORMED IMMEDIATELY.
2. SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY & DISPOSED IN A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEEP INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.

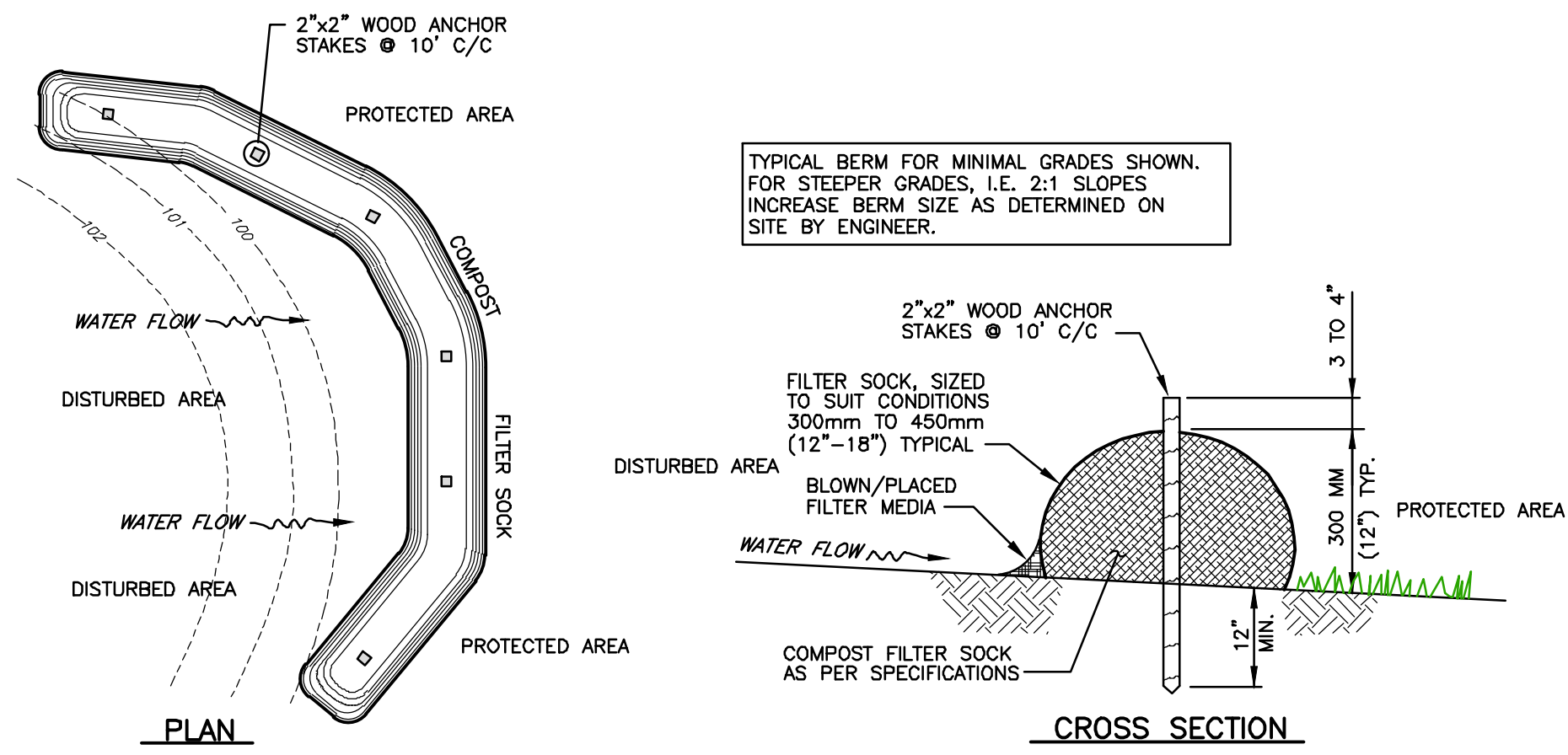
I. GENERAL NOTES

1. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.
2. IF ANY SIGNIFICANT CHANGES ARE TO BE MADE TO THE EROSION AND SEDIMENTATION CONTROL PLAN, THE CONTRACTOR WILL CONTACT THE EASTTOWN MUNICIPAL AUTHORITY.
3. EXTREME CARE SHOULD BE EXERCISED IN ALL DISTURBANCE ACTIVITIES TO PREVENT DEGRADATION TO THE WATERS OF THE COMMONWEALTH, SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARDS & SPECIFICATIONS FOR SUBSURFACE DRAIN, OR OTHER APPROVED METHOD.
4. SHOULD UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.
5. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART I, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUB-PART C, ARTICLE III, WATER RESOURCES, CHAPTER 102 - EROSION CONTROL.
6. AFTER COMPLETION OF CONSTRUCTION AND PERMANENT STABILIZATION, WHEREUPON THERE IS UNIFORM COVERAGE OF 70% VEGETATIVE COVER ACROSS THE DISTURBED AREA IN GRASSED AREAS, OR WHERE THERE IS COMPACTED STONE OR PAVING IN STREETS, REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES, RESTORE AREAS IN WHICH THESE DEVICES WERE LOCATED TO THE ORIGINAL CONDITION OR TO THE CONDITION CALLED FOR BY THE CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL NOTIFY CHESTER COUNTY CONSERVATION DISTRICT AND OBTAIN APPROVAL FOR EXCESS MATERIAL OFF-SITE DISPOSAL.
8. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS.
9. ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED, AND STABILIZED WITHIN ONE WORKING DAY. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED ON THE UPSLOPE SIDE OF THE TRENCH. IN ALL CASES, THE SMALLEST PRACTICAL AREA OF STABLE LAND SURFACE SHALL BE EXCAVATED, AND THE EXCAVATIONS SHALL BE OPEN ONLY LONG ENOUGH TO PROPERLY INSTALL AND INSPECT ALL UNDERGROUND FACILITIES IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS.
10. STORMWATER INLETS, WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
11. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT, OR WHEN THE DISTANCE BETWEEN THE GRATE AND THE SEDIMENT LEVEL IS REDUCED TO 18".
12. UPON COMPLETION OF TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS, WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR, MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.
13. UNTIL THE SITE HAS ACHIEVED FINAL STABILIZATION THE CONTRACTOR SHALL PROPERLY IMPLEMENT, OPERATE AND MAINTAIN ALL THE BEST MANAGEMENT PRACTICES. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY.
14. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 70% UNIFORM PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENT.
15. OTHER EXCAVATED MATERIAL (SPOIL) SHALL BE PLACED UPSLOPE FROM THE EXCAVATION WHENEVER POSSIBLE. RUNOFF FROM SPOIL PILES SHALL BE DIRECTED THROUGH A SILT FENCE AND BE DISCHARGED IN A NON-EROSIVE MANNER.
16. DEWATERING EQUIPMENT DISCHARGE SHALL BE DIRECTED ONTO A STABILIZED SURFACE SO THAT EROSION DOES NOT OCCUR. DISCHARGES SHALL BE DIRECTED THROUGH A SEDIMENT FILTER STRUCTURE AND DISCHARGED IN A NON-EROSIVE MANNER.
17. BACK FILLED EXCAVATIONS SHALL BE RESTORED TO THEIR ORIGINAL TYPE OF COVER AND GRADE AS PER SPECIFICATIONS. TEMPORARY STABILIZATION IS REQUIRED FOR ANY AND ALL ERODIBLE/SOLUBLE AREAS AND MATERIALS EXPOSED. FINAL GRADING, PAVING, SEEDING, AND ANY OTHER GROUND STABILIZATION SHALL BE COMPLETED.
18. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER COURSE THROUGH USE OF A SEDIMENT FILTER STRUCTURE. SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO PAVED SURFACES SHALL BE REMOVED IMMEDIATELY.
19. SOIL TYPES AND LOCATION ARE DELINEATED BASED ON THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY:
 - So: HATBORO SILT LOAM
20. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF CONTROLS MUST BE STABILIZED IMMEDIATELY.
21. SEDIMENT REMOVED FROM EROSION AND SEDIMENTATION POLLUTION CONTROL CONTROLS AND FACILITIES SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES & IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
22. BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE CONTRACTOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE CHESTER COUNTY CONSERVATION DISTRICT, IN WRITING, OF ALL RESEEDING SOIL AND BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.
23. ALL PUMPING OF SEDIMENT-LADEN WATER OR POTENTIALLY SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.

SEEDING SCHEDULE

APPLICATION	SPECIES	APPLICATION RATE	LIMING RATE +	% PURE LIVE SEED	FERTILIZER	SEEDING DATES
TEMPORARY	ANNUAL RYE	48 LBS./AC	2000 LBS./AC	98%	5-5-5* @ 150 LBS./AC	NOT AFTER OCT. 15
PERMANENT	PERENNIAL FY	20 LBS./AC		98%		BETWEEN JUNE 1 AND OCT 15
	KENTUCKY BLUE GRASS	30 LBS./AC	4 TONS	98%	SEE NOTE 1 BELOW	
	CREeping RED FESCUE	50 LBS./AC		98%		

- + AGRICULTURAL-GRADE LIMESTONE
- * COMMERCIAL GRADE FERTILIZER
- 1. FERTILIZER SHALL BE AS FOLLOWS
 - 10-20-20 ANALYSIS COMMERCIAL FERTILIZER @ 500 LBS./AC AND
- 2. SPECIFICATION ITEMS OBTAINED USING PADOT PUBLICATION NO. 408 AND THE PENN STATE AGRONOMY GUIDE (1991, 1992).
- 3. ALL SEEDING AREAS SHALL BE MULCHED WITH HAY OR STRAW. SEE MULCH NOTES, SECTION G.
- 4. ALL SEED SHALL BE APPLIED WITH A BROADCAST TYPE SPREADER.



