

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
SOIL EROSION & SEDIMENT CONTROL PLAN

**REGIONAL ENERGY ACCESS EXPANSION PROJECT  
COMPRESSOR STATION 200**

EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

APRIL 2021  
REVISED MARCH 2022

PROJECT OWNER/APPLICANT

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
PARK PLACE CORPORATE CENTER TWO,  
2800 POST OAK BLVD, LEVEL 11  
HOUSTON, TX 77056  
CONTACT: JOSEPH DEAN, MANAGER PERMITTING

PLAN PREPARER / ENGINEER

WHM CONSULTING, LLC  
366 WALKER DRIVE SUITE 300  
STATE COLLEGE, PA 16801  
PH: (814) 689-1650  
CONTACT: RYAN NELSON, PROJECT MANAGER

BAI GROUP, LLC.  
366 WALKER DRIVE SUITE 300  
STATE COLLEGE, PA 16801  
PH: (814) 238-2060  
CONTACT: PATRICK WOZINSKI, P.E. PROJECT ENGINEER

PROJECT INFORMATION

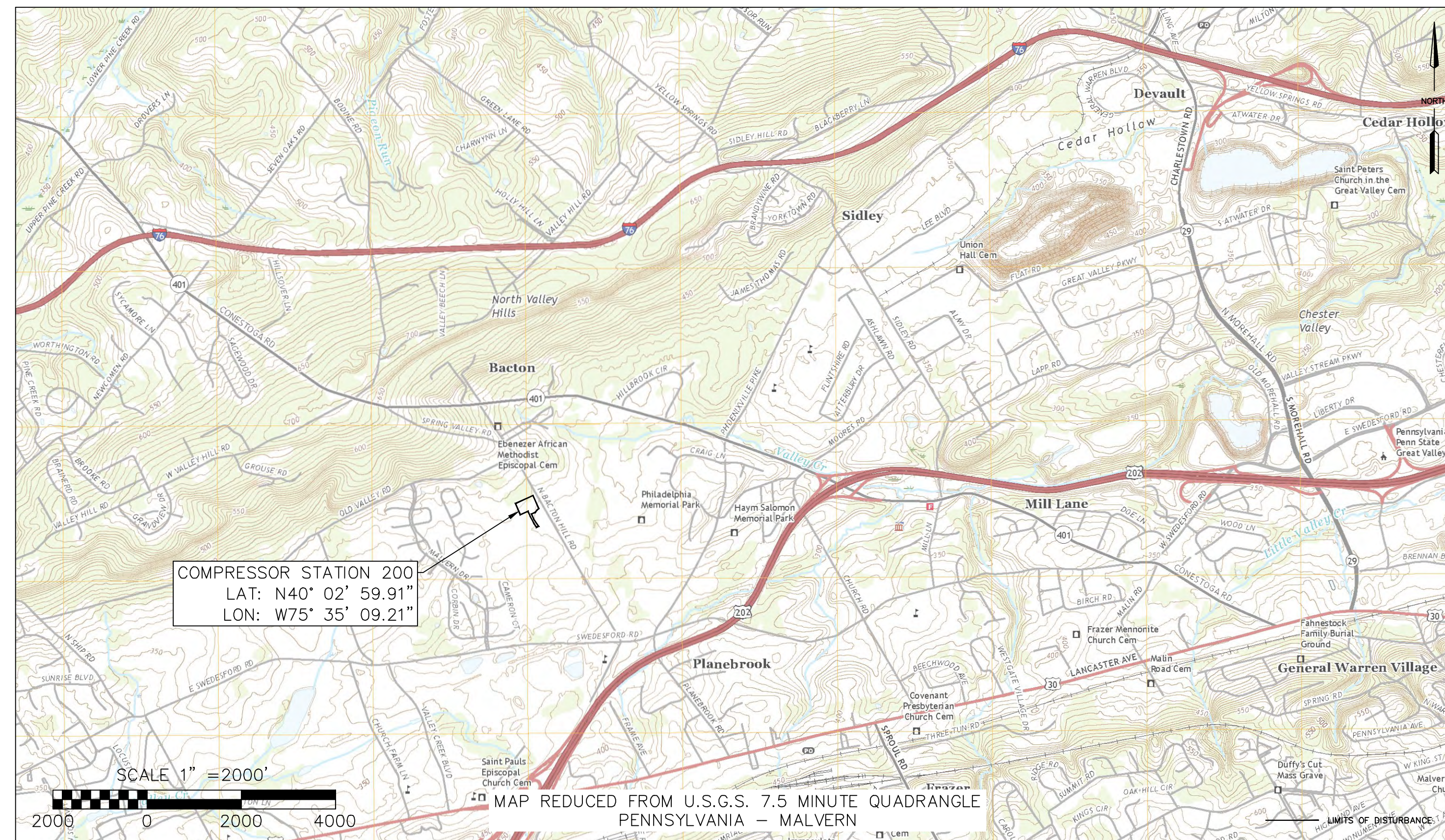
ESCP PERMIT BOUNDARY: 20.28 Ac.

LIMIT OF DISTURBANCE: 3.16 Ac.

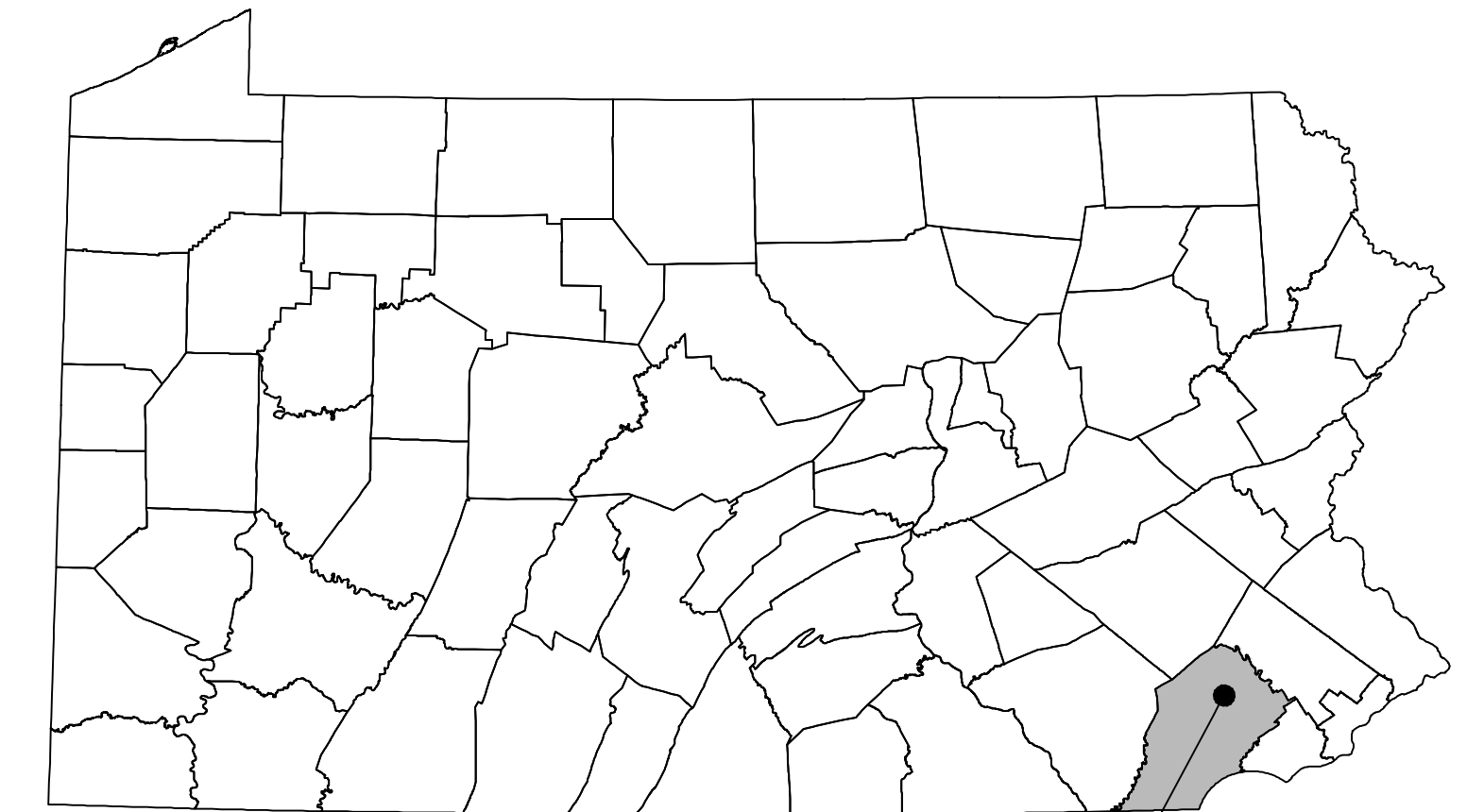
PROJECT DESCRIPTION

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO), INDIRECTLY OWNED BY THE WILLIAMS COMPANIES, INC. (WILLIAMS) IS SEEKING AUTHORIZATION FROM THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) UNDER SECTION 7(C) OF THE NATURAL GAS ACT AND PART 157 OF THE COMMISSIONS REGULATIONS, TO CONSTRUCT, OWN, OPERATE, AND MAINTAIN THE PROPOSED PROJECT FACILITIES ASSOCIATED WITH THE REGIONAL ENERGY ACCESS EXPANSION PROJECT (PROJECT). THE PROJECT IS AN EXPANSION OF TRANSCO'S EXISTING NATURAL GAS TRANSMISSION SYSTEM THAT WILL ENABLE TRANSCO TO PROVIDE AN INCREMENTAL 829,400 DEKATHERMS PER DAY (DTH/D) OF YEAR-ROUND FIRM TRANSPORTATION CAPACITY FROM THE MARCELLUS SHALE PRODUCTION AREA IN NORTHEASTERN PENNSYLVANIA (PA) TO MULTIPLE DELIVERY POINTS ALONG TRANSCO'S LEIDY LINE IN PA, TRANSCO'S MAINLINE AT THE STATION 210 ZONE 6 POOLING POINT IN MERCER COUNTY, NEW JERSEY (NJ) AND MULTIPLE DELIVERY POINTS IN TRANSCO'S ZONE 6 IN NJ, PA, AND MARYLAND (MD).

THE EXISTING COMPRESSOR STATION 200 COMPONENT OF THE PROJECT IS LOCATED IN EAST WHITELAND TOWNSHIP, CHESTER COUNTY. PROPOSED ARE COMPRESSOR STATION MODIFICATIONS TO CONNECT THE EXISTING TRANSCO MAINLINE A INTO SUCTION TO SUPPORT SOUTH FLOW.



LOCATION MAP



VICINITY MAP  
N.T.S.

SHEET INDEX	
SHEET NUMBER	DRAWING TITLE
1 OF 7	COVER
2 OF 7	EXISTING CONDITIONS PLAN
3 OF 7	E&S SITE PLAN
4-5 OF 7	NOTES
6-7 OF 7	DETAILS

RECEIVING WATERS		
NAME	DESIGNATED USE	EXISTING USE
VALLEY CREEK (EAST)*	EV, MF	N/A
VALLEY CREEK (WEST)	CWF, MF	N/A

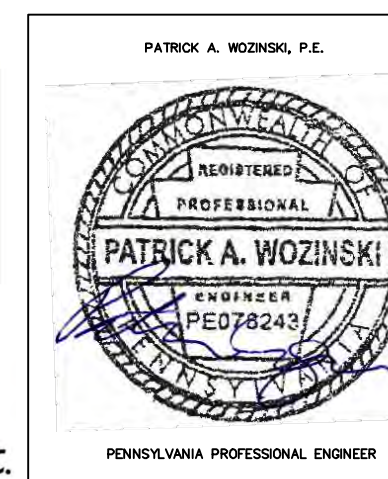
\*DISTURBANCE LOCATED IN THIS WATERSHED ONLY

E&S BMP LEGEND		
DESCRIPTION	SYMBOL	SHEET NUMBER
CONSTRUCTION ENTRANCE	CE	7
TYPICAL SOIL STOCKPILE	TTS	6
COMPOST FILTER SOCK	CFS	6
GRAVEL PAD		7
COMPOST SOCK CONCRETE WASHOUT INSTALLATION	CW	6
INFILTRATION BERM	IB	6
TRENCH DRAIN	TD	7
ROCK FILTER OUTLET	RFO	7

XXX INDICATES SOIL EROSION CONTROL MEASURE DETAIL

Call before you dig.  
1-800-242-1776 or **811**

PENNSYLVANIA ACT 287 (1974) AS AMENDED BY PENNSYLVANIA LESS THAN THREE (3) WORKING DAYS AND NO MORE THAN (10) WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH.



REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.O. NO.	CHK.	APP.
1	06/29/21	RHM	REVISED PER PADEP COMMENTS.			
2	03/01/22	RHM	RESPONSE TO PADEP TECHNICAL DEFICIENCY LETTER			

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
REGIONAL ENERGY ACCESS EXPANSION PROJECT -  
COMPRESSOR STATION 200  
SOIL EROSION & SEDIMENT CONTROL PLAN  
COVER  
EAST WHITELAND TWP., CHESTER COUNTY, PENNSYLVANIA



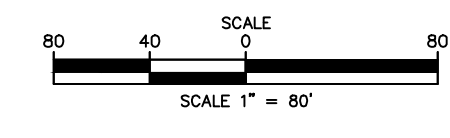
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CHECKED BY: RJN	DATE: 03/31/21	ISSUED FOR CONSTRUCTION:	REVISION:
APPROVED BY: PW	DATE: 03/31/21		
WO: 122813	RID: 305	DRAWING NUMBER: 26-1000-70-28-D	SHEET 1 OF 7



**EXISTING CONDITION NOTES/SOURCES**

- EXISTING ROADWAYS, CONTOURS, PROPERTY LINE, TREE LINE, ETC. ARE DERIVED FROM A FIELD SURVEY PERFORMED BY TRANSCO IN 2020.
- PROPERTY BOUNDARIES BASED EITHER ON TAX PARCEL INFORMATION PROVIDED BY TRANSCO. PROPERTY BOUNDARY LOCATIONS BASED ON TAX PARCEL INFORMATION ARE APPROXIMATE.
- PIPELINE ALIGNMENTS AND LIMITS OF DISTURBANCE PROVIDED BY TRANSCO.
- STREAM AND WETLAND BOUNDARIES BASED ON SURVEYS CONDUCTED BY WHM CONSULTING IN 2020.
- DATUM BASED ON PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NAD 83 NORTH ZONE, NAVD88, ELEVATION MSL, DERIVED FROM GPS OBSERVATION.