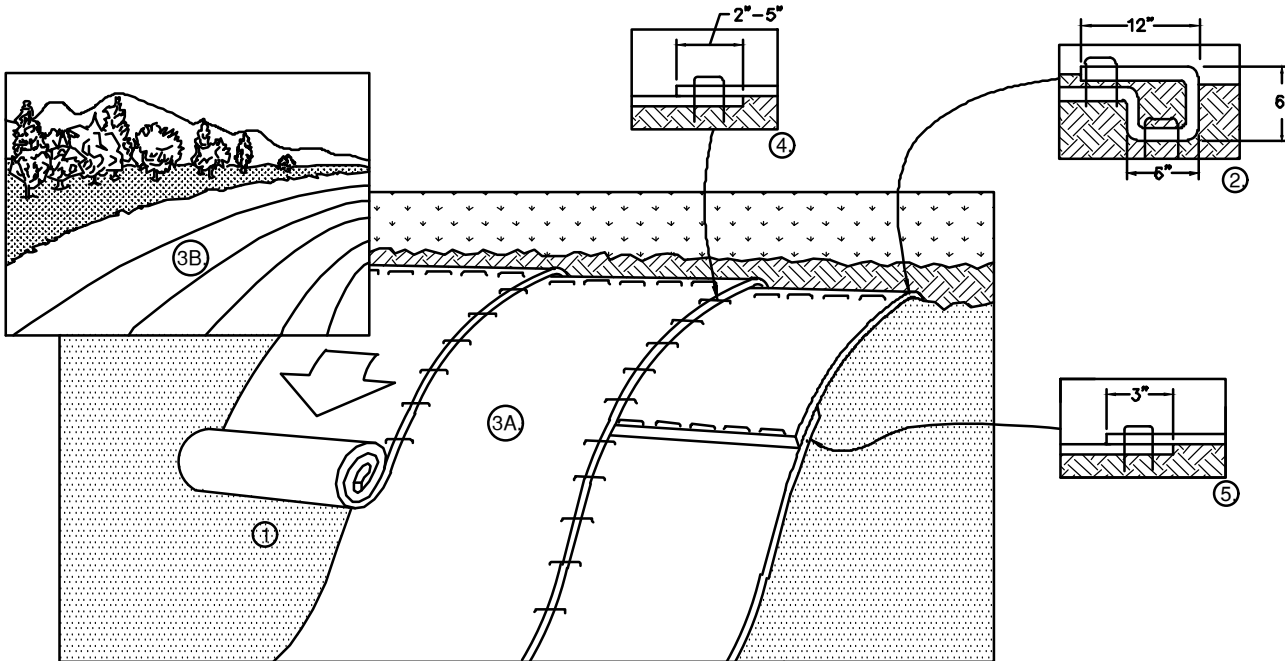
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS & INSTRUCTIONS THE FILTER SOCK SHOULD BE STAKED TO STAY IN PLACE, GENERALLY EVERY 10'.
2. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED, AFTER EACH STORM EVENT.
3. 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.
4. 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° 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.
5. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
6. 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.
7. 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.
8. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS. PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
9. 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.
10. CONTRACTOR HAS THE OPTION OF UTILIZING COMPOST FILTER SOCK INSTEAD OF SILT FENCE AS FOLLOWS:
 - 12" SOCK FOR 18" SILT FENCE
 - 18" SOCK FOR 30" SILT FENCE
 - 24" SOCK FOR SUPER SILT FENCE

SILT SOCK	SIZE	LOCATION	SLOPE	DISTANCE
PER PLAN	12"	DOWNSLOPE OF PROJECT	3%±	PER PLAN
PER PLAN	18"	DOWNSLOPE OF PROJECT	5%±	PER PLAN

COMPOST FILTER SOCK DETAIL

NO SCALE



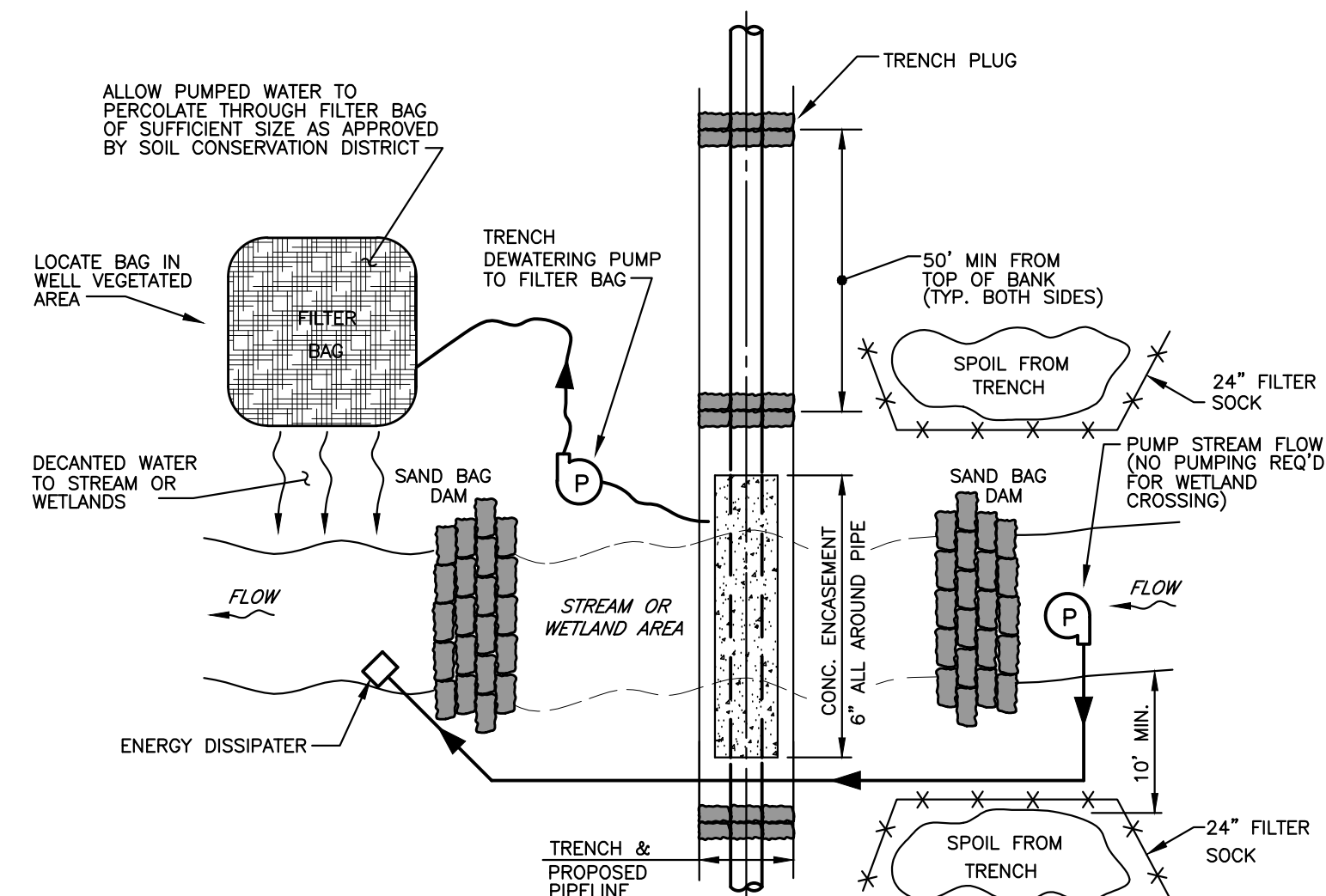
NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/ STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

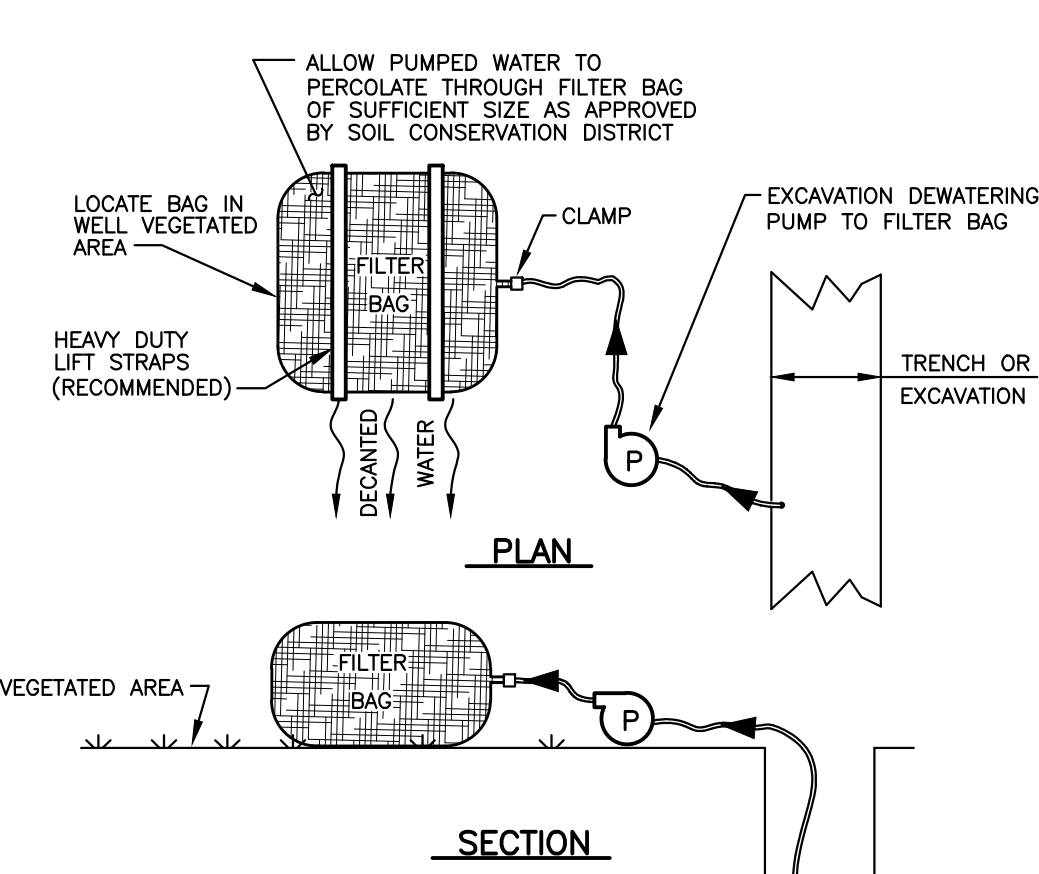
EMBANKMENT PROTECTION

NO SCALE

DAVID T. KEE, P.E.												SEAL	SEAL	CLIENT & PROJECT	TITLE				
DESIGN BY D. KEE												CHECKED		CALN TOWNSHIP MUNICIPAL AUTHORITY 253 MUNICIPAL DRIVE THORNDALE, PENNSYLVANIA 19426					
DRAWN M. COLLINS												CHECKED		SOUTH LLOYD AVENUE STREAM BANK RESTORATION PROJECT CALN TOWNSHIP, CHESTER COUNTY, PA		321 N.Furnace Road, Suite 200 Birdsboro, Pennsylvania 19508 Tel 610.374.5285			
DATE MAY 2022												SURVEY DATE		SCALE		DWG. NO. ES1			
FIELD BOOK												FIELD BOOK		PROJECT NO. 11193.59		SHEET NO. 2 OF 5		REV. A	



- NOTES:
1. A UTILITY LINE STREAM CROSSING OF A STREAM 10 FEET IN (BOTTOM) WIDTH OR LESS SHOULD BE COMPLETED WITHIN 72 HOURS (FROM START TO FINISH) INCLUDING THE TRENCH BACKFILLING, THE STABILIZATION OF STREAM BANKS & STABILIZATION OF THE AREA 50 FEET BACK FROM THE TOP OF EACH STREAM BANK.
 2. AT STREAM CROSSINGS, 50 FOOT STREAM BANK BUFFER AREA SHOULD BE MAINTAINED. WITHIN BUFFERS, CLEARING, SOIL DISTURBANCES, EXCAVATION AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING OF LOGS, BURNING CLEARED BRUSH, REFUELING AND EQUIPMENT MAINTENANCE SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFER AREAS.
 3. GRUBBING SHALL NOT TAKE PLACE WITHIN 50 FEET OF TOP-OF-BANK UNTIL ALL MATERIALS REQUIRED TO COMPLETE CROSSING ARE ON SITE AND PIPE IS READY FOR INSTALLATION.
 4. BYPASS PUMP INTAKE SHALL BE MAINTAINED A SUFFICIENT DISTANCE FROM THE BOTTOM TO PREVENT PUMPING OF CHANNEL BOTTOM MATERIALS.
 5. TRENCH PLUGS SHALL BE INSTALLED WITHIN THE TRENCH ON BOTH SIDES OF THE STREAM CHANNEL.
 6. WATER ACCUMULATING WITHIN THE WORK AREA SHALL BE PUMPED TO A PUMPED WATER FILTER BAG OR SEDIMENT TRAP PRIOR TO DISCHARGING INTO ANY SURFACE WATER.
 7. HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE TOP OF STREAMBANK.
 8. ALL DISTURBED AREAS WITHIN 50 FEET OF TOP-OF-BANK SHALL BE BLANKETED OR MATTED WITHIN 24 HOURS OF INITIAL DISTURBANCE FOR MINOR STREAMS OR 48 HOURS OF INITIAL DISTURBANCE FOR MAJOR STREAMS UNLESS OTHERWISE AUTHORIZED.
 9. APPROPRIATE STREAMBANK PROTECTION SHALL BE PROVIDED WITHIN THE CHANNEL.
 10. WETLANDS CROSSINGS: STAGING AREAS SHOULD BE LOCATED AT LEAST 50 FEET FROM THE EDGE OF THE WETLAND. MOVEMENT OF VEHICLES ACROSS THE WETLAND SHOULD BE MINIMIZED. WHERE VEHICLES MUST BE MOVED ACROSS WETLANDS, THE USE OF PADS OR MATS SHOULD BE USED. EXCAVATED TOPSOIL (WITH THE VEGETATIVE ROOT MASS) SHOULD BE CAREFULLY REMOVED & STOCKPILED SEPARATELY FROM THE SUBSOIL (UNLESS THERE IS STANDING WATER OR THE SOIL IS TOO SATURATED TO SEGREGATE). BMP'S (E.G. TRENCH PLUGS) SHOULD BE TAKEN TO PREVENT THE TRENCH FROM DRAINING THE WETLANDS OR CHANGING THE HYDROLOGY. LIME & FERTILIZER SHOULD NOT BE APPLIED. ANNUAL RYE GRASS AT THE RATE OF 40LB/ACRE SHOULD BE APPLIED TO AREAS WITHOUT STANDING WATER. STRAW MULCH SHOULD BE USED, AT THE RATE OF 3T/ACRES AND WITHOUT BINDING AGENTS. ORIGINAL GRADES THROUGH WETLANDS MUST BE RESTORED AFTER TRENCHING & BACKFILLING. MOUNDING OF FILL MATERIAL TO ALLOW FOR SETTLEMENT IN THE TRENCH WILL BE ALLOWED IN ACCORDANCE WITH BEST CONSTRUCTION METHODS.
 11. ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM STREAM CROSSING SITE.
 12. STORED BACKFILL SHALL BE LOCATED OUT OF THE FLOODWAY.
 13. THERE SHALL BE A MINIMUM OF 3' OF COVER BETWEEN THE TOP OF THE CONCRETE ENCASUREMENT & THE BOTTOM OF THE STREAMBED. IF ROCK IS ENCOUNTERED A MINIMUM OF 1' OF COVER IS ACCEPTABLE.



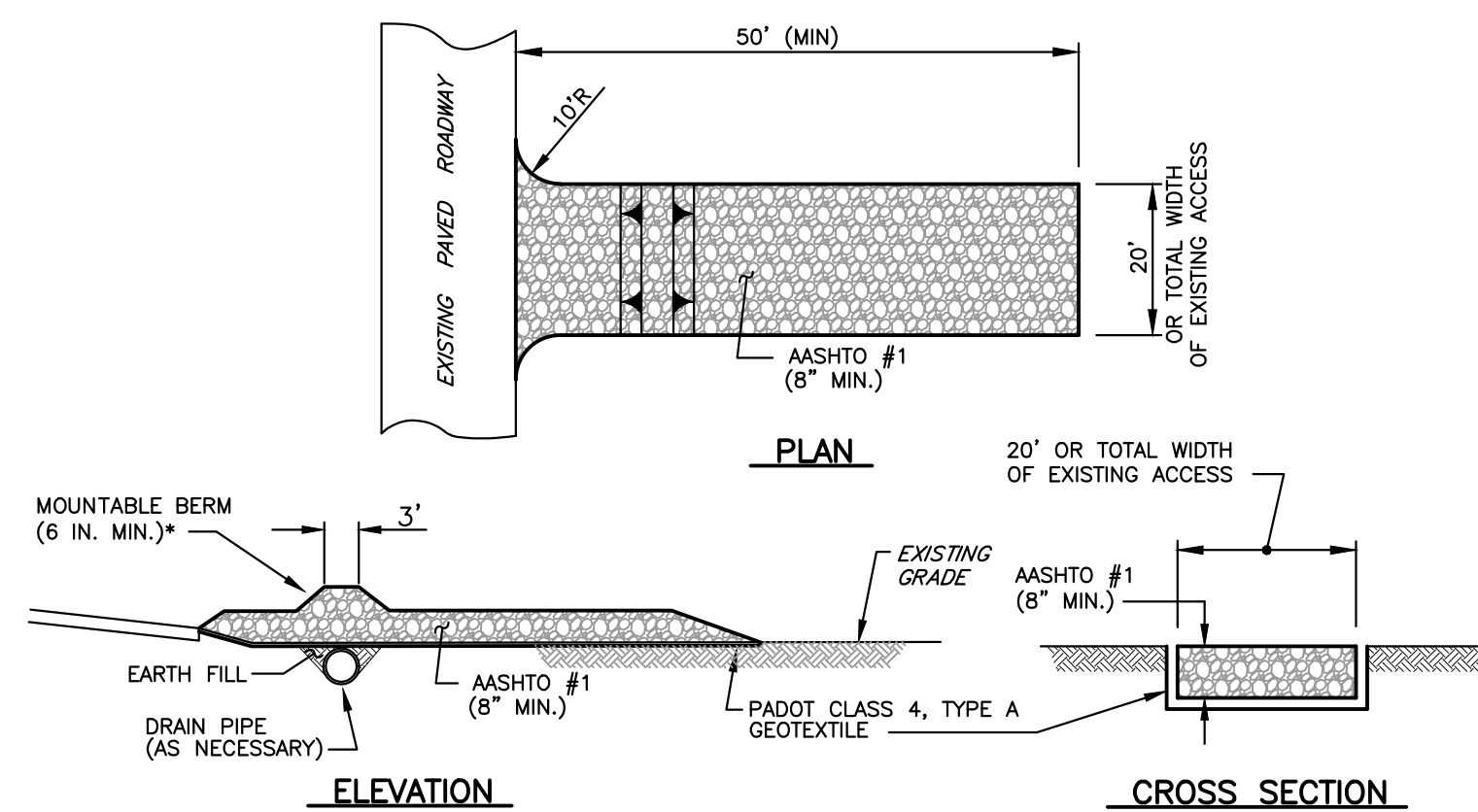
- NOTES:
1. LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:
- | PROPERTY | TEST METHOD | MINIMUM STANDARD |
|--------------------------|-------------|------------------|
| AVG. WIDE WIDTH STRENGTH | ASTM D-4884 | 60 LB./IN |
| GRAB TENSILE | ASTM D-4632 | 205 LB |
| PUNCTURE | ASTM D-4833 | 110 LB |
| MULLEN BURST | ASTM D-3786 | 350 PSI |
| UV RESISTANCE | ASTM D-4355 | 70% |
| AOS % RETAINED | ASTM D-4751 | 80 SIEVE |
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
 3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
 4. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
 5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
 6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
 7. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG DETAIL