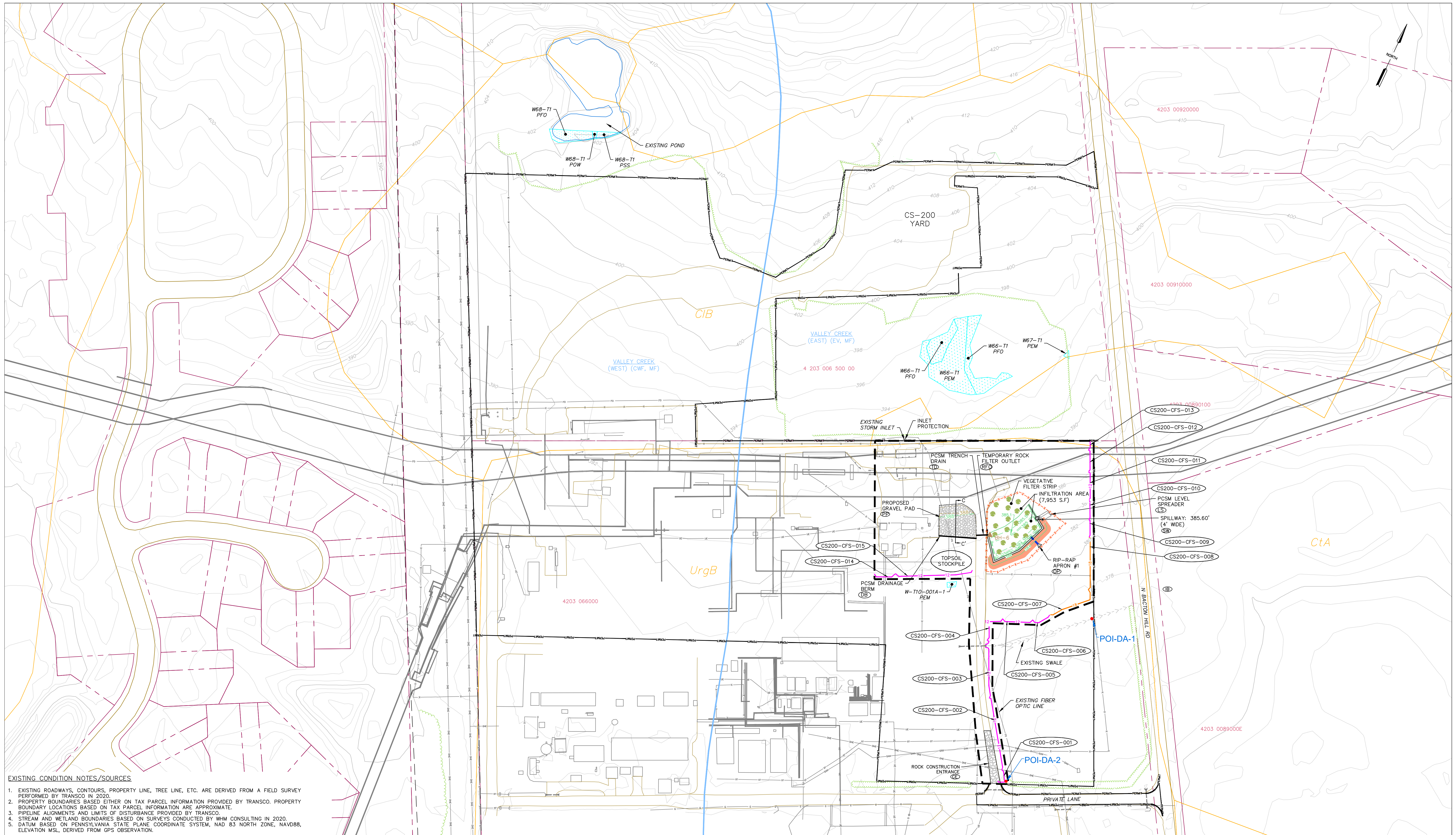
LEGEND		SOIL LEGEND	
	ESCP PERMIT BOUNDARY		CONESTOGA SILT LOAM, 0 TO 3 PERCENT SLOPES
	LIMITS OF DISTURBANCE		URBAN LAND-CONESTOGA COMPLEX, 0 TO 8 PERCENT SLOPES
	DELINEATED WETLAND		EXISTING GRADE MAJOR CONTOURS (10' C.I.)
	SOL BOUNDARY / TYPE		EXISTING GRADE MINOR CONTOURS (2' C.I.)
	EXISTING TREELINE / TREE/SHRUB		TEST PIT LOCATION
	PROPERTY LINE		
	EXISTING LEADY / TOP/L PIPELINES		
	EXISTING FOREIGN PIPELINES		
	EXISTING UTILITY POLE / TOWER		
	EXISTING VALVE		
	EXISTING CULVERT		
	EXISTING ELECTRIC LINE		
	EXISTING UNDERGROUND ELECTRIC LINE		
	EXISTING GAS LINE		
	EXISTING WATER LINE		
	EXISTING SANITARY LINE		
	EXISTING STORM SEWER		
	EXISTING TELEPHONE LINE		
	EXISTING FIBER OPTIC LINE		
	EXISTING UNDERGROUND CABLE LINE		
	EXISTING STORM INLET		
	EXISTING SANITARY MANHOLE		
	EXISTING COMMUNICATION/ELECTRIC MANHOLE		
	EXISTING FIRE HYDRANT		
	EXISTING POWER POLE		
	EXISTING EASEMENT		
	EXISTING RIGHT-OF-WAY		
	EXISTING FENCE		
	EXISTING WETLAND		



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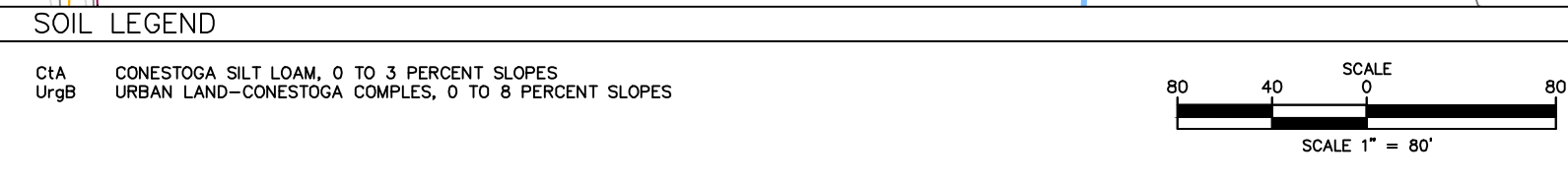
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W.O. NUMBER: 1232813	RID: 305		



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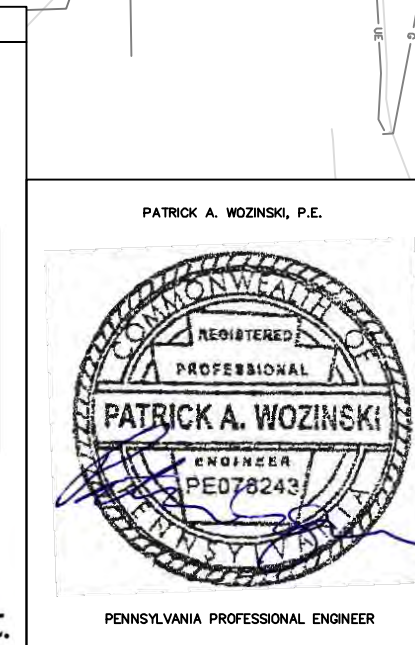
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LEGEND		SOIL LEGEND	
	ROCK CONSTRUCTION ENTRANCE		CONESTOGA SILT LOAM, 0 TO 3 PERCENT SLOPES
	PERMIT BOUNDARY		URBAN LAND-CONESTOGA COMPLEX, 0 TO 8 PERCENT SLOPES
	LIMITS OF DISTURBANCE		EXISTING STRUCTURE
	SOIL BOUNDARY / TYPE		EXISTING EDGE OF ROAD
	EXISTING TREELINE / TREE/SHRUB		EXISTING STORM SEWER
	PROPERTY LINE		EXISTING TELEPHONE LINE
	EXISTING LEDGE / TOP/L PIPELINES		EXISTING FIBER OPTIC LINE
	EXISTING FOREIGN PIPELINES		EXISTING UNDERGROUND CABLE LINE
	EXISTING UTILITY POLE / TOWER		EXISTING STORM INLET
	EXISTING VALVE		EXISTING SANITARY MANHOLE
	EXISTING CULVERT		EXISTING COMMUNICATION/ELECTRIC MANHOLE
	EXISTING ELECTRIC LINE		EXISTING FIRE HYDRANT
	EXISTING UNDERGROUND ELECTRIC LINE		EXISTING POWER POLE
	EXISTING GAS LINE		EXISTING EASEMENT
			EXISTING RIGHT-OF-WAY
			EXISTING FENCE
			PROPOSED FENCE
			EXISTING WATERSHED DIVIDE
			PROPOSED GRAVEL
			EXISTING GRADE MAJOR CONTOURS (10' C.I.)
			EXISTING GRADE MINOR CONTOURS (2' C.I.)
			PROPOSED GRADE MAJOR CONTOURS (10' C.I.)
			PROPOSED GRADE MINOR CONTOURS (2' C.I.)
			PROPOSED PAD SUBGRADE MAJOR CONTOURS (10' C.I.)
			PROPOSED PAD SUBGRADE MINOR CONTOURS (2' C.I.)
			PROPOSED ECB WITH STAPLE PATTERN D
			PROPOSED CONSTRUCTION FENCE
			12" COMPOST FILTER SOCK
			18" COMPOST FILTER SOCK
			24" COMPOST FILTER SOCK
			TEST PIT LOCATION



**EROSION AND SEDIMENTATION NOTES:**

- SHEET FLOW SHALL BE MAINTAINED TO THE COMPOST FILTER SOCKS. IF CONCENTRATED FLOW/OVERTOPPING OCCURS, A ROCK FILTER OUTLET SHALL BE INSTALLED AT THE POINT OF CONCENTRATION/OVERTOPPING.
- COMPOST FILTER SOCK LAYOUT MAY BE FIELD ADJUSTED TO CONFORM TO ACTUAL FIELD CONDITIONS PROVIDED THE INTENT OF THE DESIGN IS MAINTAINED.



PATRICK A. WOZINSKI, P.E.			
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**STANDARD EROSION AND SEDIMENT POLLUTION CONTROL NOTES**

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL 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 1-800-242-1776 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 LOCAL COUNTY CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEANING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- 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.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISHED GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER. STOCKPILES SHALL BE LOCATED WITHIN THE LIMIT OF DISTURBANCE (LOD). FILTER SOCK OR SILT FENCE SHALL BE PLACED DOWNGRADIENT OF STOCKPILES.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT OR THE DEPARTMENT 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 FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT 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 AND ONTO ROADS AS IDENTIFIED ON THE PLANS.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RAINFALL EVENT ON A WEEKLY BASIS. ALL PREVENTATIVE AND MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGARDING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE AS NEEDED AND 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 SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- 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 EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOOT, 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. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- 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 REACTIVATED 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 MOVEMENTS.
- E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY, IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO 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 LOCAL 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 CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 802 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.
- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- ALL E&S CONVEYANCE CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
- UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE E&S CONVEYANCE CHANNELS 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.
- E&S CONVEYANCE CHANNELS HAVING RIPRAP, RENO MATRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL COUNTY CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL COUNTY CONSERVATION DISTRICT OR THE DEPARTMENT.
- EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER, WITHIN 100' OF A STREAM OR WETLAND IN A HIGH QUALITY OR EXCEPTIONAL VALUE WATERSHED, WITHIN 50' OF A STREAM OR WETLAND IN A NON-HIGH QUALITY OR EXCEPTIONAL VALUE WATERSHED, AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

**SEQUENCE OF CONSTRUCTION**

- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, ENVIRONMENTAL INSPECTORS, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- HOLD PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL INSPECTORS, LOCAL COUNTY CONSERVATION DISTRICT (CCD), PADEP, AND DESIGN ENGINEER.
- INSTALL ORANGE CONSTRUCTION FENCE AROUND AREAS TO BE PROTECTED.
- LOCATE STAGING AREAS AND ACCESS POINTS INCLUDING CONSTRUCTION ENTRANCES. FIELD LOCATE LIMITS OF DISTURBANCE.
- INSTALL ROCK CONSTRUCTION ENTRANCE (CE).
- INSTALL PERIMETER CONTROLS AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- BEGIN CONSTRUCTION STAKING FOR GRADING.
- BEGIN GRADING AND STRIP AND STOCKPILE TOPSOIL WITHIN THE AREA OF IMPROVEMENTS AND INSTALL SEDIMENT BARRIERS AROUND STOCKPILES.
- UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OF AN ACTIVITY WHERE THE CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED FOUR DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OF AN ACTIVITY TO BE CONSIDERED TEMPORARILY STABILIZED. THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM COVERAGE OF MULCH AND SEED, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION, OR AN ACCEPTABLE BMP WHICH TEMPORARILY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION. TEMPORARY STABILIZATION WILL NOT OCCUR ON ACTIVE VEHICULAR TRAVEL WAYS. THE ON-SITE ENVIRONMENTAL INSPECTOR WILL LOG DAILY ACTIVITY WITHIN THE LOD AND NOTIFY THE CONTRACTOR OF AREAS REQUIRING TEMPORARY STABILIZATION (I.E., AREAS WHERE WORK HAS CEASED FOR AT LEAST FOUR DAYS).
- VALVE YARD PAD\*
  - AS THE VALVE YARD PAD REACHES FINAL GRADE, ENSURE THE SUBGRADE ELEVATIONS DIRECT STORMWATER RUNOFF TO CS200-CFS-014 & -015.
  - COMPACT THE SUBGRADE FILL TO LIMIT INFILTRATION IN THE PAD AREA.
  - PLACE AGGREGATE FINAL COVER TO ACHIEVE FINAL GRADE ON VALVE YARD PAD.
- INSTALL INFILTRATION BERM AND VEGETATED FILTER STRIP IN ACCORDANCE WITH THE GEOHAZARD ASSESSMENT AND RECOMMENDATIONS\*
  - COMPLETE SITE GRADING AND STABILIZE WITHIN THE LIMIT OF DISTURBANCE EXCEPT WHERE THE INFILTRATION BERM WILL BE CONSTRUCTED. MAKE EVERY EFFORT TO MINIMIZE BERM FOOTPRINT AND NECESSARY ZONE OF DISTURBANCE (INCLUDING BOTH REMOVAL OF EXISTING VEGETATION AND DISTURBANCE OF EMPTY SOIL) IN ORDER TO MAXIMIZE INFILTRATION.
  - LIGHTLY SCARIFY THE SOIL IN THE AREA OF THE PROPOSED BERM BEFORE DELIVERING SOIL TO SITE.
  - UTILIZE SUITABLE FILL MATERIAL TO MAKE UP THE MAJOR PORTION OF THE BERM. SOIL SHOULD BE ADDED IN 8-INCH LIFTS AND COMPACTED AFTER EACH ADDITION ACCORDING TO DESIGN SPECIFICATIONS. THE SLOPE AND SHAPE OF THE BERM SHOULD BE GRADED OUT AS SOIL IS ADDED.
  - PROTECT THE SURFACE PONDING AREA AT THE BASE OF THE BERM AND IN THE FILTER STRIP AREA FROM COMPACTION. IF COMPACTION OF THIS AREA DOES OCCUR, SCARIFY THE SOIL TO A DEPTH OF AT LEAST 8 INCHES.
  - COMPLETE FINAL GRADING OF THE BERM AND FILTER STRIP AFTER THE TOP LAYER OF SOIL IS ADDED. TAMP SOIL DOWN LIGHTLY AND SMOOTH SIDES OF THE BERM. THE CREST AND BASE OF THE BERM SHOULD BE AT LEVEL GRADE.
  - PLANT BERM AND FILTER STRIP WITH TURF, MEADOW PLANTS, SHRUBS OR TREES, AS DESIRED.
  - MULCH PLANTED AND DISTURBED AREAS WITH COMPOST MULCH TO PREVENT EROSION WHILE PLANTS BECOME ESTABLISHED. IMMEDIATELY STABILIZE SIDE SLOPES WITH EROSION CONTROL MATTING WHEN SLOPES ARE 3:1 OR GREATER. SEE E&S AND/OR PCSM/SR PLANS AND DETAIL (PATTERNS DIFFER BY SLOPE CATEGORY).
- DRAINAGE BERM AND TRENCH DRAIN\*
  - CONSTRUCT DRAINAGE BERM AND TRENCH DRAIN SHOWN IN THE PLAN. INSTALL OUTLET PROTECTION AS REQUIRED.
- IMMEDIATELY STABILIZE SIDE SLOPES WITH EROSION CONTROL MATTING WHEN SLOPES ARE 3:1 OR GREATER. SEE E&S AND/OR PCSM PLANS AND DETAIL (PATTERNS DIFFER BY SLOPE CATEGORY).
- ESTABLISH FINAL GRADE.
- SURFACE STABILIZATION, APPLY PERMANENT STABILIZATION MEASURES IMMEDIATELY TO ANY DISTURBED AREAS WHERE WORK HAS REACHED FINAL GRADE.
- MAINTAIN E&S BMPs UNTIL SITE WORK IS COMPLETE AND UNIFORM 70% PERENNIAL VEGETATIVE COVER IS ESTABLISHED.
- REMOVE AND PROPERLY DISPOSAL/RECYCLE E&S BMPs. REMOVE ORANGE CONSTRUCTION FENCE. REPAIR AND PERMANENTLY STABILIZE AREAS DISTURBED DURING E&S REMOVAL UPON ESTABLISHMENT OF UNIFORM 70% VEGETATIVE COVER.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE LOCAL CCD FOR A FINAL INSPECTION
- THE SITE ENGINEER SHALL COMPLETE AN INSPECTION TO VERIFY THAT ALL INSTALLED PCSM BMPs ARE INSTALLED AND NOT IMPACTED BY CONSTRUCTION.
- SUBMIT NOTICE OF TERMINATION ONCE THE PROJECT IS COMPLETE AND PERMANENTLY STABILIZED.