NO SCALE

UTILITY LINE STREAM/WETLAND CROSSING PUMPED BYPASS DETAIL

NO SCALE

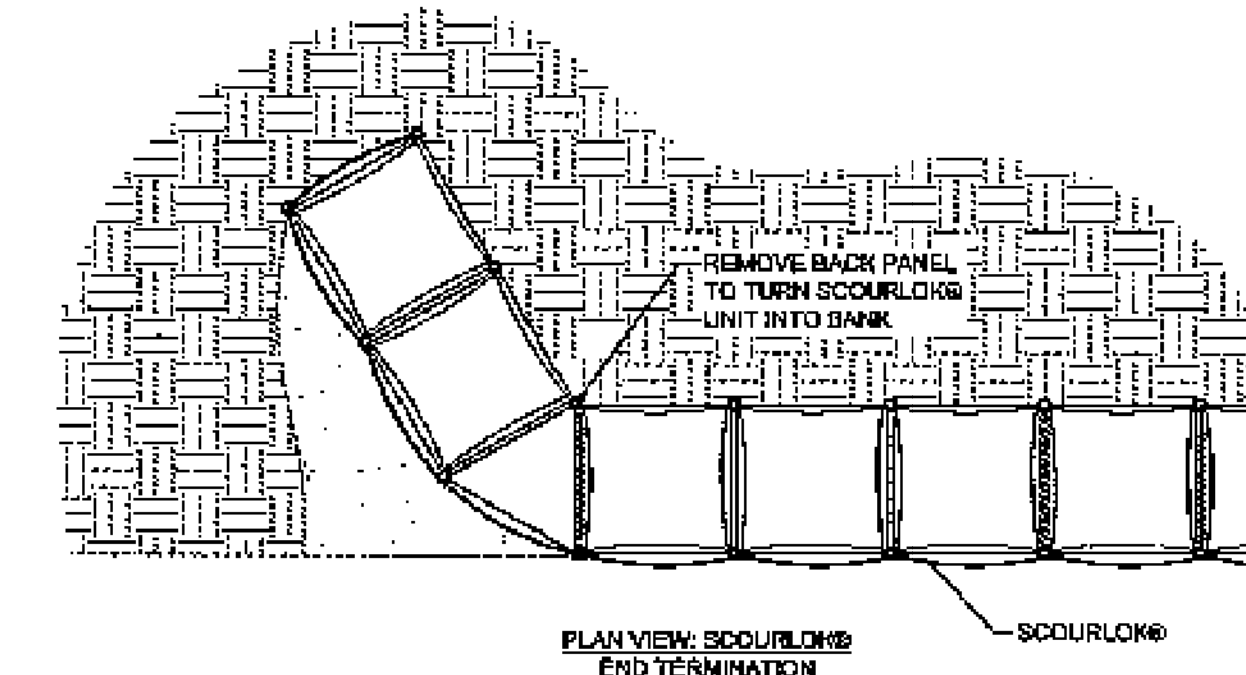
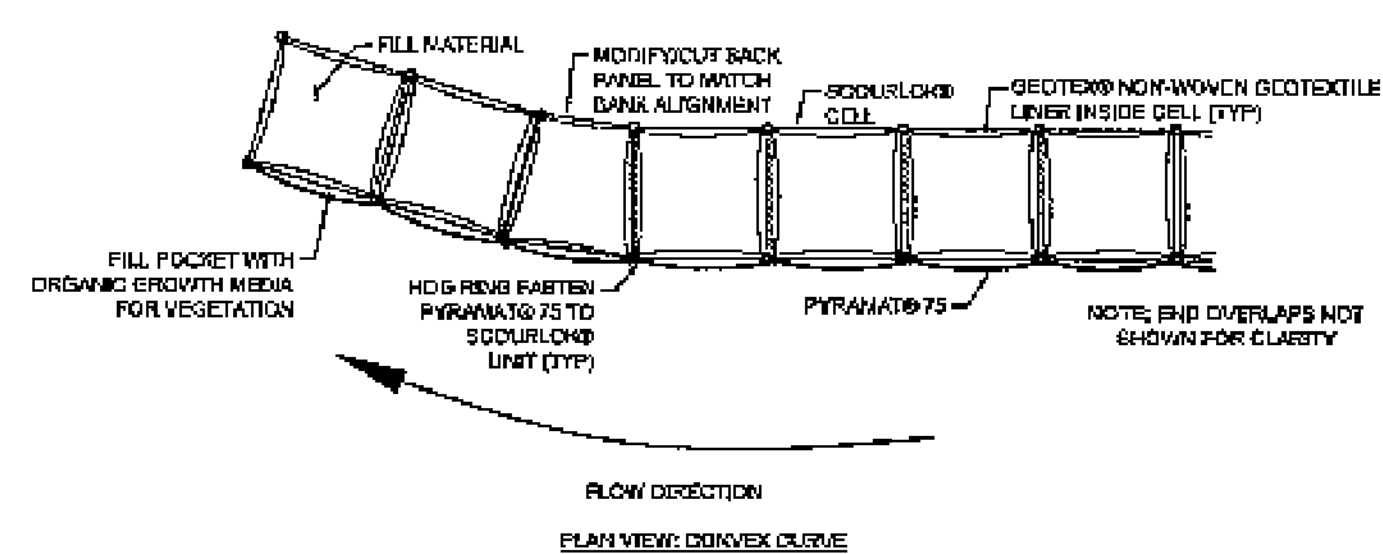
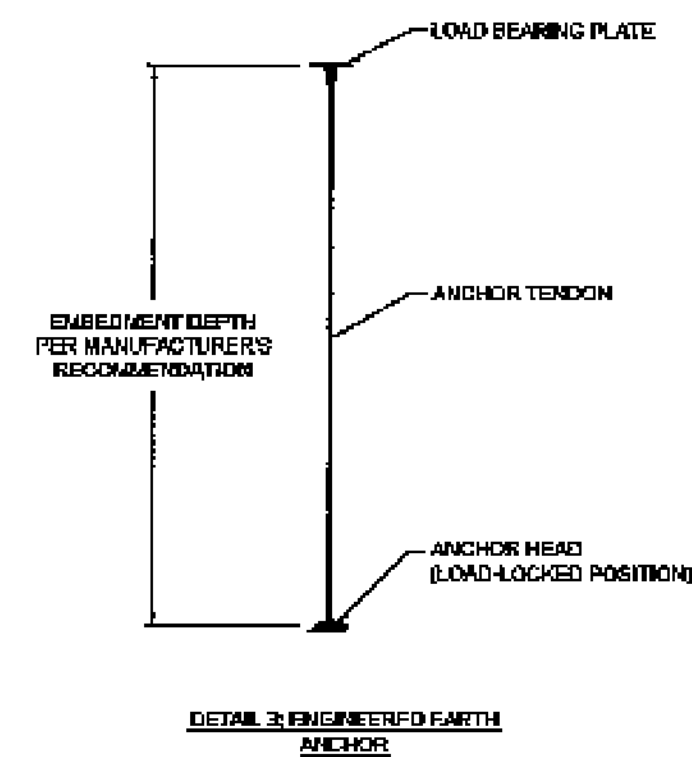
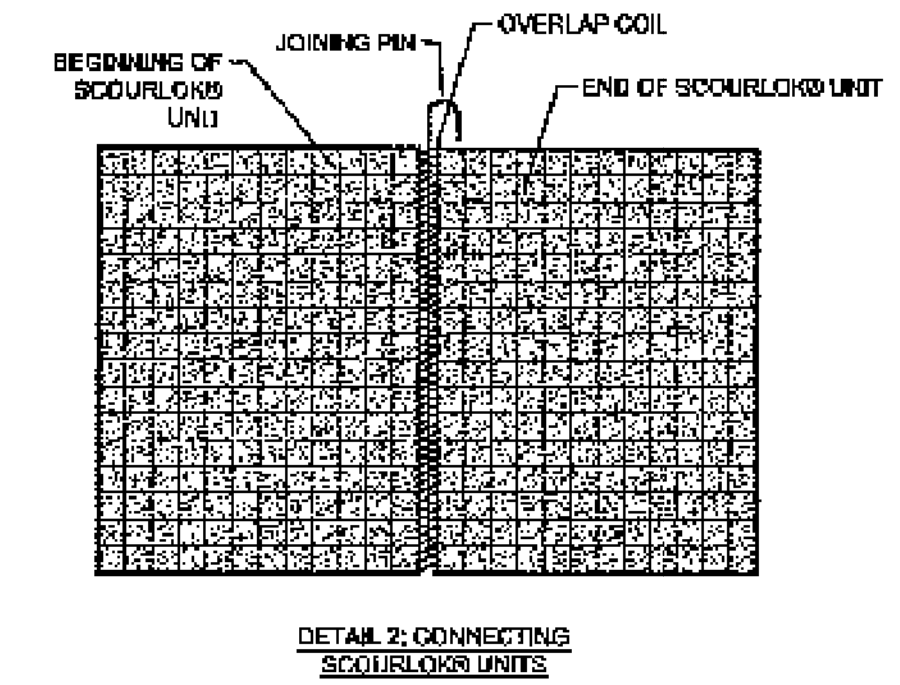
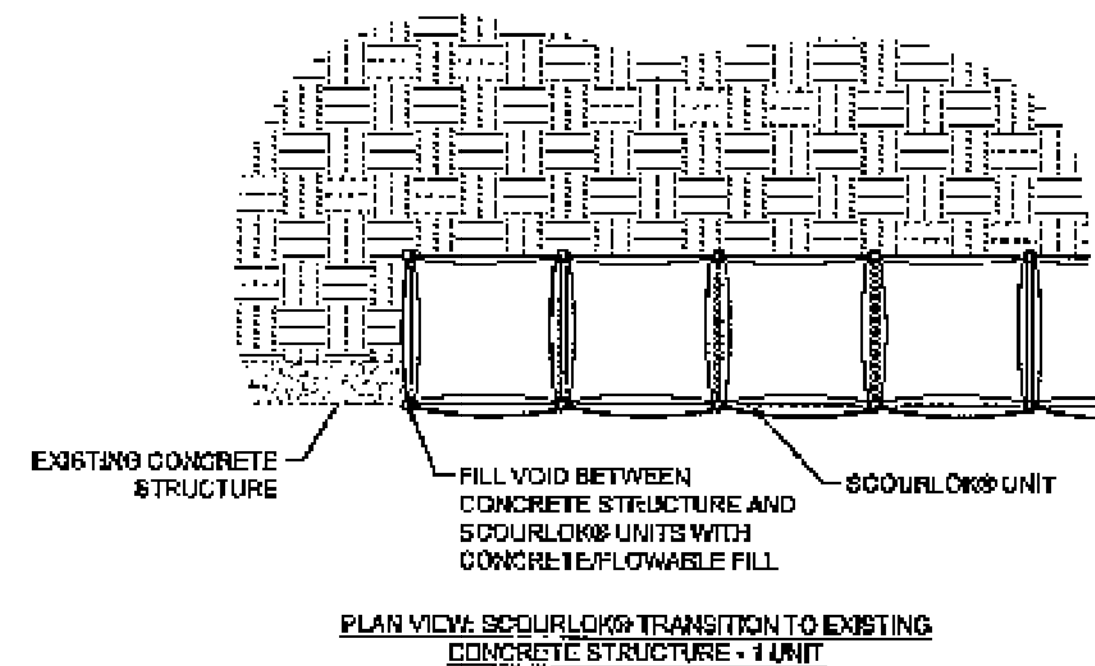
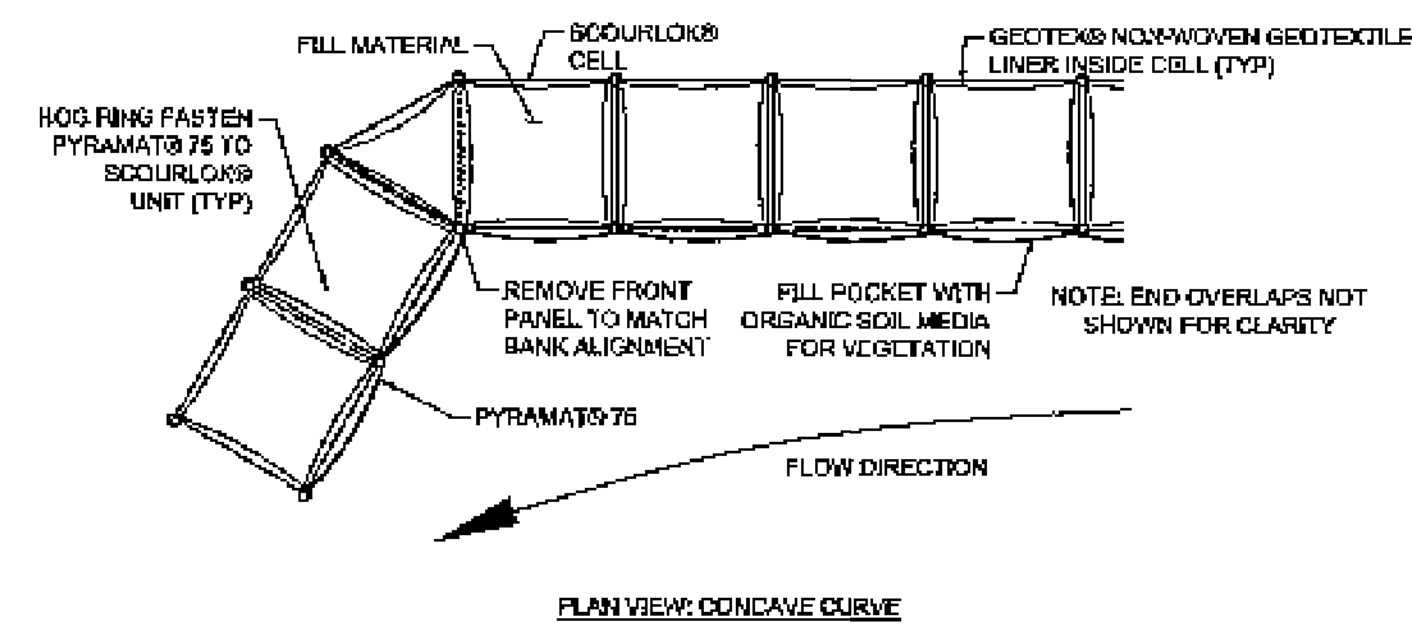
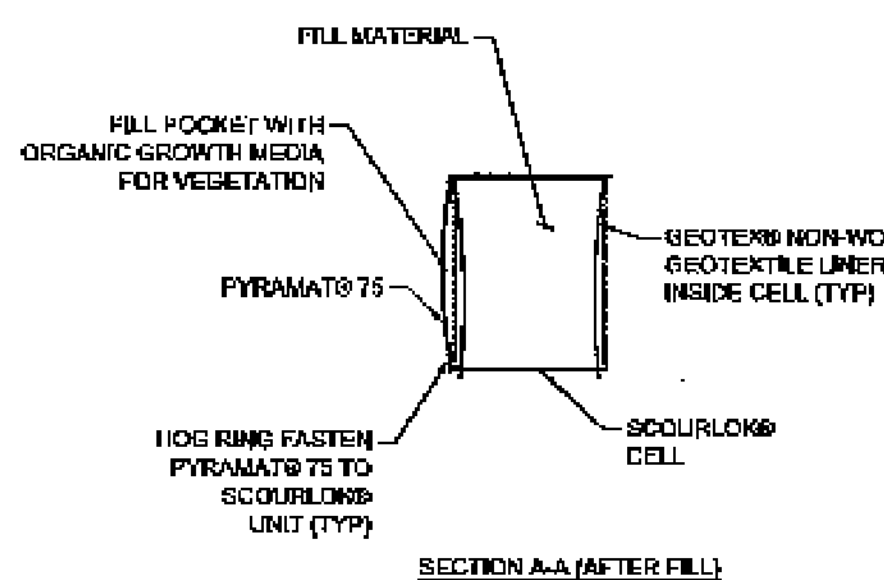
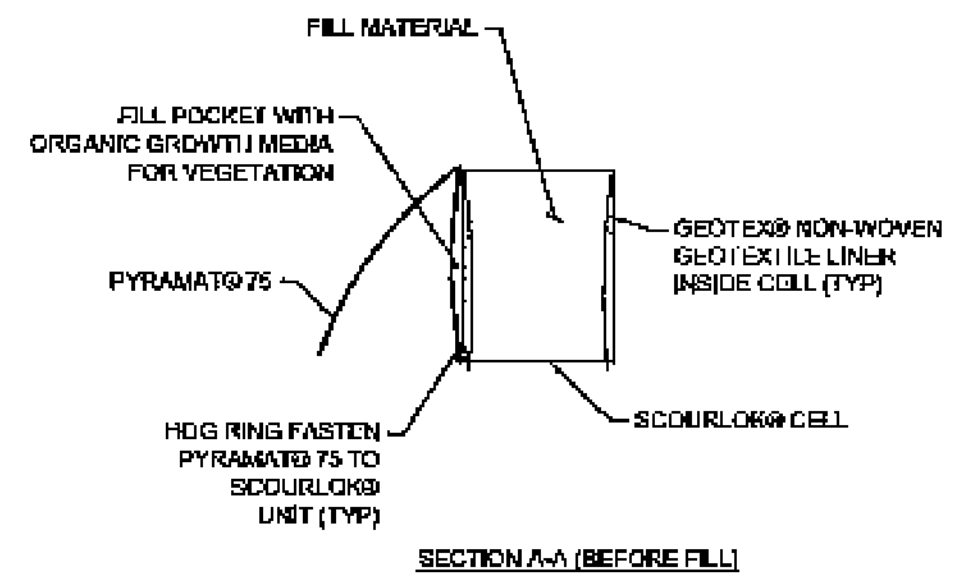
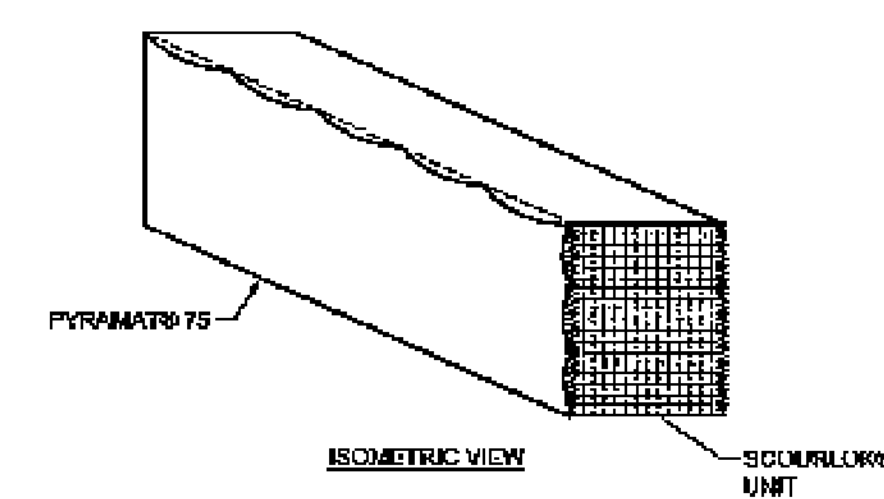
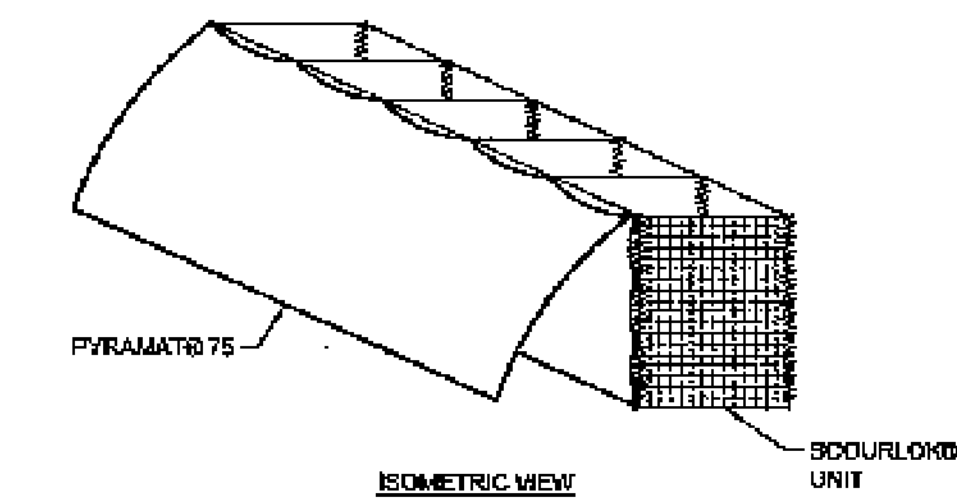
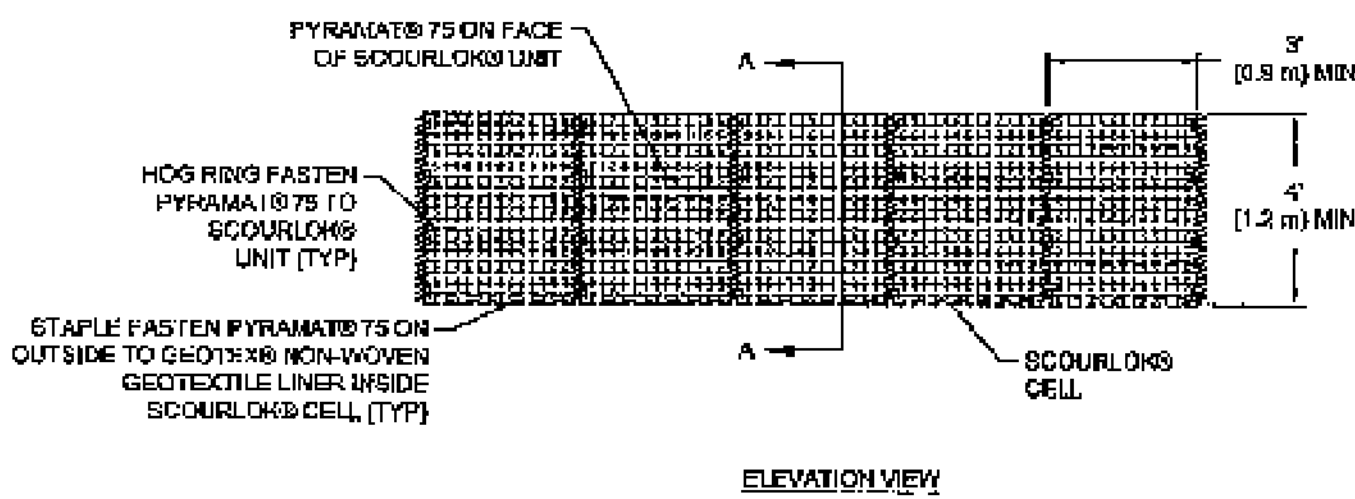
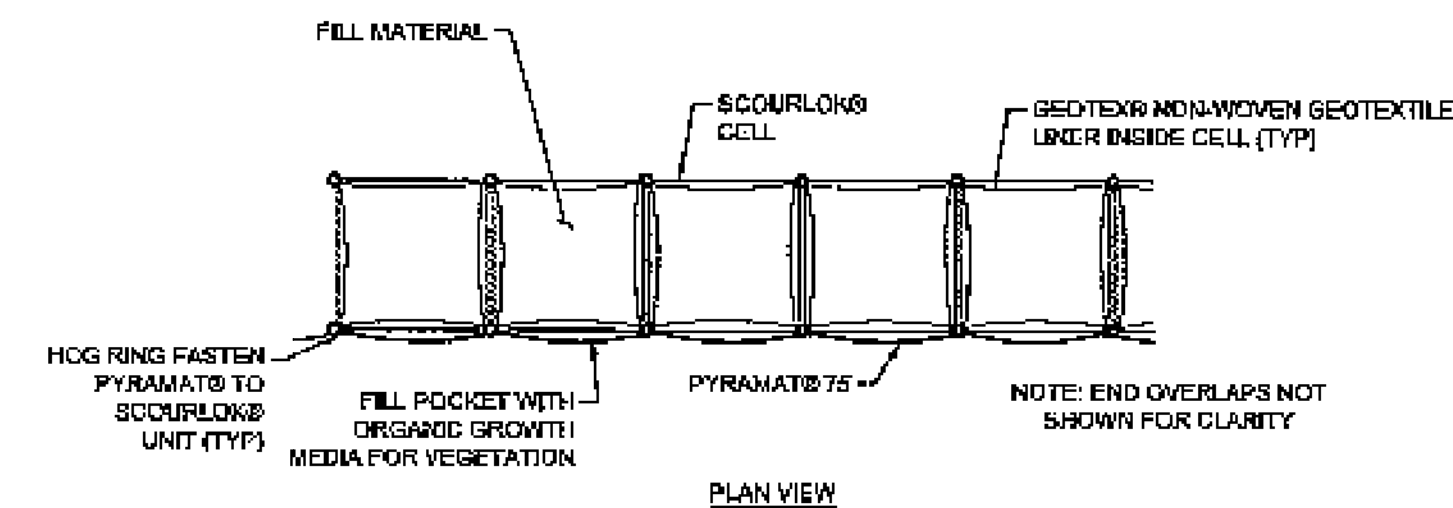
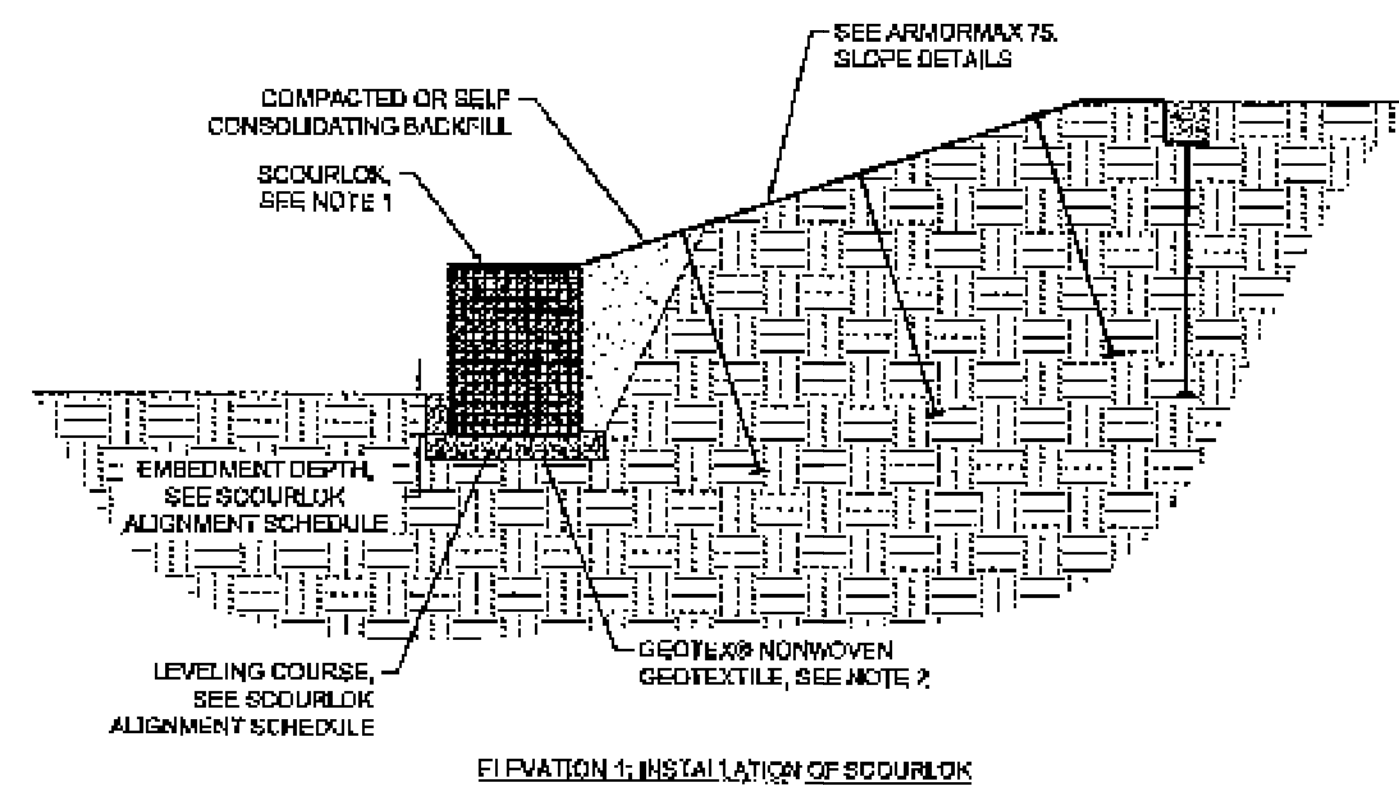