**\*PORTIONS OF THE BMP INSTALLATION SEQUENCE DENOTED WITH AN ASTERISK (\*) ABOVE ARE CRITICAL STAGES AS DISCUSSED ON THIS SHEET.**

**PCSM CRITICAL STAGES**

CRITICAL POINTS REQUIRING VISITS BY THE LICENSED PROFESSIONAL OR DELEGATE ARE AS FOLLOWS:

- UPON COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO ASCERTAIN THE INFILTRATION BERM AND VEGETATED FILTER STRIP AREA HAS BEEN FLAGGED AND FENCE ERECTED TO PREVENT ACCESS TO THE AREA.
- AT COMPLETION OF DRAINAGE BERM TO ENSURE IT HAS BEEN CONSTRUCTED TO THE PROPOSED LINES AND GRADES, THE SPECIFIED LINING MATERIALS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
- AT THE BEGINNING OF CONSTRUCTION OF THE INFILTRATION BERM AND VEGETATED FILTER STRIP TO ENSURE THE INFILTRATION AREA HAS NOT BEEN COMPACTED BY CONSTRUCTION ACTIVITIES.
- DURING CONSTRUCTION OF THE INFILTRATION BERM THE LICENSED PROFESSIONAL WILL OBSERVE THAT THE BMP IS CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- FOLLOWING INSTALLATION OF THE VALVE YARD PAD SUBGRADE TO ENSURE STORMWATER FLOW IS DIRECTED TO THE DIVERSION BERM.
- FOR FINAL INSPECTION OF CONSTRUCTED BMPs TO VERIFY ALL INSTALLED BMPs ARE INSTALLED AND NOT IMPACTED BY CONSTRUCTION ACTIVITIES/RUNOFF.
- AT THE ESTABLISHMENT OF HARD SURFACE STABILIZATION OR 70% VEGETATION COVERS TO ALLOW REMOVAL OF E&S CONTROLS.

**THERMAL IMPACTS**

DUE TO THE OVERALL NATURE OF THE PROJECT, THERMAL IMPACTS TO SURFACE WATERS ARE NOT ANTICIPATED. THE PRIMARY MEANS TO ADDRESS THERMAL IMPACTS ON THIS PROJECT IS TO LIMIT THE SIZE AND DURATION OF EXPOSED EARTH. STORMWATER RUNOFF ASSOCIATED WITH THE INSTALLATION OF THE PAD WILL BE ROUTED THROUGH THE STORMWATER BMP'S DESIGNED TO RETAIN AND INFILTRATE THE FIRST SURGE OF WATER FROM THE SITE. THE FIRST SURGE OF WATER WILL BE THE WARMEST WATER FOR THE DURATION OF THE STORM EVENT AND WILL QUICKLY COOL AS THE STORM EVENT PROGRESSES. THE BMPs ARE DESIGNED TO CAPTURE AND INFILTRATE THIS WARMEST SURGE OF STORMWATER. BASED ON ROUTING CALCULATIONS, STORMWATER IS NOT DISCHARGED FROM THE BMPs FOR THE FIRST 12 HOURS DURING A 100-YEAR/24-HOUR STORM EVENT. THE RETENTION PERIOD IS LONGER FOR LESS INTENSE STORMS. THEREFORE, THROUGH THESE MEASURES, THERE IS NO SIGNIFICANT THERMAL IMPACT TO THE RECEIVING WATERS ANTICIPATED.

**RESPONSIBILITIES FOR FILL MATERIALS**

IF THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF SITE LOCATION, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL IN MOST CASES RESIDE WITH THE OPERATOR.

IF THE SITE WILL HAVE EXCESS FILL THAT WILL NEED TO BE EXPORTED TO AN OFF SITE LOCATION, THE RESPONSIBILITY OF CLEAN FILL DETERMINATION AND ENVIRONMENTAL DUE DILIGENCE RESTS ON THE APPLICANT.

IF ALL CUT AND FILL MATERIALS WILL BE USED ON THE SITE, A CLEAN FILL DETERMINATION IS NOT REQUIRED BY THE OPERATOR UNLESS THERE IS A BELIEF THAT A SPILL OR RELEASE OF A REGULATED SUBSTANCE OCCURRED ON SITE.

APPLICANTS AND/OR OPERATORS MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT THE FILL MATERIAL ASSOCIATED WITH THIS PROJECT QUALIFIES AS CLEAN FILL. DEFINITIONS OF CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE ARE PROVIDED BELOW. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL," DOCUMENT NUMBER 258 2182 773. A COPY OF THIS POLICY IS AVAILABLE ONLINE AT WWW.DEFWEBSITE.PA.US.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED 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. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL."

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

**TEMPORARY AND PERMANENT STABILIZATION:**

1. PERMANENT STABILIZATION: UPON FINAL COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE SITE SHALL IMMEDIATELY HAVE TOPSOIL RESTORED, REPLACED, OR AMENDED, SEED MIXTURE 1 PLUS 2 FROM TABLE 11.5, MULCHED OR OTHERWISE PERMANENTLY STABILIZED AND PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION.

E&S BMPs SHALL BE IMPLEMENTED AND MAINTAINED UNTIL THE PERMANENT STABILIZATION IS COMPLETED, ONCE PERMANENT STABILIZATION HAS BEEN ESTABLISHED, THE TEMPORARY E&S BMPs SHALL BE REMOVED. ANY AREAS DISTURBED IN THE ACT OF REMOVING TEMPORARY E&S BMPs SHALL BE PERMANENTLY STABILIZED UPON COMPLETION OF THE TEMPORARY E&S BMP REMOVAL ACTIVITY.

FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY TO BE CONSIDERED PERMANENTLY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING:

- A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION.
- AN ACCEPTABLE BMP WHICH PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

WHEN EROSION AND SEDIMENTATION CONTROLS ARE TO BE REMOVED IN AGRICULTURAL NON-SENSITIVE AREAS (STREAMS/WETLANDS), AGRICULTURAL LANDOWNERS SHALL MAINTAIN AGRICULTURAL BMPs PER PADEP REGULATIONS.

2. TEMPORARY STABILIZATION: 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 (INCLUDING AGRICULTURAL AREAS), THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.

FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY TO BE CONSIDERED TEMPORARILY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING:

- A MINIMUM UNIFORM COVERAGE OF MULCH AND SEED, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION.
- AN ACCEPTABLE BMP WHICH TEMPORARILY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

3. STABILIZATION DURING NON-GROWING SEASONS

WHEN UTILITY CONSTRUCTION MUST BE DONE AND IS COMPLETED DURING A NON-GROWING SEASON, INTERIM STABILIZATION BMPs MUST BE IMPLEMENTED AND ADEQUATELY MAINTAINED. THE APPLICATION OF STRAW MULCH AND THE RATE OF 3.0 TONS PER ACRE IS REQUIRED. THE BMPs SHOULD BE INSPECTED WEEKLY (UNLESS SNOW COVERED) AND AFTER EACH RUNOFF EVENT TO IDENTIFY AREAS THAT BECOME BARE.

BARE AREAS SHALL BE COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET. ALL TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROLS MUST BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

4. WETLAND STABILIZATION. TEMPORARY COVER FOR WETLANDS AREAS WILL INCLUDE ANNUAL RYEGRASS AT 40LB/ACRE. DO NOT LIME, FERTILIZE OR MULCH WETLAND AREAS. PERMANENT WETLAND MIX IS ERNST 122 FACW MEADOW MIX AT 20 LB/ACRE.

5. RIPARIAN BUFFER STABILIZATION – TEMPORARY COVER FOR RIPARIAN AREAS TO INCLUDE SEED FROM MIXTURE 1 FROM TABLE 11.4. AT THE OUTLINED SEEDING RATE, PERMANENT COVER FOR RIPARIAN AREAS WILL INCLUDE 30LB/ACRE OF ERNST 178 RIPARIAN BUFFER MIX. WHERE SLOPES EXCEED 10% THE PERMANENT MIX SHALL BE SEED MIXTURE 2 FROM TABLE 11.4. EROSION CONTROL BLANKET IS TO BE UTILIZED ALONG STREAM BANKS, AS OUTLINED IN THE ECB DETAIL. ADD LIME AND FERTILIZER AS OUTLINED IN TABLE 11.2.



REVISIONS				W.O. NO.	CHK.	APP.
NO.	DATE	BY	DESCRIPTION			
1	06/29/21	RHM	REVISED PER PADEP COMMENTS.			
2	03/01/22	RHM	RESPONSE TO PADEP TECHNICAL DEFICIENCY LETTER			

**TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC**  
**REGIONAL ENERGY ACCESS EXPANSION PROJECT -**  
**COMPRESSOR STATION 200**  
**SOIL EROSION & SEDIMENT CONTROL PLAN**  
**NOTES**  
 EAST WHITELAND TWP., CHESTER COUNTY, PENNSYLVANIA

DRAWN BY: DRV	DATE: 03/31/21	ISSUED FOR BID:	SCALE:
CHECKED BY: RJN	DATE: 03/31/21	ISSUED FOR CONSTRUCTION:	REVISION:
APPROVED BY: PW	DATE: 03/31/21	DRAWING NUMBER:	SHEET <b>4</b>
WO: 122813	RID: 305	26-1000-70-28-D	OF <b>7</b>

#### RESOLUTION OF SOIL LIMITATIONS

TRANSCO PROPOSES THE FOLLOWING RESOLUTIONS TO COMPENSATE FOR SOIL LIMITATIONS, SUMMARIZED IN SOILS LIMITATIONS TABLE:

- TO OFFSET THE CAVING OF CUTBANKS, TRENCHING OPERATIONS WILL BE CONDUCTED IN ACCORDANCE WITH THE OSHA TECHNICAL MANUAL FOR TRENCHING.
- PREVENTATIVE COATINGS SHALL BE USED TO PREVENT CORROSION OF CONCRETE AND/OR STEEL.
- WHEN BEDROCK IS ENCOUNTERED IT WILL BE REMOVED BY MECHANICAL METHODS OR BLASTING. BLASTING OPERATIONS WILL CONFORM WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- PRECAUTIONS WILL BE TAKEN TO PREVENT SLOPE FAILURE WHEN WORKING WITHIN LOW STRENGTH SOILS BY FLATTENING CUT / FILL SLOPES, NOT OVERLOADING, MAINTAINING LATERAL SUPPORT, AND PREVENTING SATURATION OF SOILS. LOW STRENGTH SOILS WILL NOT BE USED FOR ROADWAY CONSTRUCTION.
- EXCAVATION IN SOILS PRONE TO FLOODING, SLOW PERCOLATION, PONDING, WETNESS, LOCATED IN A SEASONAL HIGH WATER TABLE, OR WHICH ARE HYDRIC, WILL LIKELY ENCOUNTER WATER. COMPENSATION WILL INVOLVE DEWATERING WITH APPROPRIATE MEANS SUCH AS PUMP WATER FILTER BAGS, SEDIMENT TRAPS, ETC.
- SOILS THAT HAVE THE POTENTIAL TO SWELL, SHRINK, OR HEAVE DUE TO FROST ACTION MAY CAUSE DAMAGE TO ROADWAYS OR PADS. WHERE FOUNDATIONS ARE CRITICAL, COMPENSATION MAY REQUIRE REMOVAL AND REPLACEMENT OF SOILS WITH SUITABLE MATERIAL.
- IN CIRCUMSTANCES WHERE SOILS APPEAR TO BE A POOR SOURCE OF TOPSOIL, DROUGHTY OR PRONE TO WETNESS, SOIL TESTING WILL BE PERFORMED TO DETERMINE THE APPROPRIATE APPLICATIONS OF SOIL AMENDMENTS TO PROMOTE GROWTH. SOILS ON-SITE THAT ARE FAIR SOURCES OF TOPSOIL, WILL BE IDENTIFIED, STRIPPED AND STOCKPILED FOR USE DURING RESTORATION.
- IN ORDER TO MINIMIZE EROSION OF SOILS THAT ARE EASILY ERODIBLE, COMPENSATION MAY INVOLVE PROVIDING A PROTECTIVE LINING, TO APPLY SEED, MULCH, EROSION CONTROL BLANKETS (EITHER IN ROLLS OR HYDRAULICALLY APPLIED), TRACKING SLOPES, UPSTREAM DIVERSIONS, WATERBARS, ETC. TO MINIMIZE SOIL EROSION.