- NOTES:
1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
 2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT 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.
 4. 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.

CONSTRUCTION ENTRANCE DETAIL

NO SCALE

				DAVID T. KEE, P.E.			SEAL	SEAL	CLIENT & PROJECT			TITLE		
				RELEASED BY					CALN TOWNSHIP MUNICIPAL AUTHORITY			253 MUNICIPAL DRIVE		
				DESIGN					THORNDALE, PENNSYLVANIA 19426					
				DRAWN					SOUTH LLOYD AVENUE			321 N.Furnace Road, Suite 200		
				DATE					CALN TOWNSHIP RESTORATION PROJECT			Birdsboro, Pennsylvania 19508		
				MAY 2022					CALN TOWNSHIP, CHESTER COUNTY, PA			Tel 610.374.5285		
				SURVEY DATE					SCALE			DWG. NO.		
				FIELD BOOK					PROJECT NO.			11193.59		
				SHEET NO.					3 OF 5			REV. A		
				REV.					A			E92		



SCOURLOK® ENGINEERED BANK STABILIZATION GENERAL INSTALLATION GUIDELINES

GENERAL NOTES

- Scourlok® Engineered Bank Stabilization provides a durable, geotechnically stable structure that provides immediate erosion protection and long-term vegetative cover if desired. SCOURLOK is constructed of rigid cells armored with PYRAMAT® 75 High Performance Turf Reinforcement Mat (HPRM) and internally lined with GEOTEX® 601 non-woven geotextile. PYRAMAT is fastened to the rigid cells to provide a flexible exterior, control erosion, and improve system durability and forms packets that can be filled with organic growth media to promote and sustain vegetation. The durable geotextile lining allows the rigid cell to be filled with earth, sand, gravel, crushed rock and other granular material.
- GEOTEX® 601 is a polypropylene, staple fiber, needle-punched nonwoven geotextile and is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

BEFORE INSTALLATION BEGINS

- Coordinate with a Propex Representative: A pre-construction meeting is suggested with the construction team and a representative from Propex. This meeting should be scheduled by the contractor with at least a two week notice.
- Obtain the Tools Needed: Tools that you will need to install SCOURLOK include a pair of industrial shears to cut PYRAMAT® 75, tape measure, level, percussion hammer (sized appropriately for the anchors), wire cut pliers with the percussion hammer, drive steel compatible with the anchors, sockets, lead to soil and lead-back the anchor, hog ring pin to fasten PYRAMAT 75 to the SCOURLOK unit, and wire cutters to cut the cable tendon of the anchor. If anchors will be load tested during construction, additional testing equipment may be necessary. Consult the "Anchor Load Test Manual" from Propex for further guidance. Available for purchase from Propex are drive steel, setting tools, and wire cutters.
- Determine how to Establish Vegetation: The method of vegetation establishment should be determined prior to the start of installation. Different vegetation establishment methods require different orders of installation.
- Please consult the Propex Website for the most up to date installation guidelines.