SOIL MAPPING UNIT	SOIL SERIES
ClA	CONESTOGA SILT LOAM, 0 TO 3 PERCENT SLOPES
UrgB	URBAN LAND--CONESTOGA COMPLEX, 0 TO 8 PERCENT SLOPES

SOIL NAME	SOIL WITH SLOPE CLASS	CUTBANKS CAVE	CORROSION TO CONCRETE/STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE	HYDRIC/HYDROC INCLUSIONS	LOW STRENGTH/ LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK - SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
CONESTOGA	ClA, UrgB	X	C/S					X	X	X		X			X		

#### CHARACTERIZATIONS OF EARTH DISTURBANCE ACTIVITIES, INCLUDING PAST, PRESENT AND PROPOSED LAND USES

THE LIMIT OF DISTURBANCE (LOD) FOR COMPRESSOR STATION 200 WILL BE APPROXIMATELY 3.16 ACRES. THE COMPRESSOR STATION 200 WILL INVOLVE THE INSTALLATION A GRAVEL PAD, PROPOSED BMPs AND OTHER COMPRESSOR STATION MODIFICATIONS. TRANSCO WILL USE AND IMPLEMENT THE PRACTICES, MEASURES, AND DETAILS TO CONTROL SOIL EROSION AND OFF-SITE SEDIMENTATION DURING CONSTRUCTION. USING DATA TAKEN FROM GOOGLE EARTH AND MULTI-RESOLUTION LAND CHARACTERISTICS (MLC) CONSORTIUM WEBSITE (<https://www.mrlc.gov/viwes/>), IT APPEARS THAT LAND USE FOR THE PAST FEW DECADES HAS BEEN UTILIZED AS A COMPRESSOR STATION SITE. THE CONTRACTOR WILL CONSTRUCT STORMWATER BMPs TO MITIGATE THE INCREASE IN VOLUME AND PEAK RATES ASSOCIATED WITH CONSTRUCTION. THE PROPOSED BMPs ARE DESIGNED TO STORE THE NET INCREASE IN VOLUME BETWEEN THE PRE- AND POST-DEVELOPMENT 2-YEAR RAIN EVENTS.

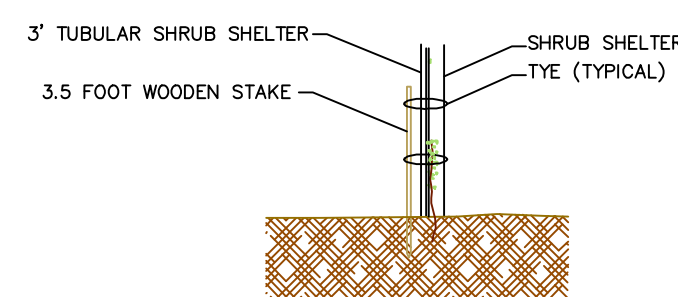
#### BMP DESCRIPTION NARRATIVE

A DRAINAGE BERM, TRENCH DRAIN, AND AN INFILTRATION BERM WILL BE INSTALLED ACROSS THE DEVELOPED AREA TO CONVEY THE NET INCREASE IN VOLUME BETWEEN THE PRE- AND POST-DEVELOPMENT 2-YEAR STORM EVENTS AND MITIGATE THE INCREASE (PRE-POST DEVELOPMENT) IN PEAK RUNOFF FOR THE 1-, 2-, 10-, 25-, 50-, AND 100-YEAR STORM EVENTS. A DRAINAGE BERM AND TRENCH DRAIN WILL BE CONSTRUCTED TO DIRECT THE MAJORITY OF RUNOFF FROM THE DEVELOPED AREA TO THE INFILTRATION BERM. ALL BMP DESIGN CALCULATIONS AND DRAWINGS ARE PROVIDED IN ATTACHMENT 4 AND PCSM PLAN SET.

#### PLANTING NOTES:

ALL PLANTS SHALL BE INSTALLED ACCORDING TO THE ACCEPTABLE STANDARDS OF THE TRADE AND UNDER THE SUPERVISION OF A LANDSCAPE PROFESSIONAL WITH SUITABLE PRACTICAL FIELD EXPERIENCE IN PLANT INSTALLATION PROJECTS. ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL BE GUARANTEED TO BE TRUE TO NAME AND HEALTHY UPON DELIVERY. ANY SUBSTITUTIONS BASED UPON AVAILABILITY OR SITE CONDITIONS MUST BE APPROVED BY A PROFESSIONAL WITH EXPERIENCE IN TREE AND SHRUB PLANTING DESIGN.

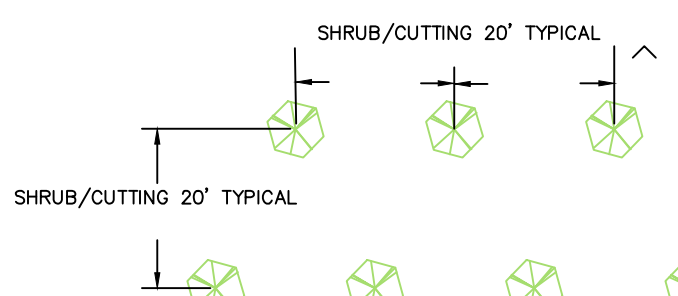
SHRUBS SHALL BE PLANTED BY DIGGING A HOLE TWICE THE SIZE OF THE WIDTH OF THE ROOTBALL DOWN INTO THE SUBSTRATE AT THE POINT OF INSTALLATION. IF THE PLANT IS IN A PLASTIC CONTAINER, THIS SHALL BE CAREFULLY REMOVED TO KEEP THE ROOTBALL INTACT. AFTER PLANTING, THE AREA SHOULD BE BACKFILLED AND WATERED. SHRUBS MAY BE PROVIDED WITH SUPPORT STAKES IF THIS IS DEEMED NECESSARY BY THE INSTALLER.



TYPICAL SHRUB SHELTER DETAIL (TSSD) NOT TO SCALE

Scientific Name	Common Name	Spacer	Container	Spacing
<i>Cornus alba</i>	redstart dogwood	FACW Shrub	bare root or 1 gal	20' O.C.
<i>Cornus amomum</i>	silky dogwood	FACW Shrub	bare root or 1 gal	20' O.C.
<i>Cornus racemosa</i>	gray dogwood	FAC Shrub	bare root or 1 gal	20' O.C.
<i>Lindera benzoin</i>	northern spicebush	FAC Shrub	bare root or 1 gal	20' O.C.
<i>Viburnum dentatum</i>	southern arnwood	FAC Shrub	bare root or 1 gal	20' O.C.
<i>Viburnum prunifolium</i>	smooth blackhaw	FACU Shrub	bare root or 1 gal	20' O.C.

*Note: 1 minimum of three (3) shrub species to be planted in the planting area.*



TYPICAL SPACING DETAIL (TSD) NOT TO SCALE

#### SEEDING AND MULCHING:

THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER CONSTRUCTION IS COMPLETED. ESTABLISHMENT OF TEMPORARY COVER MUST TAKE PLACE WITHIN 4 DAYS OF CESSATION OF WORK. TEMPORARY EROSION AND SEDIMENTATION CONTROL BMPs CAN BE REMOVED WHEN THE SITE MEETS FINAL STABILIZATION. FINAL STABILIZATION MEANS THAT ALL SOIL-DISTURBING ACTIVITIES ARE COMPLETED, AND THAT A PERMANENT VEGETATIVE COVER WITH A DENSITY OF 70% OR GREATER HAS BEEN ESTABLISHED OR THAT HARD COVER SUCH AS PAVEMENT OR BUILDINGS HAS STABILIZED THE SURFACE. IT SHOULD BE NOTED THAT THE 70% REQUIREMENT REFERS TO THE TOTAL AREA VEGETATED AND NOT JUST A PERCENT OF THE SITE. NO HAY OR STRAW MULCH SHALL BE PLACED ON WATERBODY BANKS. AT A MINIMUM, ALL WATERBODY BANKS SHALL BE COVERED WITH EROSION CONTROL BLANKET. IN ADDITION, ONLY STRAW MULCH SHALL BE USED IN AREAS ADJACENT TO WETLANDS.

#### TEMPORARY REVEGETATION

AFTER GRADING AND EXCAVATION IS COMPLETED WITHIN AN AREA, VEGETATION WILL BE SOWN PROMPTLY AFTER CEASING EARTHWORK IN THOSE AREAS. HAY, STRAW MULCH, OR OTHER SIMILAR MATERIAL WILL BE APPLIED TO NEWLY SEEDED AREAS TO PROTECT AGAINST EROSION UNTIL THE VEGETATION IS ESTABLISHED. HAY, STRAW MULCH, OR OTHER SIMILAR MATERIAL SHALL BE APPLIED AT A RATE OF AT LEAST 3 TONS PER ACRE. EROSION CONTROL BLANKET SHALL BE USED ON STREAM BANKS. NO HAY OR STRAW, MULCH OR BLANKET SHALL BE UTILIZED IN WETLAND AREAS.

#### PERMANENT SEEDING AND MULCHING

TOPSOIL WILL BE REPLACED PRIOR TO STABILIZATION. DISTURBED AREAS SHALL BE SEEDED WITH A MIXTURE AS OUTLINED IN THE DETAILS PAGES OF THE EROSION AND SEDIMENT CONTROL PLAN SET. APPLY LIME AND FERTILIZER IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS OR AS OUTLINED IN THE BELOW TABLE. HAY, STRAW MULCH, OR OTHER SIMILAR MATERIAL SHALL BE APPLIED AT A RATE OF AT LEAST 3 TONS PER ACRE.

SOIL AMENDMENT	PERMANENT SEEDING APPLICATION RATE			NOTES
	PER ACRE	PER 1,000 SF	PER 1,000 SY	
AGRICULTURAL LIME	6 TONS	20 LBS.	2,480 LBS.	OR AS PER SOIL TEST, MAY NOT BE REQ. IN AGRICULTURAL FIELDS
10-20-20 FERTILIZER	1,000 LBS.	25 LBS.	210 LBS.	OR AS PER SOIL TEST, MAY NOT BE REQ. IN AGRICULTURAL FIELDS
TEMPORARY SEEDING APPLICATION RATE				
AGRICULTURAL LIME	1 TON	4 LBS.	410 LBS.	TYP. NOT REQ. FOR TOPSOIL STOCKPILES
10-10-10 FERTILIZER	500 LBS.	12.5 LBS.	100 LBS.	TYP. NOT REQ. FOR TOPSOIL STOCKPILES

ADAPTED FROM PENN STATE, "EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND"

NOTE: A COMPOST BLANKET WHICH MEETS THE STANDARDS OF THIS CHAPTER MAY BE SUBSTITUTED FOR THE SOIL AMENDMENTS SHOWN IN TABLE 11.2

Species	Growth Habit1	Tolerates				Minimum Seed Specifications3				
		Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5.5-5.7)	Purity (%)	Ready Germ (%)	Hard Seed (%)	Total Germ (%)	Seeds/lb (1,000s)
Deertongue	bunch	yes	yes	yes	yes	95	75		75	250
Weeping lovegrass	bunch	no	yes	yes	yes	97	75		75	1,500
Switchgrass4	bunch	yes	yes	yes	yes			(60 PLS)		390
Big bluestem	bunch	yes	yes	yes	yes			(60 PLS)		150
Cool-Season Grasses										
Redtop	sod	yes	yes	yes	yes	92	80		80	5,000
Fine fescues	sod	no	no	yes	no	95	80		80	400
Perennial ryegrass	bunch	yes	no	no	no	95	85		85	227
Annual ryegrass	bunch	yes	no	yes	no	95	85		85	227
Kentucky bluegrass	sod	yes	no	no	no	85	75		75	2,200
Reed canarygrass	sod	yes	yes	yes	yes	95	70		70	520
Orchardgrass	bunch	yes	yes	yes	yes	95	80		80	654
Smooth bromegrass	bunch	yes	no	yes	yes	95	80		80	1,230
Smooth bromegrass	sod	no	yes	no	no	95	80		80	136
Legumes5										
Birdsfoot trefoil6	bunch	yes	no	yes	yes	98	60	20	80	400
Flatpea	sod	no	no	yes	yes	98	55	20	75	10
Serecia lespedeza	bunch	no	yes	yes	yes	98	60	20	80	335
Cereals										
Winter wheat	bunch	no	no	no	yes	98	85		85	15
Winter rye	bunch	no	no	no	yes	98	85		85	18
Spring oats	bunch	no	no	no	no	98	85		85	13
Sundangrass	bunch	no	yes	no	no	98	85		85	55
Japanese millet	bunch	yes	no	yes	yes	98	80		80	155

- GROWTH HABIT REFERS TO THE ABILITY OF THE SPECIES TO EITHER FORM A DENSE SOD BY VEGETATIVE MEANS (STOLONS, RHIZOMES, OR ROOTS) OR REMAIN IN A BUNCH OR SINGLE PLANT FORM. IF SEEDED HEAVILY ENOUGH, EVEN BUNCH FORMERS CAN PRODUCE A VERY DENSE STAND. THIS IS SOMETIMES CALLED A SOD, BUT NOT IN THE SENSE OF A SOD FORMED BY VEGETATIVE MEANS.
- ONCE ESTABLISHED, PLANS MAY GROW AT A SOMEWHAT LOWER pH, BUT COVER GENERALLY IS ONLY ADEQUATE AT pH 6.0 OR ABOVE.
- MINIMUM SEED LOTS ARE TRULY MINIMUM, AND SEED LOTS TO BE USED FOR REVEGETATION PURPOSES SHOULD EQUAL OR EXCEED THESE STANDARDS. THUS, DEERTONGUE GRASS SHOULD GERMINATE 75% OR BETTER. COMMON SEED LOTS ARE AVAILABLE THAT EQUAL OR EXCEED MINIMUM SPECIFICATIONS. REMEMBER THAT DISTURBED SITES ARE ADVERSE FOR PLAN ESTABLISHMENT. READY GERMINATION REFERS TO SEED THAT GERMINATES DURING THE PERIOD OF THE GERMINATION TEST AND THAT WOULD BE EXPECTED, IF CONDITIONS ARE FAVORABLE, TO GERMINATE RAPIDLY WHEN PLANTED. THE OPPOSITE OF READY GERMINATION IS DORMANT SEED, OF WHICH HARD SEED IS ONE TYPE.
- SWITCHGRASS SEED IS SOLD ONLY IN THE BASIS OF PLS.
- NEED SPECIFIC LEGUME INOCULANT. INOCULANT SUITABLE FOR GARDEN PEAS AND SWEETPEAS USUALLY IS SATISFACTORY FOR FLATPEA.
- BIRDSFOOT TREFLOIL IS ADAPTED OVER THE ENTIRE STATE, EXCEPT IN THE EXTREME SOUTHEAST WHERE CROWN AND ROOT ROT MAY INJURE STANDS.

PERCENTAGE OF MIX COMPOSITION	SCIENTIFIC NAME	COMMON NAME
30.0%	panicum clandestinum	DEERTONGUE
20.0%	elymus virginicus	VIRGINIA WILDRYE
11.8%	androPOGON GERARDII	BIG BLUESTEM
10.5%	SORGHASTRUM NUTANS	INDIANAGRASS
5.0%	panicum VIRGATUM	SWITCHGRASS
4.0%	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA
4.0%	VERBENA HASTATA	BLUE VERVAIN
3.0%	JUNCUS EFFUSUS	SOFT RUSH
3.0%	RUDBECKIA HIRTA	BLACKEYED SUSAN
2.0%	HELIOPSIS HELIANTHOIDES	OXEYE SUNFLOWER
1.0%	ASCLEPIAS INCARNATA	SWAMP MILKWEED
0.7%	ASTER NOVAE-ANGIAE	NEW ENGLAND ASTER
0.7%	ASTER UMBELLATUS	FLAT TOPPED WHITE ASTER
0.7%	EUPATORIUM PERFORIATUM	BONESET
0.5%	AGRO STIS PERENNANS	AUTUMN BENTGRASS
0.5%	HELENIUM AUTUMNALE	COMMON SNEEZEWEED
0.5%	MO NARDA FISTULOSA	WILD BERGAMOT
0.5%	VERNO NIA NO VERO RACENSIS	NEW YORK IRONWEED
0.4%	PYCNANTHEMUM TENUIFOLIUM	NARROWLEAF MOUNTAINMINT
0.4%	SOLIDAGO PATULA	ROUGHLEAF GOLDENROD
0.3%	EUPATORIUM FISTULOSUM	JOE PEE WEE
0.3%	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA
0.2%	ASTER PUNICUS	PURPLESTEM ASTER

- SEEDING RATE: 20 LBS./ACRE WITH THE FOLLOWING NURSE CROPS: DRY SITES - GRAIN OATS, JAN 1 TO AUG 1; OR, GRAIN RYE, AUG TO JAN 1; MOIST SITES - GRAIN RYE YEAR ROUND.
- THIS SEED MIX IS TO BE USED TO REVEGETATE WORKSPACE WITHIN THE DESIGNATED RIPARIAN BUFFER AREA WHERE SLOPES ARE LESS THAN 10%. IF THE SLOPE EXCEEDS 10%, A STANDARD UPLAND ROW MIX SHOULD BE USED.
- AN ALTERNATIVE SEED MIXTURE THAT CONTAINS SIMILAR SPECIES IS ACCEPTABLE.

Mixture Number	Species	Seeding Rate-Pure Live Seed <sup>1</sup>	
		Moist Sites	Adverse Sites
1 <sup>2</sup>	Spring oats (spring), or Annual ryegrass (spring or fall), or Winter wheat (fall), or Winter rye (fall)	64	96
		10	15
2 <sup>3</sup>	Fine fescue, or Kentucky bluegrass, plus Birdsfoot trefoil	35	40
		15	30
		25	20
3	Birdsfoot trefoil, plus Tall fescue	6	10
		30	35
11	Deertongue, plus Birdsfoot trefoil	15	20
		6	10
12 <sup>5</sup>	Switchgrass, or big bluestem, plus Birdsfoot trefoil	15	20
		15	20
		6	10
13	Orchardgrass, plus Smooth bromegrass, plus Birdsfoot trefoil	20	30
		25	35
		6	10

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- PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATION DIVIDED BY 100. FOR EXAMPLE, TO SECURE THE ACTUAL PLANTING RATE FOR SWITCHGRASS, DIVIDE 12 POUNDS PLS SHOWN ON THE SEED TAG. THIS, IF THE PLS CONTENT OF A GIVEN SEED LOT IS 35%, DIVIDE 12 PLS BY 0.35 TO OBTAIN 34.3 POUNDS OF SEED REQUIRED TO PLANT ONE ACRE. ALL MIXTURES IN THIS TABLE ARE SHOWN IN TERMS OF PL PLS PER ACRE.
- IF HIGH-QUALITY SEED IS USED, FOR MOST SITES SEED SPRING OATS AT A RATE OF 2 BUSHELS PER ACRE, WINTER WHEAT AT 11.5 BUSHELS PER ACRE, AND WINTER RYE AT 1 BUSHEL PER ACRE. IF GERMINATION IS BELOW 90%, INCREASE THESE SUGGESTED SEEDING RATES BY 0.5 BUSHEL PER ACRE.
- THIS MIXTURE IS SUITABLE FOR FREQUENT MOWING. DO NOT CUT SHORTER THAN 4 INCHES.
- KEEP SEEDING RATE TO THAT RECOMMENDED IN TABLE. THESE SPECIES HAVE MANY SEEDS PER POUND AND ARE VERY COMPETITIVE. TO SEE SMALL QUANTITIES OF SMALL SEEDS SUCH AS WEEPING LOVEGRASS AND REDTOP, DILUTE WITH DRY SAWDUST, SAND, RICE HULLS, BUCKWHEAT HULLS, ETC.
- DO NOT MOW SHORTER THAN 9 TO 10 INCHES.

#### GENERAL MAINTENANCE NOTES FOR ALL BMPs:

ROUTINE MAINTENANCE INSPECTIONS WILL BE REQUIRED TO ENSURE THE PERFORMANCE OF ALL THE SEDIMENT CONTROL BMP DEVICES. AT A MINIMUM, ALL STRUCTURES AND DEVICES SHALL BE INSPECTED ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT. THIS INSPECTION SHALL BE FOLLOWED WITH A REPAIR SCHEDULE OF ALL NOTED DEFICIENCIES. VEGETATION PROGRESS SHALL ALSO BE INCLUDED IN THIS INSPECTION. VOID AREAS SHALL PROMPTLY BE RESEEDED AND MULCHED TO ESTABLISH PROTECTION.

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE DONE IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS TO THOSE INSTALLED, WILL BE REQUIRED.

SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF WITHIN THE LIMIT OF DISTURBANCE IN LANDSCAPE AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN STOCKPILES AREAS.

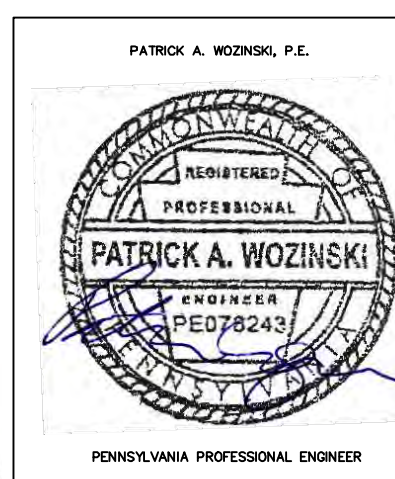
ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL, FALLEN LEAVES & WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES WITH EXCEPTION TO OTHER REQUIRED BMPs (I.E., CHECK DAMS). CHANNELS SHOULD BE KEPT MOWED AND/OR FREE OF ALL WEEDY, BRUSHY OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/ THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL SECTION DETAIL.

SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE AS NEEDED AND 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 SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

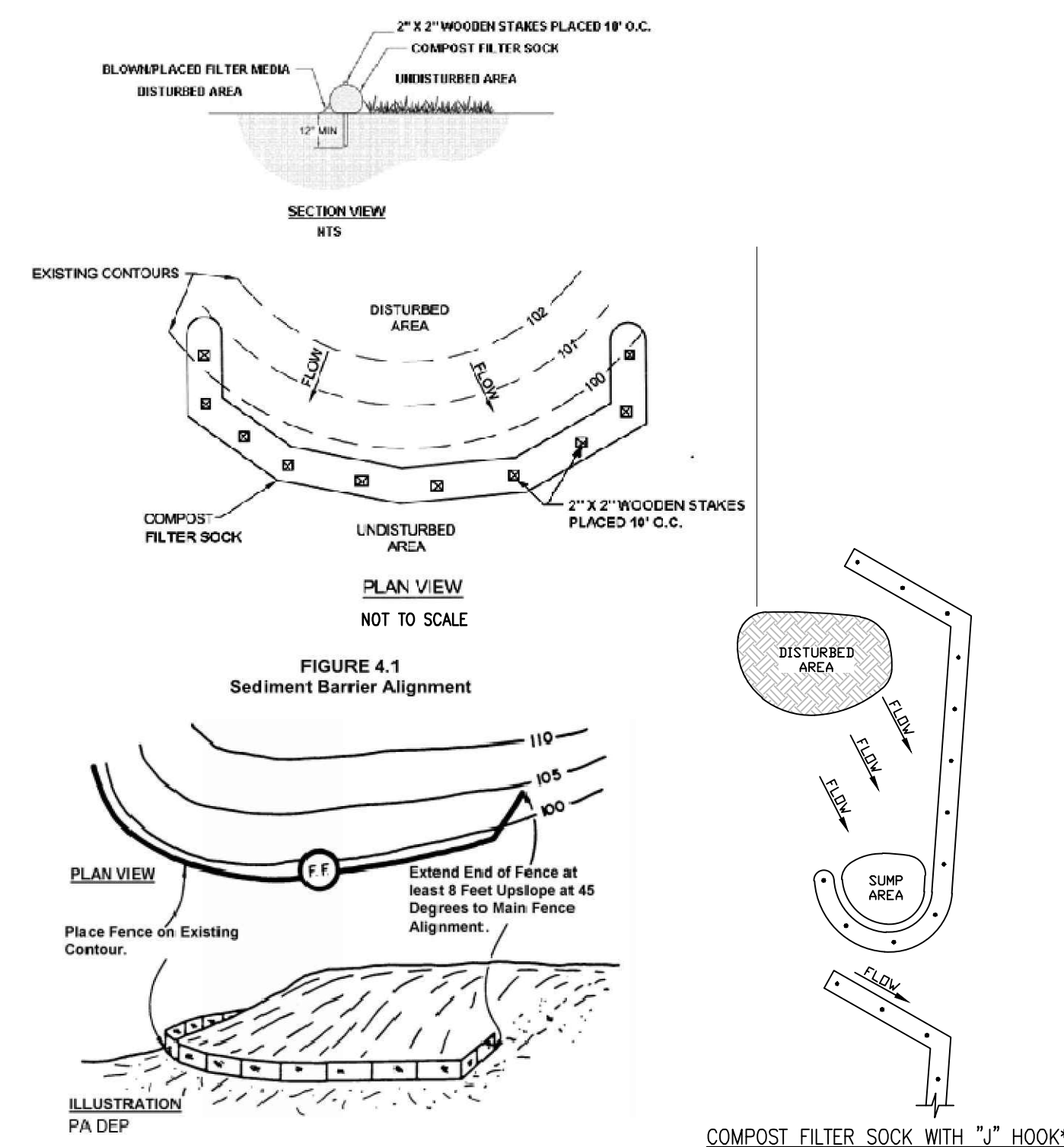
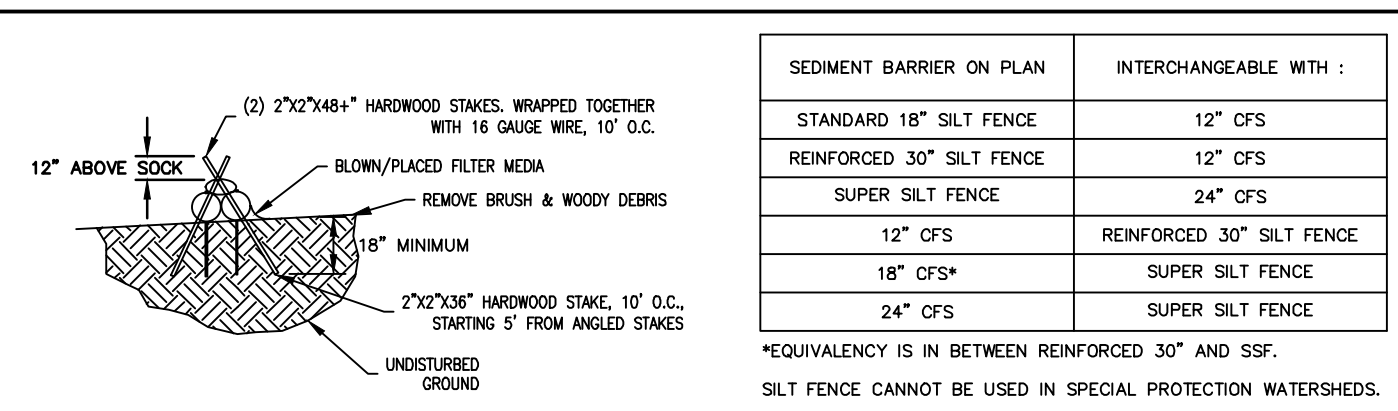
ALL NECESSARY REPAIRS WILL BE MADE IMMEDIATELY.

CONTROL MEASURE	INSPECT	MAINTENANCE SCHEDULE	
		PROBLEMS TO LOOK FOR	POSSIBLE REMEDIES
BROAD BASED DIP	DAILY	SEDIMENT/DEBRIS BLOCKING THE NORMAL FLOW OF WATER. WASHOUTS, BULGES, OR SLUMPS.	REPAIR DAMAGED OR NON-FUNCTIONING DIPS.
COMPOST FILTER SOCK	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	BARRIER HAS BEEN UNDERMINED OR TOPPED SEDIMENT AT 1/2 HEIGHT OF BARRIER. TORN OR DAMAGED FABRIC SOCK IS OLDER THAN PERMITTED RUNOFF ESCAPING AROUND BARRIER	REPLACE WITH A ROCK FILTER OUTLET. INCREASE NUMBER OF STAKES AT AFFECTED AREA. REMOVE SEDIMENT, PLACE ACROSS SITE AS FILL. REPAIR ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACE. EXTEND BARRIER.
CLEAN WATER CROSSING	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	CHANNEL DEPTH NOT MAINTAINED. EROSION AROUND TRENCH INLETS AND WATERSHEDS. DAMAGED CHANNEL LINING. SEDIMENT/DEBRIS BLOCKING NORMAL FLOW OF WATER. TRASH AND DEBRIS.	RECONSTRUCT CHANNEL. REGRADE AND REPAIR ANY UNDERMINED OR WASHED OUT AREAS. REPLACE CHANNEL LINING. REMOVE SEDIMENT WHEN TOTAL CHANNEL DEPTH IS REDUCED BY 25%. REMOVE TRASH AND DEBRIS.
DIVERSION BERM/DIVERSION TERRACE	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	SEDIMENT/DEBRIS BLOCKING THE NORMAL FLOW OF WATER. WASH OUTS, BULGES OR SLUMPS. UNSTABLE SIDE SLOPES. DAMAGED CHANNEL LINING. REDUCED CAPACITY DUE TO DECREASE IN CHANNEL DIMENSIONS. VEGETATION GROWTH.	REMOVE SEDIMENT/DEBRIS, SPREAD SEDIMENT ACROSS SITE. REPAIR OR REPLACE IMMEDIATELY UPON DISCOVERY. RECONSTRUCT CHANNEL. REPLACE CHANNEL LINING. RE-SEED.
EROSION CONTROL BLANKET	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	TORN OR LOOSE STAPLED AREAS. VEGETATION GROWTH. BLANKET DESTROYED OR DAMAGED.	REMOVE AND REPLACE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REGRADE AND REPAIR ANY UNDERMINED OR WASHED OUT AREAS. RE-SEED.
HYDROSTATIC DEWATERING STRUCTURE	DURING DEWATERING ACTIVITIES.	ACCUMULATIONS REACH 1/3 THE ABOVEGROUND HEIGHT OF THE BARRIER.	REMOVE SEDIMENT/DEBRIS. REPLACE STRAW BALES.
PUMPED WATER FILTER BAG	BEFORE AND AFTER EACH USE	TORN FABRIC, TEARS OR BREACHES. SEDIMENT ESCAPING WITH PURGE WATER. MORE THAN 50% FILLED WITH SEDIMENT.	REPLACE FILTER BAG. REMOVE SEDIMENT, SPREAD OVER SITE.
ROCK CONSTRUCTION ENTRANCE	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	STONE THICKNESS NOT CONSTANTLY MAINTAINED. SEDIMENT ON PUBLIC ROADWAY.	ADD ROCK TO BRING TO SPECIFIED DIMENSIONS. SWEEP MATERIAL BACK TO PROJECT SITE. DO NOT WASH ROADWAY WITH WATER.
ROCK FILTER OUTLET	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	LINING WASHED AWAY. SEDIMENT AT 1/3 HEIGHT OF BARRIER. RILLS & GULLIES FORMING. CLOGGING.	RESHAPE AS NECESSARY AND REPLACE TOP LAYER WITH CLEAN STONE. REPLACE RIPRAP WITH LARGER SIZE RIPRAP. REBUILD/EXTEND BARRIER. WASH OR REPLACE SEDIMENT LADEN STONE.
TRENCH PLUG (PRIOR TO BACKFILLING)	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	STORMWATER POOLING WITHIN THE EXCAVATION BEHIND A TRENCH PLUG, FAILED TRENCH PLUG.	PUMP WATER THROUGH A PUMPED WATER FILTER BAG OVER STABLE, UNDISTURBED EARTH. REPAIR TRENCH PLUG.
VEGETATION	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	SEDIMENT AT TOE-OF-SLOPE. RILLS & GULLIES FORMING. BARE SOIL PATCHES.	CHECK FOR TOE-OF-SLOPE DIVERSION & INSTALL, IF NEEDED. FILL RILLS AND RE-GRADE GULLIED SLOPES. RE-SEED, FERTILIZE, LIME AND RE-MULCH.
SEDIMENT TRAP	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	TRASH AND OTHER DEBRIS. SEDIMENT AT CLEAN-OUT ELEVATION. DAMAGED OR CLOGGED COMPOST FILTER SOCK. EROSION. VEGETATION GROWTH. STANDING WATER MORE THAN 7 DAYS AFTER RAINFALL EVENT.	DISPOSE OF TRASH PROPERLY. REMOVE SEDIMENT, PLACE ACROSS SITE AS FILL. REMOVE CLOGGED MATERIAL. RESTORE TO DESIGN SPECIFICATIONS. PUMP WATER THROUGH A PUMPED WATER FILTER BAG OVER STABLE, UNDISTURBED EARTH.