Propex GEOSOLUTIONS

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CONCEPTUAL INSTALLATION DETAILS

Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure the accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability, and accuracy. This engineering drawing is protected by the Copyright Act, 17 U.S.C. § 111 et seq. and may be used ONLY with the express written permission of Propex in connection with Propex products. Any copying, distributing, and/or creation of a derivative work without permission of Propex is prohibited and is subject to actual damages, statutory damages and attorney's fees under the Copyright Act.

SCOURLOK® INSTALLATION DETAILS

1 of 1

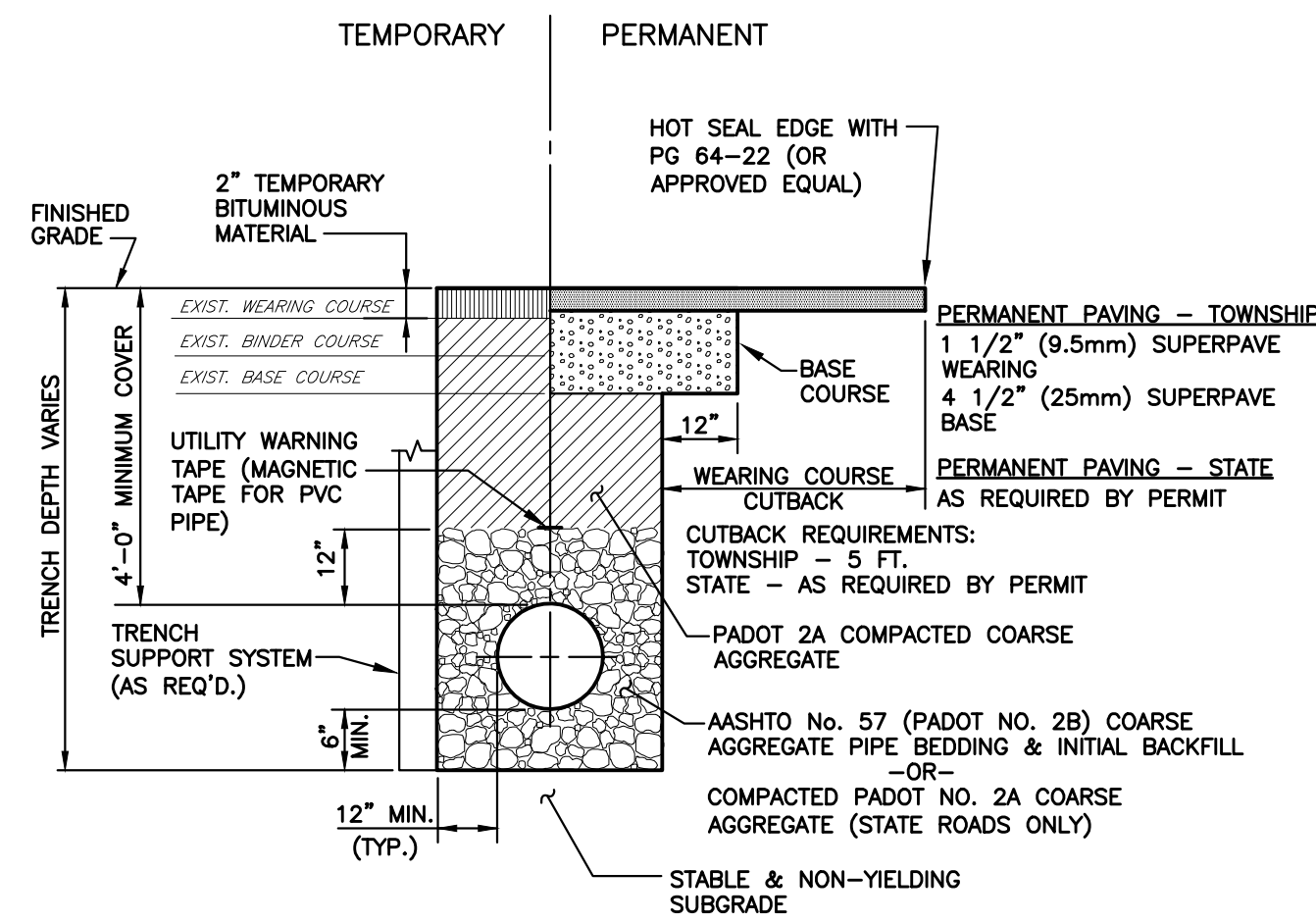
Date: 02/14/2022 Drawn By: J.HILL Scaled: NTS

*ALL DIMENSIONS ARE TO BE VERIFIED BY ENGINEER OF RECORD

SCOURLOK ALIGNMENT SCHEDULE

SCOURLOK EMBEDMENT DEPTH	MIN 0.5 ft.
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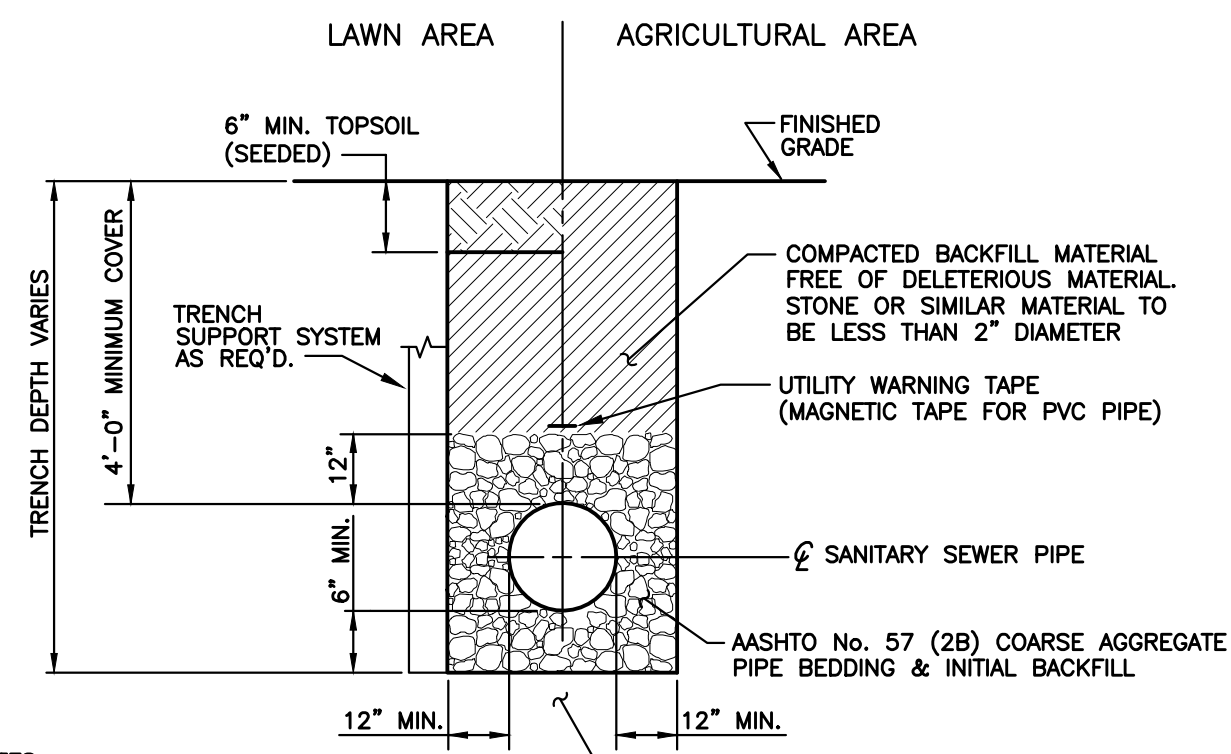
NO	REVISION	DATE	BY	APP.	NO	REVISION	DATE	BY	APP.	DAVID T. KEE, P.E. RELEASED BY DESIGN D. KEE DRAWN M. COLLINS DATE MAY 2022	SEAL	SEAL	CLIENT & PROJECT CALN TOWNSHIP MUNICIPAL AUTHORITY 253 MUNICIPAL DRIVE THORNDALE, PENNSYLVANIA 19426 SOUTH LLOYD AVENUE STREAM BANK RESTORATION PROJECT CALN TOWNSHIP, CHESTER COUNTY, PA	ARRCO 321 N. Furnace Road, Suite 200 Birdsboro, Pennsylvania 19508 Tel: 610.374.5285	TITLE SCALE PROJECT NO. SHEET NO. REV.	DWG. NO. MD1	
															11193.59	4 OF 5	A



- NOTES:
1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
 3. FOR STATE ROADS, ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE. DESIGN & CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.

TRENCH RESTORATION DETAIL - EXISTING ROADS
(PAVING/REPAVING OLDER THAN 3 YEARS)