\* REFER TO BMP DETAIL FOR ADDITIONAL MAINTENANCE REQUIREMENTS AND REMEDIES.



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1	06/29/21	RHM	REVISED PER PADEF COMMENTS			



- NOTES:
- ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS.
  - COMPOST FILTER SOCK FILL TO MEET APPLICATION REQUIREMENTS. THE USE OF SWITCHGRASS AS A DIRECT REPLACEMENT OR ANY COMBINATION OF COMPOST/SWITCHGRASS IS A PADEP APPROVED ALTERNATIVE E&S BMP.
  - COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY CONSTRUCTION CONTRACTOR.
  - COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT.
  - 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 SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
  - 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 WITH ADDITIONAL SOCK OR ROCK FILTER.
  - 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.
  - WHERE COMPOST FILTER SOCK CANNOT BE INSTALLED PARALLEL TO GRADE, A J-HOOK WILL BE INSTALLED TO EXTEND A SUMP AREA TO PROVIDE FILTRATION AND TO REDUCE FLOW VELOCITY.
  - J-HOOK WILL BE TURNED UPSLOPE AND EXTENDED A MINIMUM VERTICAL DISTANCE UPSLOPE EQUIVALENT TO THE COMPOST FILTER SOCK DIAMETER.
  - THE NEXT DOWNGRADIENT SECTION OF COMPOST FILTER SOCK WILL BE INSTALLED IN A MANNER TO DIRECT STORMWATER DISCHARGE FROM THE J-HOOK AWAY FROM THE PROJECT AREA.

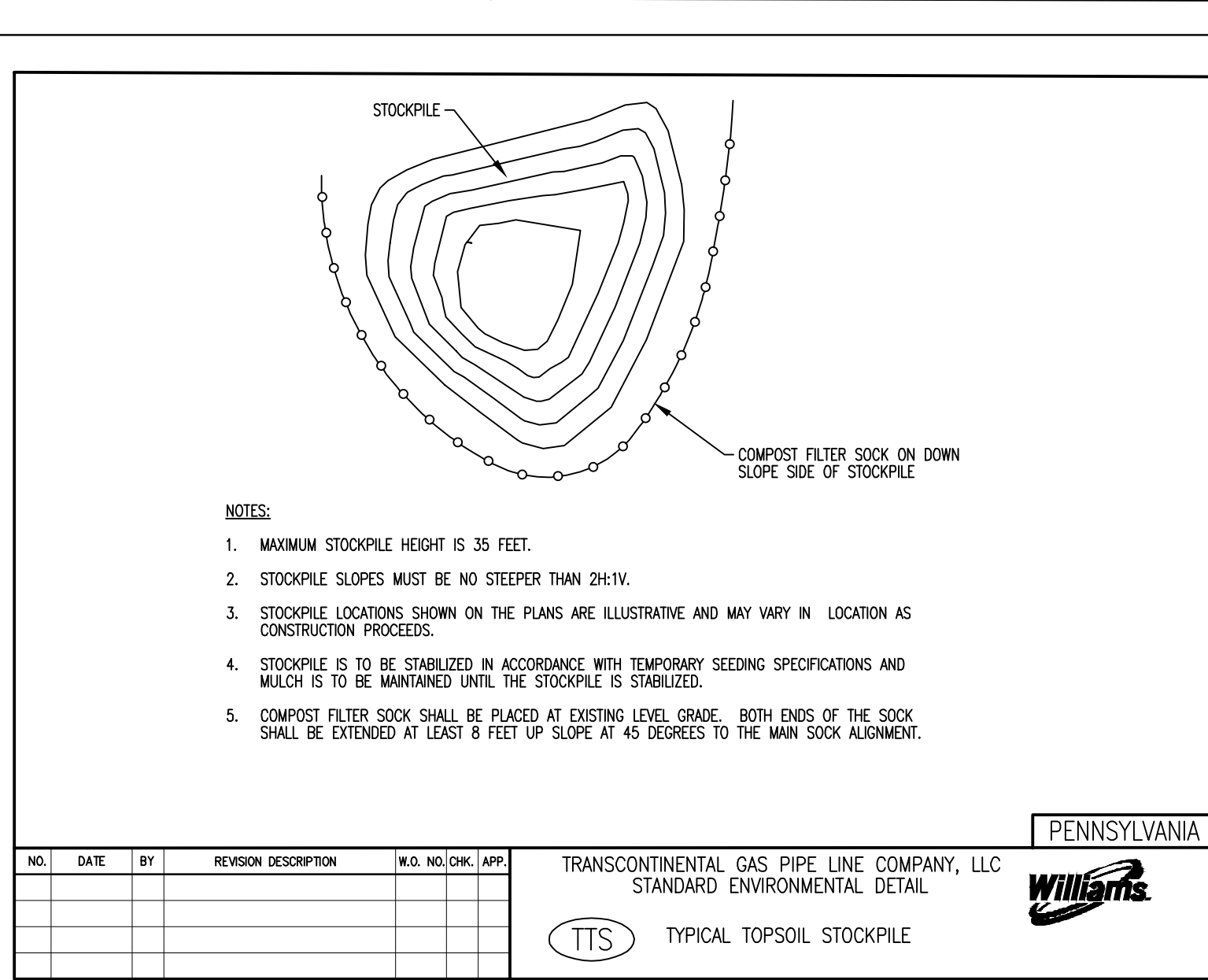
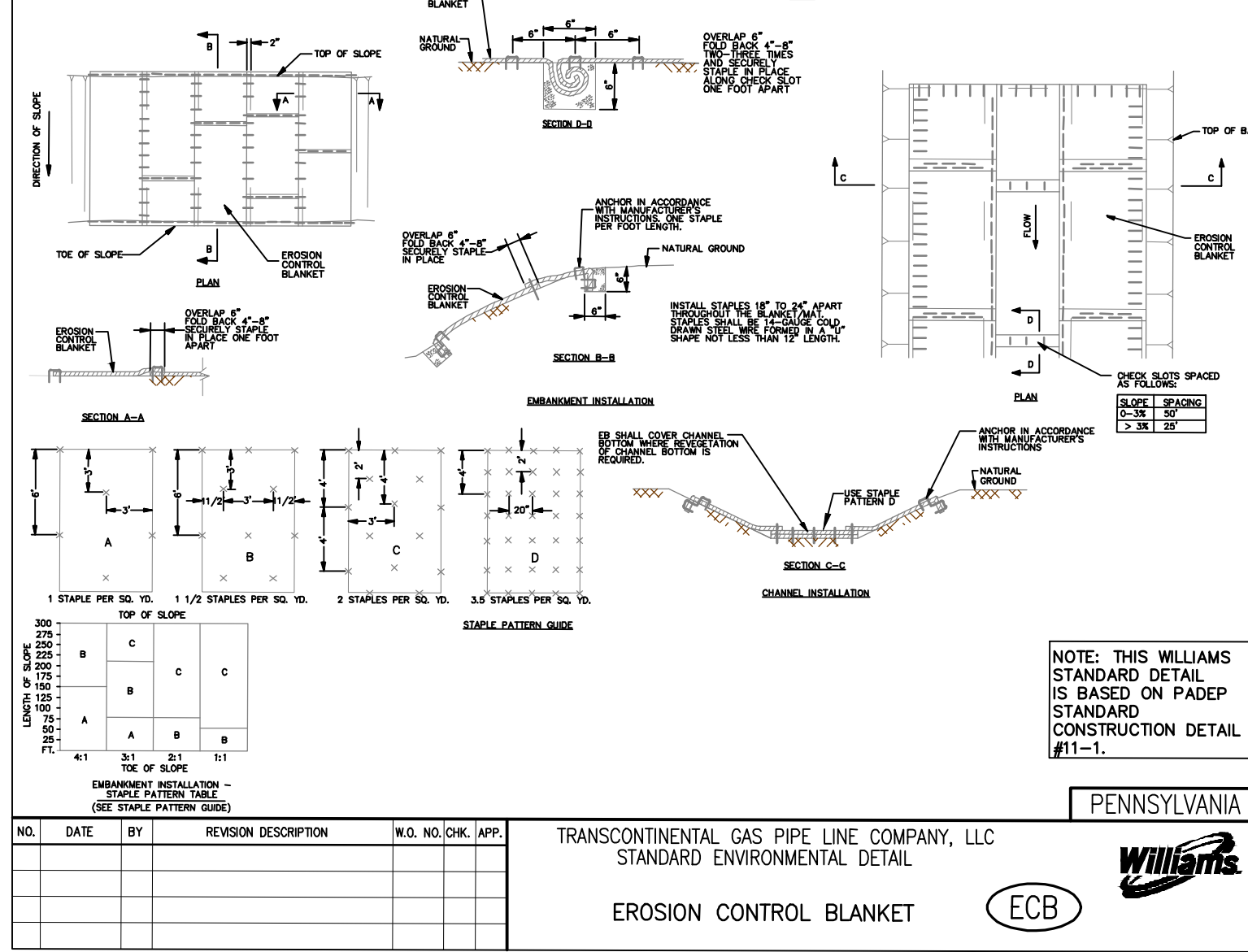
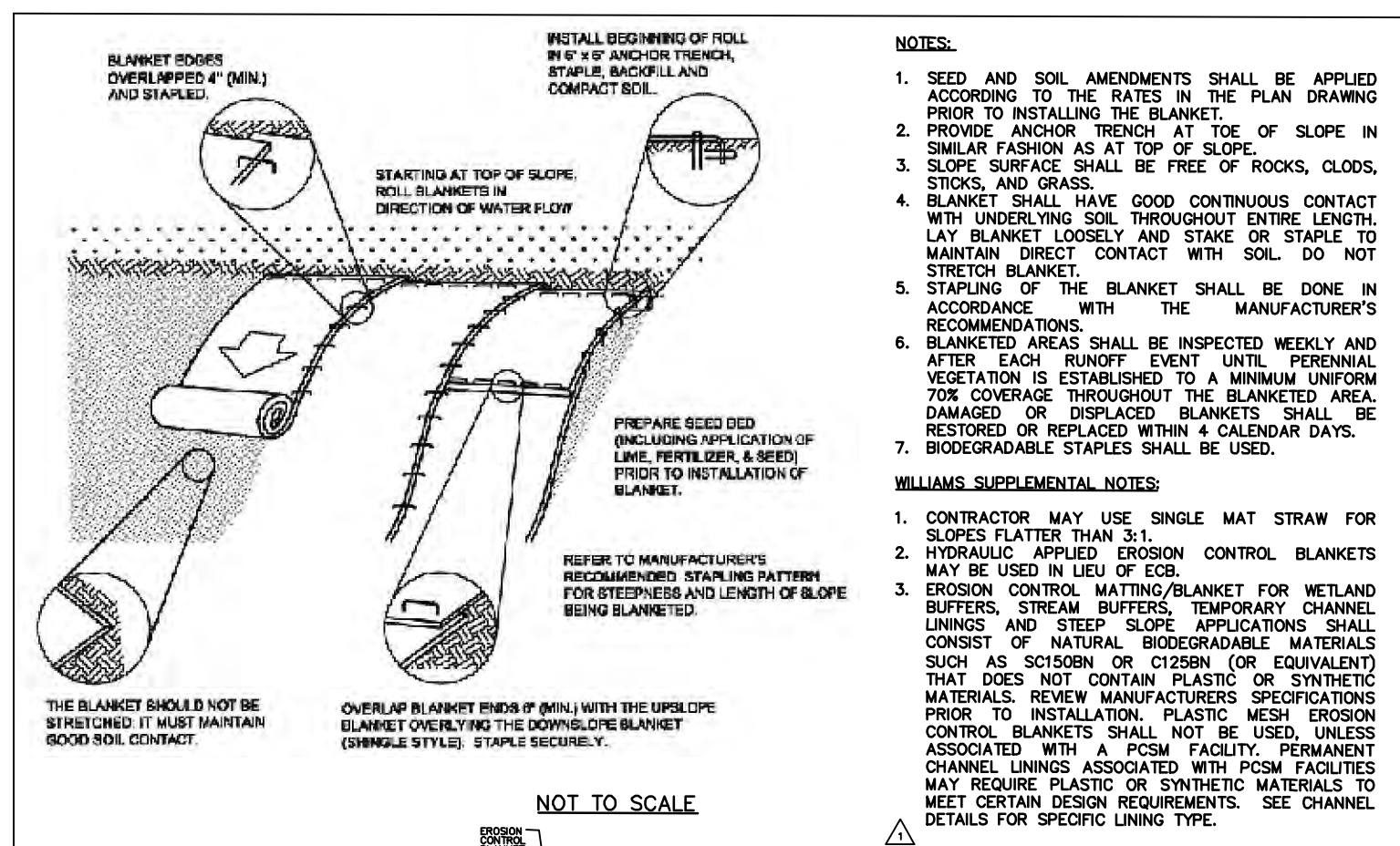
ORGANIC MATTER CONTENT		25% - 100% (DRY WEIGHT BASIS)	
ORGANIC PORTION	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
	5.5 - 8.5	30% - 60%	30% - 50% PASS THROUGH 3/8\" SIEVE
PH	5.5 - 6.5	30% - 60%	5.0 ds/m (mmhos/cm) MAXIMUM
MOISTURE CONTENT			
PARTICLE SIZE			
SOLUBLE SALT CONCENTRATION			

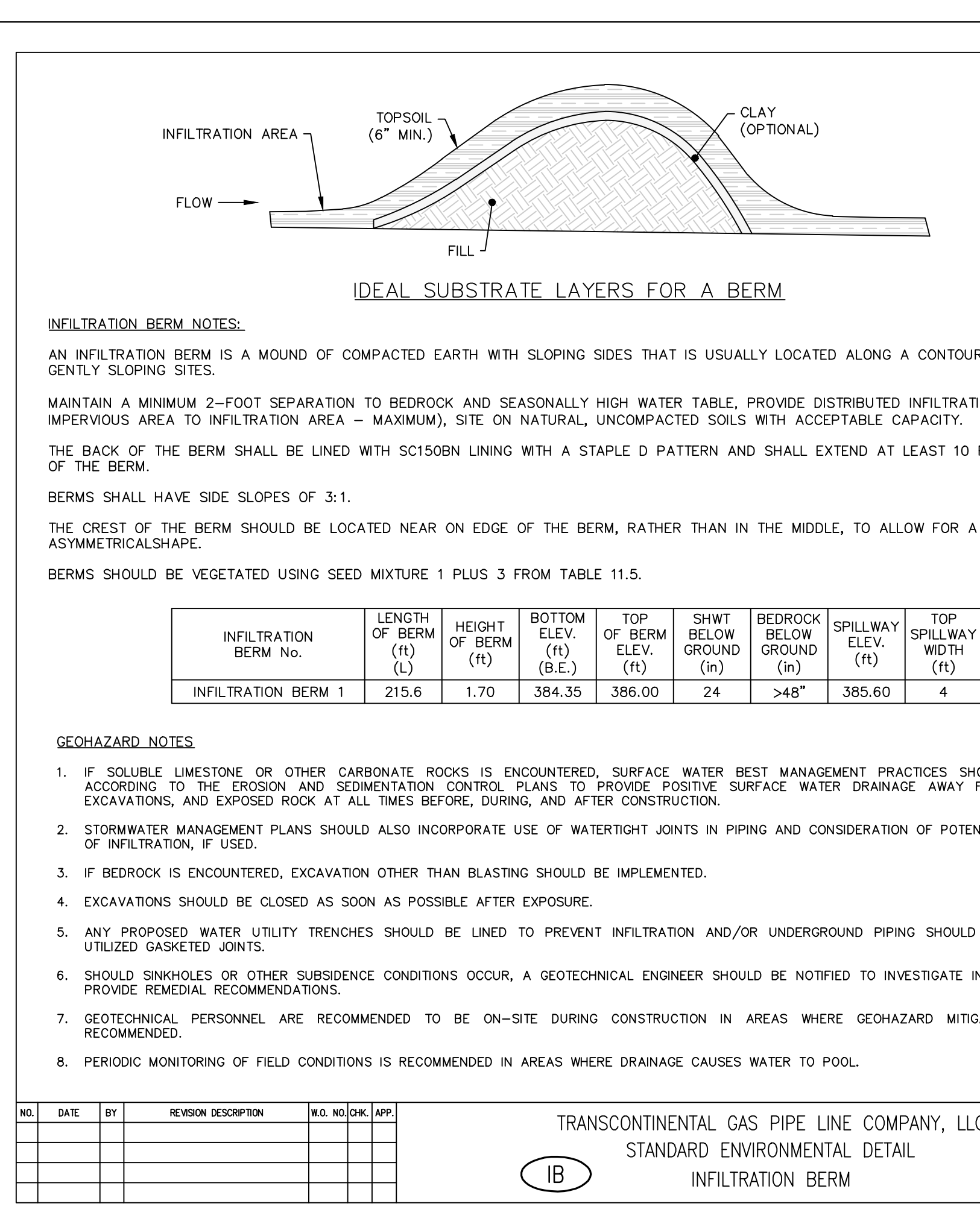
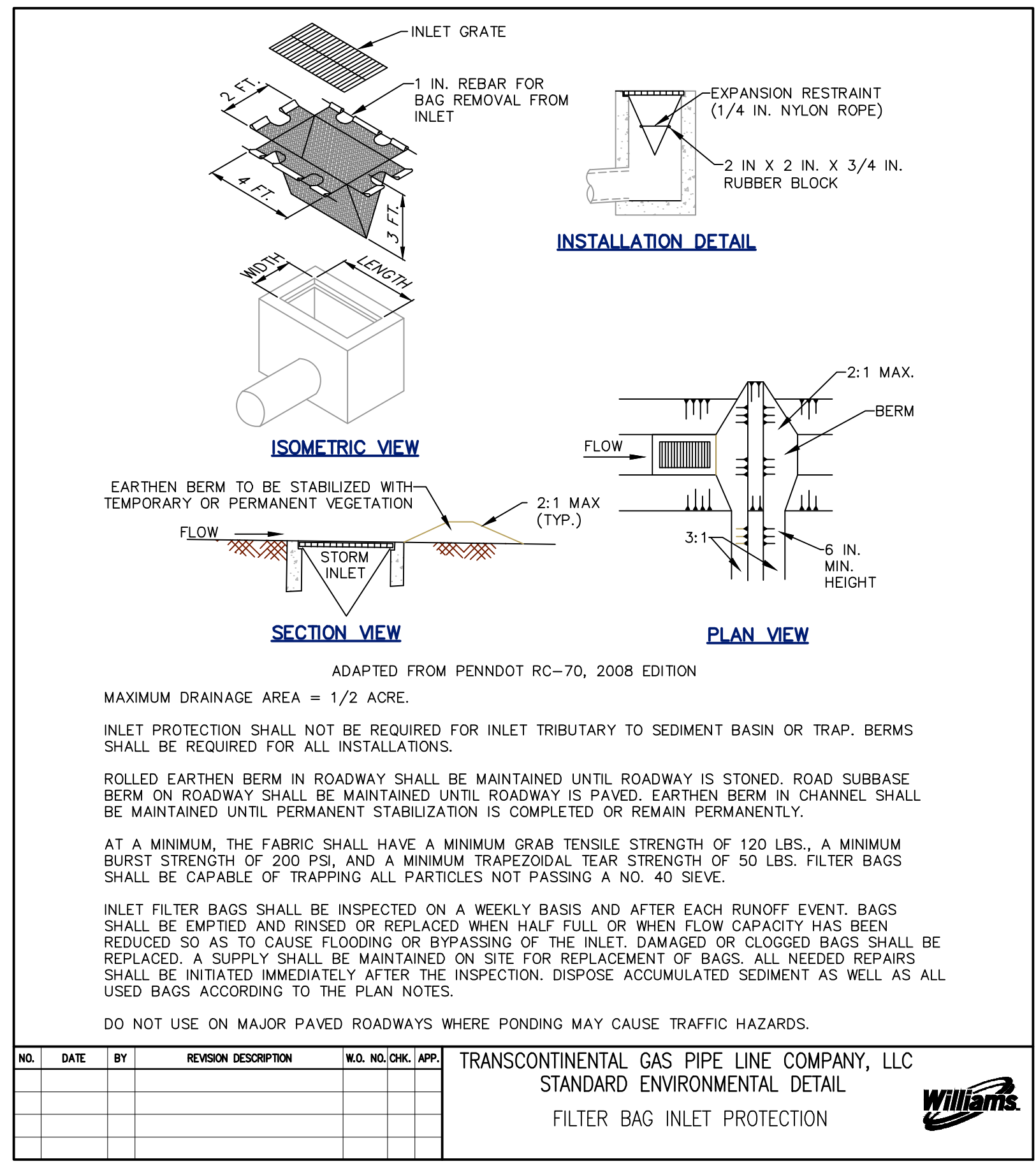
MATERIAL TYPE	3 mil HDPE		5 mil HDPE		HEAVY-DUTY MULTI-FILAMENT POLYPROPYLENE (HMFPP)
	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	
SOCK CHARACTERISTICS	12"	12"	12"	12"	12"
	18"	18"	18"	18"	18"
	24"	24"	24"	24"	24"
	32"	32"	32"	32"	32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 psi	26 psi	44 psi	202 psi
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.	23% at 1000 hr.	100% at 1000 hr.	100% at 1000 hr.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET CONTINUOUSLY WOUND				
	FUSION-WELDED JUNCTIONS 3/4\" x 3/4\" MAX APERTURE SIZE				
	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
OUTER FILTRATION MESH	3/16\" MAX APERTURE SIZE				
SOCK FABRICS COMPOSED OF BIURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					

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TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
STANDARD ENVIRONMENTAL DETAIL  
**CFS** COMPOST FILTER SOCK

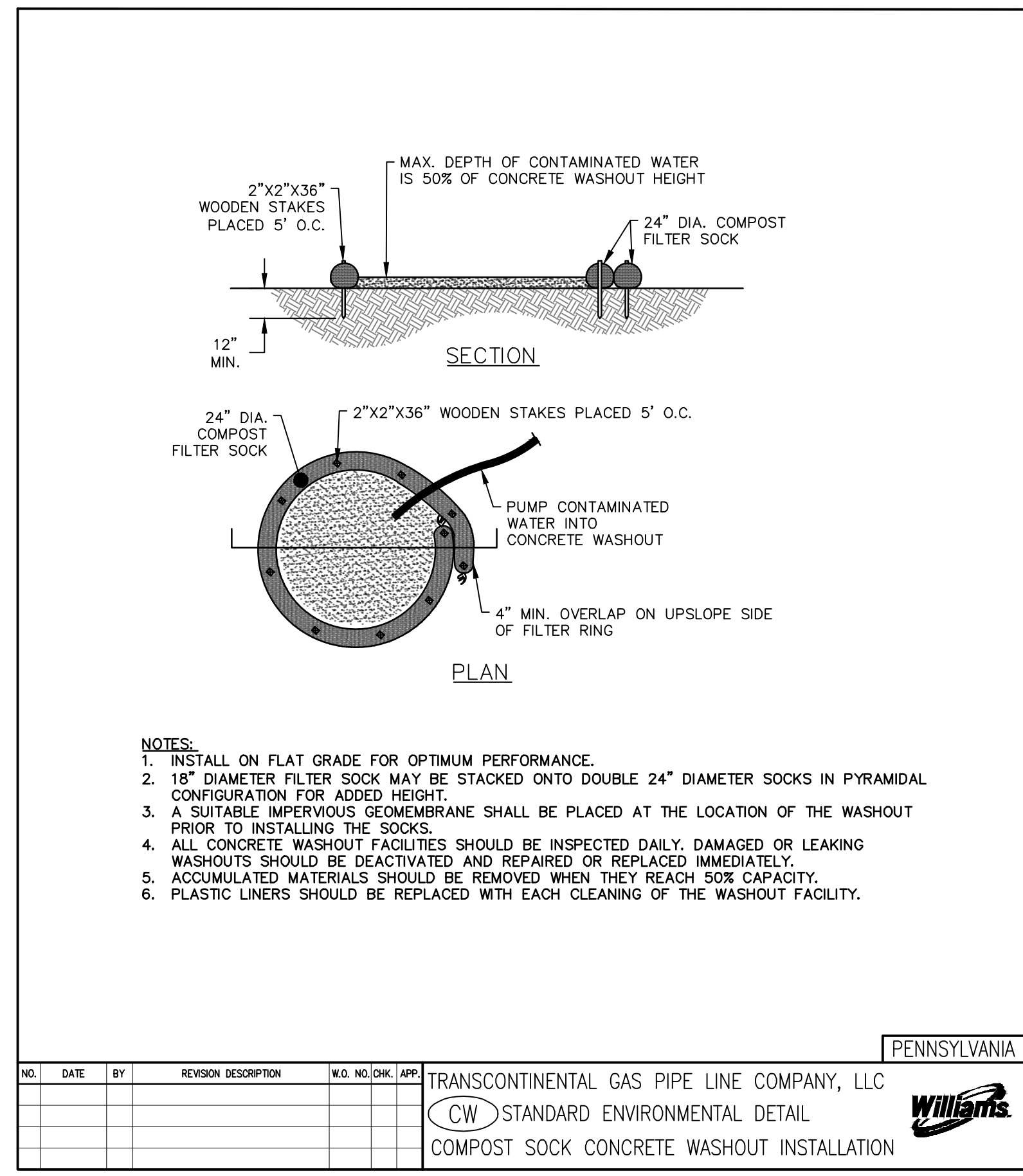


SOCK No.	DIA (IN.)	LOCATION	SLOPE (%)	z e
1	12	Along south-eastern LOD, east site of RCE	4	103
2	12	Along south-eastern LOD, east site of RCE	1	294
3	12	Along south-eastern LOD	1	181
4	12	Along south-eastern LOD	2	102
5	12	Along south-eastern LOD	3	112
6	12	Along south-eastern LOD	4	148
7	18	Along south-eastern LOD	4	369
8	18	Along north-eastern LOD	4	385
9	12	Along north-eastern LOD	5	268
10	12	Along north-eastern LOD	4	157
11	12	Along north-eastern LOD	5	104
12	12	Along north-eastern LOD	5	100
13	12	Along north-eastern LOD	5	81
14	12	Along south-western LOD	3	260
15	12	Along south-western LOD	3	265



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1	06/29/21	RHM	REVISED PER PADEP COMMENTS.			
2	03/01/22	RHM	RESPONSE TO PADEP TECHNICAL DEFICIENCY LETTER			

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
STANDARD ENVIRONMENTAL DETAIL  
**IB** INFILTRATION BERM



NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
REGIONAL ENERGY ACCESS EXPANSION PROJECT -  
COMPRESSOR STATION 200  
SOIL EROSION & SEDIMENT CONTROL PLAN  
DETAILS  
EAST WHITELAND TWP., CHESTER COUNTY, PENNSYLVANIA

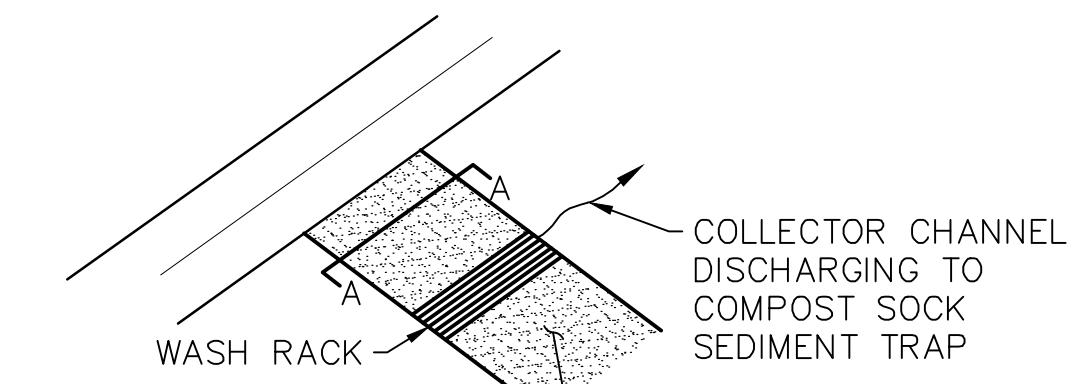
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CHECKED BY:	RUN	DATE:	03/31/21	ISSUED FOR CONSTRUCTION:	REVISION:
APPROVED BY:	PW	DATE:	03/31/21	DRAWING NUMBER:	26-1000-70-28-D