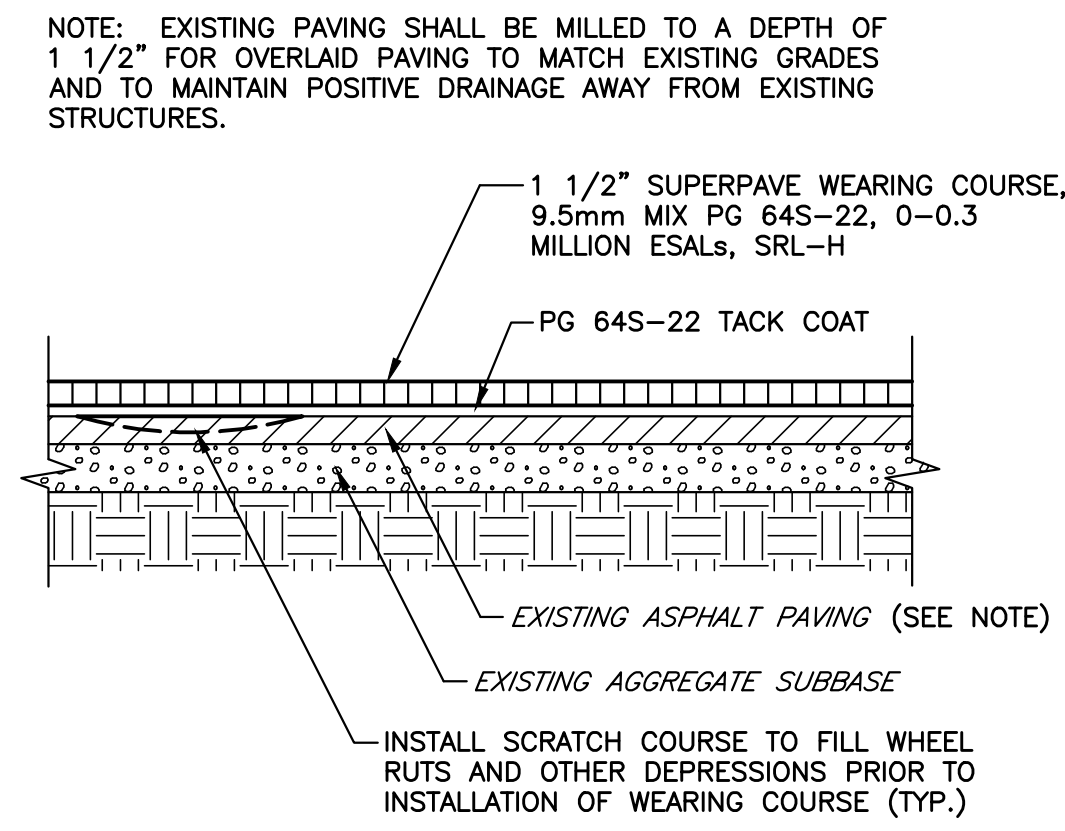
NO SCALE



- NOTES:
1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
 3. IF EDGE OF TRENCH IS 3' OR LESS FROM EDGE OF PAVING OF A STATE ROAD, RESTORATION ABOVE TOP OF INITIAL BACKFILL SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.

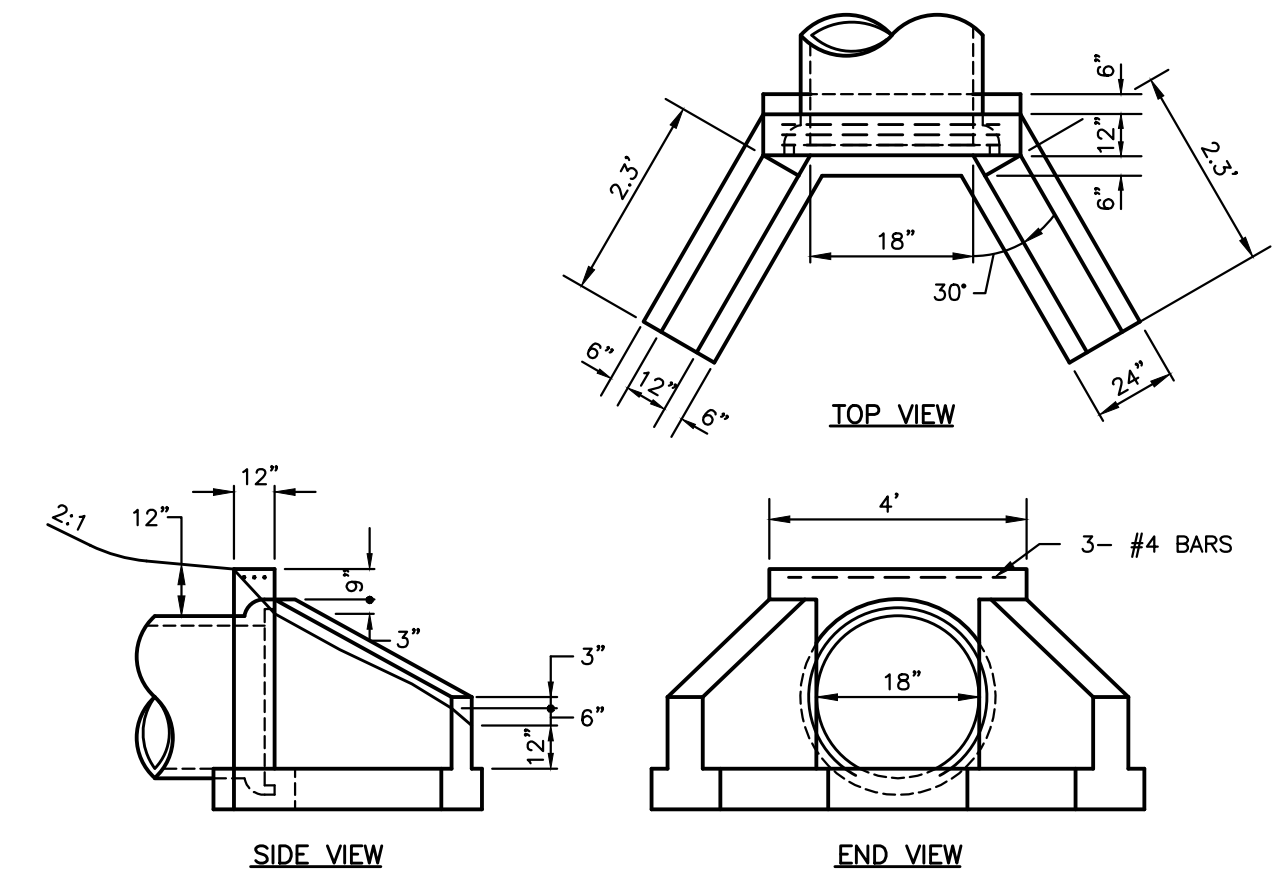
TRENCH RESTORATION DETAIL
LAWN/AGRICULTURAL AREAS

NO SCALE



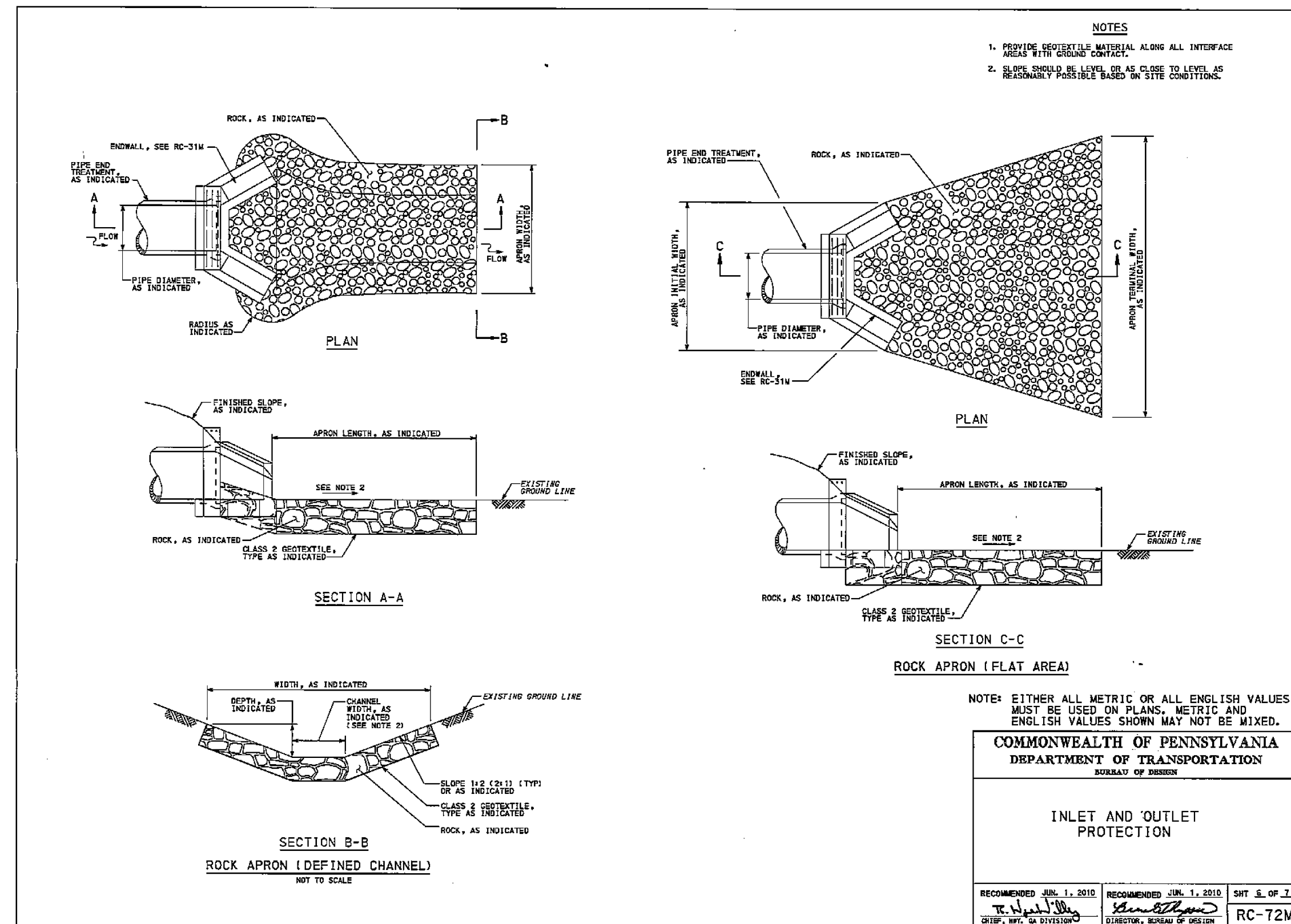
OVERLAY PAVING DETAIL

NO SCALE



TYPE D-W ENDWALL DETAIL

NO SCALE



ROCK APRON DETAIL

NO SCALE

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET AND OUTLET
PROTECTION

RECOMMENDED DATE: 1. 2010
DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: [Signature]
RC-72M

				DAVID T. KEE, P.E. RELEASED BY		SEAL	SEAL	CLIENT & PROJECT CALN TOWNSHIP MUNICIPAL AUTHORITY 253 MUNICIPAL DRIVE THORNDALE, PENNSYLVANIA 19426		TITLE	
				DESIGN D. KEE				SOUTH LLOYD AVENUE STREAM BANK RESTORATION PROJECT CALN TOWNSHIP, CHESTER COUNTY, PA		ARRCO	
				DRAWN M. COLLINS				321 N.Furnace Road, Suite 200 Birdsboro, Pennsylvania 19508 Tel 610.374.5285		SCALE	
				DATE MAY 2022				PROJECT NO. 11193.59		DWG. NO. MD2	
				SURVEY DATE				SHEET NO. 5 OF 5		REV. A	
				FIELD BOOK							