SHEET 6 OF 7

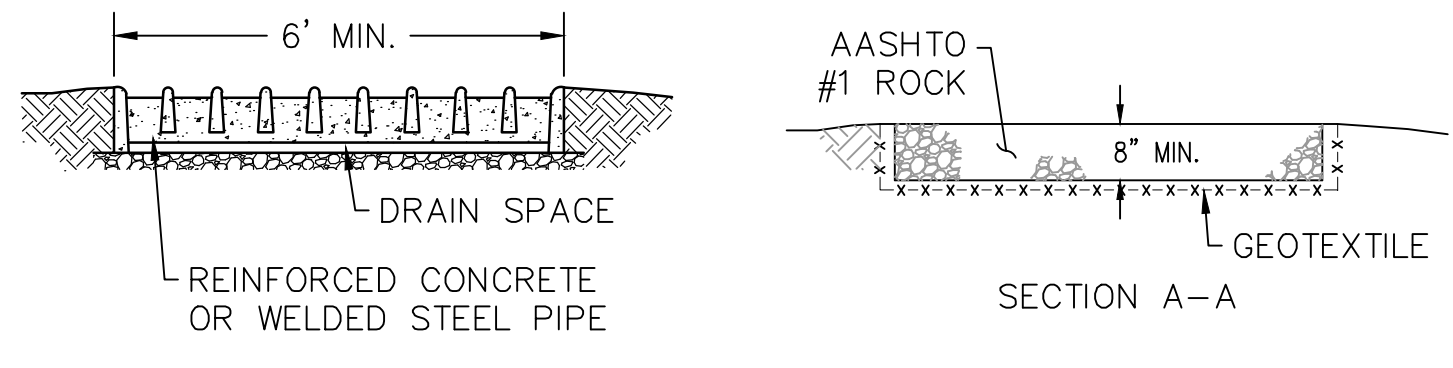
**BAL GROUP**

**WMM CONSULTING, INC.**

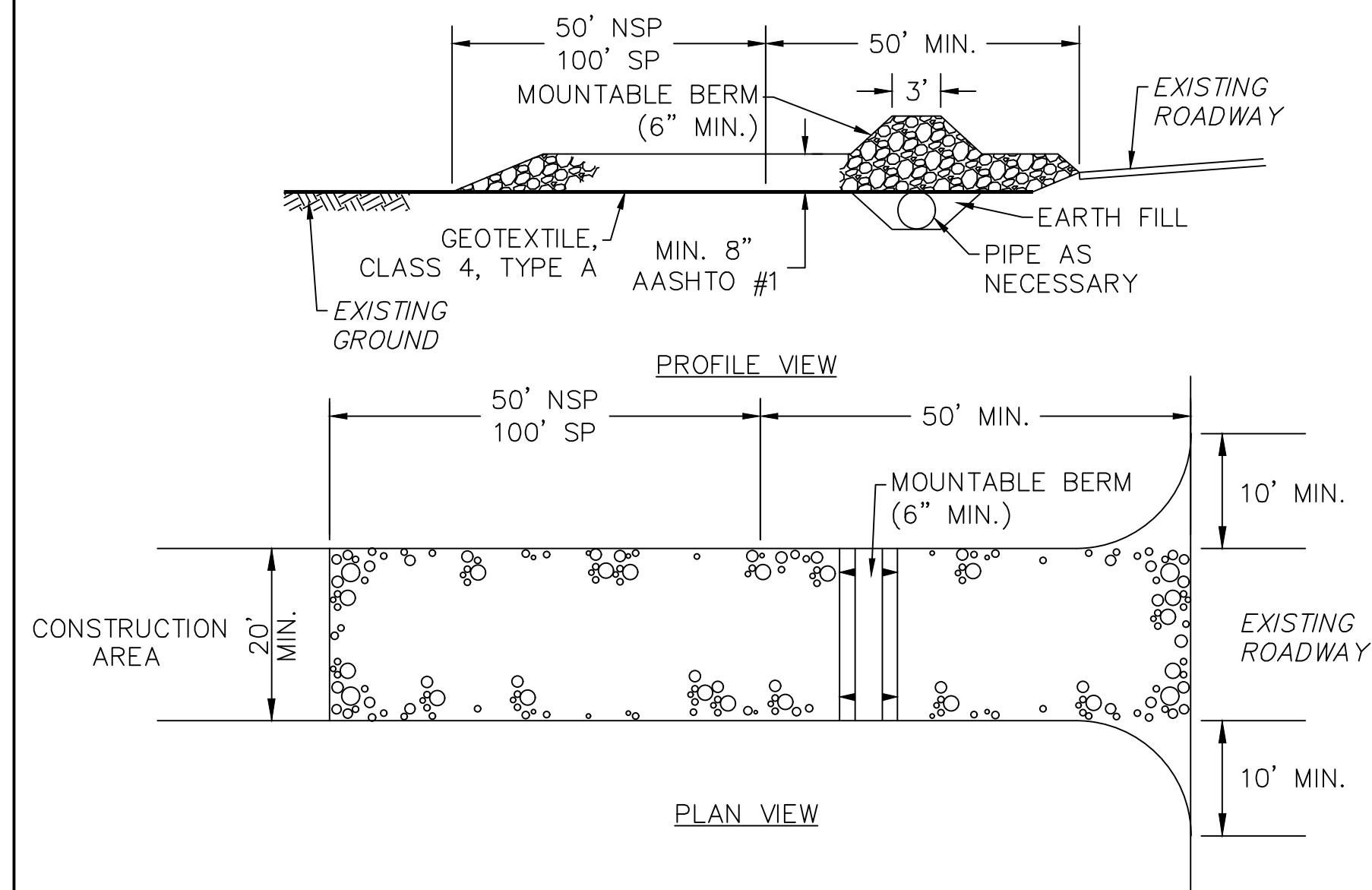
**PATRICK A. WOZINSKI, P.E.**  
REGISTERED PROFESSIONAL ENGINEER  
PED78243  
PENNSYLVANIA PROFESSIONAL ENGINEER



AASHTO #1 ROCK (8" THICK)  
EXTENDING 25' MIN. ON BOTH  
APPROACHES TO WASH RACK



- NOTE:
- 1) WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS, WHICHEVER IS GREATER.
  - 2) WASH RACK SHALL BE CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.
  - 3) A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.
  - 4) MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAYS OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

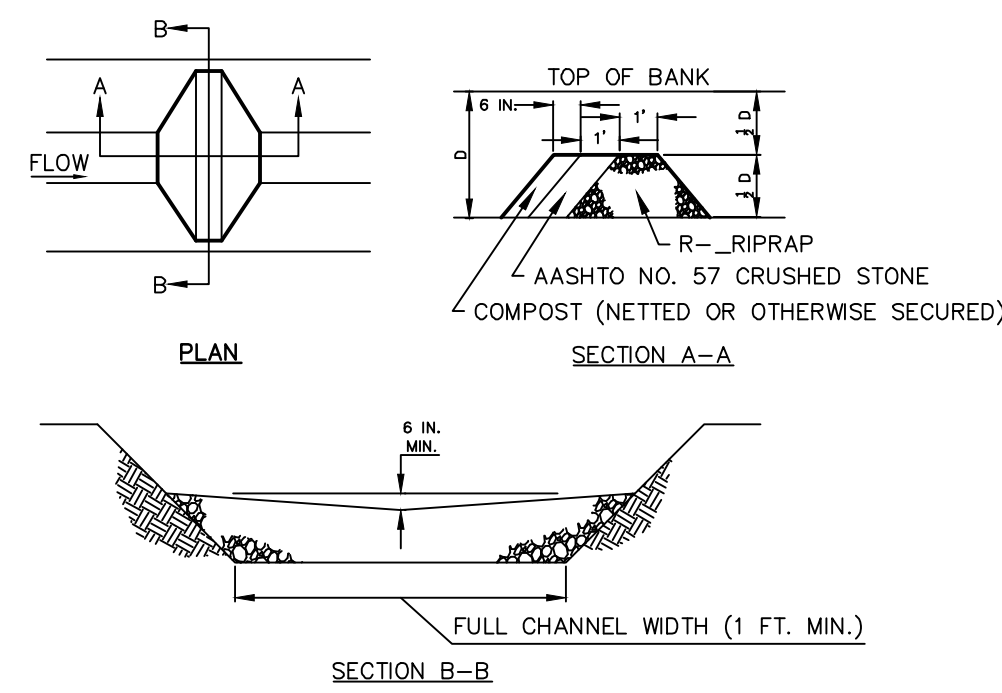


- NOTES:
- 1) REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
  - 2) MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
  - 3) 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.
  - 4) STREET SWEEPING ON PAVED ROADS
    - a. USE A VACUUM TRUCK SWEEPER OR SWEEPER WITH A CATCH BIN ATTACHMENT.
    - b. AT A MINIMUM - ANY DAY IN WHICH CONSTRUCTION TRAFFIC IS EXITING THE ROCK CONSTRUCTION ENTRANCE, THE VACUUM TRUCK SWEEPER OR SWEEPER WITH A CATCH BIN ATTACHMENT SHALL CLEAN THE ROAD WAY AT THE END OF THE WORK DAY AND PRIOR TO ANY FORECASTED RAIN EVENT.
  - 5) STREET SWEEPING ON DIRT OR GRAVEL SURFACE PUBLIC ROADS
    - a. RIGOROUS MANUAL REMOVAL OF MUD/DIRT FROM VEHICLE/EQUIPMENT TIRES PRIOR TO EXITING CONSTRUCTION SITE, SUPPLEMENTED BY IMMEDIATE RECOVERY, BY MANUAL OR MECHANICAL MEANS, OF SOIL WHICH MAY BECOME DISCHARGED ONTO PUBLIC ROADWAYS. DUST CONTROL AND/OR COMPACTION VIA ROLLING OF THE DIRT PUBLIC ROAD SURFACE WILL BE IMPLEMENTED AS NEEDED.

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CE CONSTRUCTION ENTRANCE

PENNSYLVANIA  
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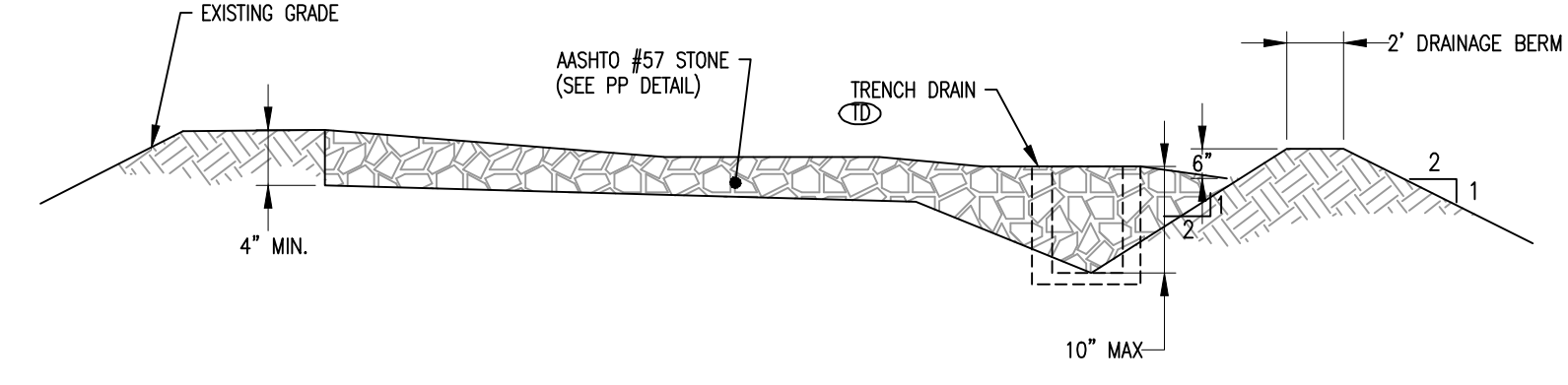
NOTES:

1. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.
2. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

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TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
STANDARD ENVIRONMENTAL DETAIL  
RFO ROCK FILTER OUTLET

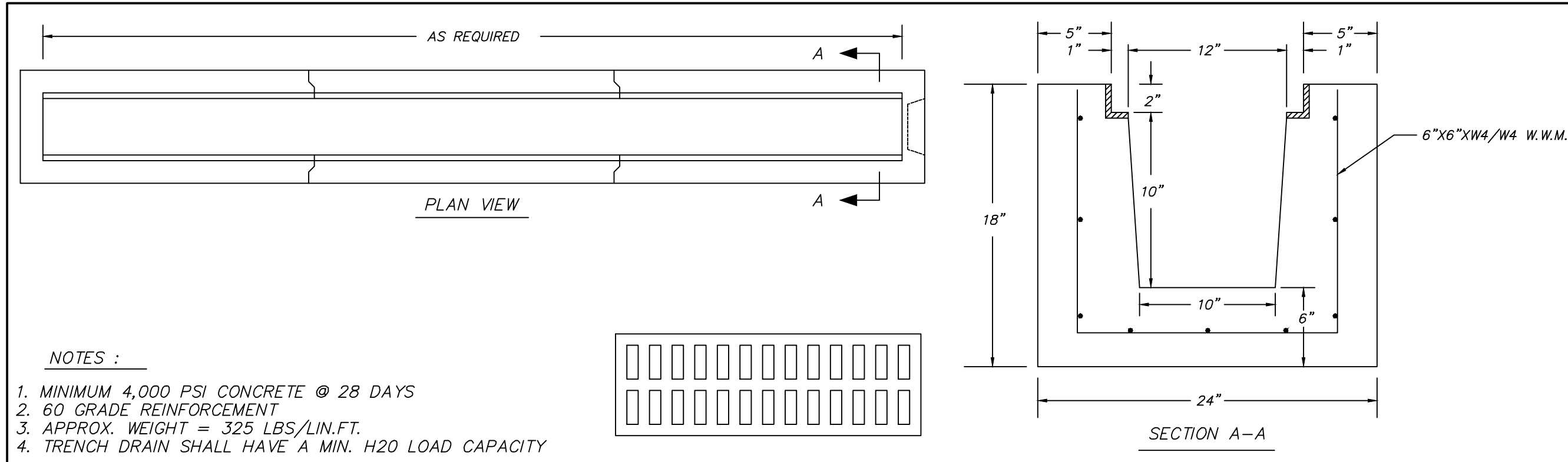
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TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC  
SECTION C-C GRAVEL PAD

PENNSYLVANIA  
Williams



- NOTES:
1. MINIMUM 4,000 PSI CONCRETE @ 28 DAYS
  2. 60 GRADE REINFORCEMENT
  3. APPROX. WEIGHT = 325 LBS/LIN.FT.
  4. TRENCH DRAIN SHALL HAVE A MIN. H2O LOAD CAPACITY

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TRANSCONTINENTAL GAS PIPE LINE CORPORATION  
STANDARD ENVIRONMENTAL DETAIL  
TD TRENCH DRAIN

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APPROVED BY: PW	DATE: 03/31/21	DRAWING NUMBER: 26-1000-70-28-D	SHEET 7 OF 7

W.O. 1232813 R.D. 305