# EROSION AND SEDIMENT CONTROL PLAN FOR



# JULY 27, 2018



LOCATION MAP SCALE: 1"=2000'

SHEET INDEX					
DRAWING NUMBER	DESCRIPTION				
ESC-1	COVER SHEET				
ESC-2	EXISTING CONDITIONS AND DEMOLITION PLAN				
ESC-3	EROSION AND SEDIMENT CONTROL PLAN				
ESC-4	EROSION AND SEDIMENT CONTROL DETAILS				
ESC-5	EROSION AND SEDIMENT CONTROL NOTES				



Know what's **below**. Call before you dig.

PENNSYLVANIA ACT 38(1991)/187(1996) REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH. PA ONE CALL SERIAL NO: 20160360536

  NO.	DATE	REVI	SION BY APRV'D
PRO DESI DRA CHK	JECT NO GNED BY MN BY: D BY:	.: 15006 /: DPG BKK DPG	DRAWING NUMBER ESC - 1
DATE	:	07/27/2018	SHEET 1 OF 5

- IN FEBRUARY AND MAY 2016.
- PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.

- STRUCTURE<sup>®</sup> ALONG SCI LANE AT THE NORTH END OF THE SITE. ELEVATION = 1048.34'.
- LOCATED AT THE NORTHEAST INTERSECTION OF SCI LANE AND WILLOW CROSSING ROAD. ELEVATION = 989.20'
- FIELD OBSERVATIONS AND RECORD DRAWINGS PROVIDED BY UTILITY COMPANIES. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON AND ADDITIONAL BURIED UTILITIES AND STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED THE EXACT LOCATION AND DEPTH OF ALL UTILITY LINES PRIOR TO THE START OF ANY
- FOR THE LANDS OF COMMONWEALTH OF PENNSYLVANIA PREPARED BY NAVTECH, INC DATED



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	OHEOHE	OUBLE YELLOW LINE		
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© : WrC CIB : WPS 50107 BTC0 346/7	D-4 REMOVE EXISTING METER PIT	AND CAP EXISTING	<u>9</u> E	<u> </u>
OHE	D-5 EXISTING TREE TO REMAIN.	IIT REQUIREMENTS.		NSH
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	D-7 EXISTING GAS SERVICE TO BE UTILITY COMPANY AND 0.3 C	E TERMINATED BY ONTRACTOR.		ELD .
	D-8 SEE ARCHITECTURAL DRAWING SPECIFICATIONS FOR DETAILED DEMOLITION PLANS BY 0.1 C	GS AND D STRUCTURE ONTRACTOR.		EMPF
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			DESIGNED BY:	DPG
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	D-12 RELATED PIPING		DRAWING NUMBE	R
	D-13 COMPANY.	TO DEMANY SOD	Eer	9
20 0 50' 100' SCALE: 1" = 50'	D-14 EXISTING STORM DRAIN PIPE FURTHUR MODIFICATION.	iu kemain fuk	E36 -	4
			SHEET 2 OF 5	Ś



#### Specification Sheet – Permanent Erosion Control Blanket

#### DESCRIPTION

The permanent erosion control blanket shall be a machine-produced mat of 100% UV stable polypropylene fiber. The matting shall be of consistent thickness with the synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top side with black heavyweight UV-stabilized polypropylene netting having ultraviolet additives to delay breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh. The bottom net shall also be UV stabilized polypropylene with a 0.63 x 0.63 inch (1.57 x 1.57 cm) mesh size. The blanket shall be sewn together on 1.5 inch (3.81 cm) centers with non-degradable thread. All mats shall be manufactured with a colored thread stitched along both outer edges as an overlap guide for adiacent mats. The blanket shall meet Type 5A, 5B, specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18

Material Content

	indication con				
Matrix	100% UV stable Polypropylene Fiber	0. (C	.7 lbs/sq yd 1.38 kg/sm)		
Netting	Top: UV-stabilized Polyprop Bottom: UV-stabilized Polyp	ylene 5 (2 propylene 3	lbs/1000 sq ft 4.4 g/sm) lbs/1000 sq ft 4.7 = (cm)		
Thread	Polypropylene, UV stable	()	4.7 g/sm)		
	Standard Rol	Sizes			
Width	6.5 ft (2.0 m)	6.5 ft (2.0 m) 8 ft (2.44 m)			
Length	108 ft (32.92 r	m)	112 ft (35.14 m)		
Weight ± 10%	61 lbs (27.66 k	g)	76.25 lbs (34.59 kg)		
Area	80 sq yd (66.0	) sm)	100 sq yd (83.61 sm)		
	Slope Design Data	: C Factor	s		
	Slope	Gradients	(5)		
Slope Length (	( <b>L)</b> ≤ 3:1	3:1 – 2.1	≥ 2:1		
≤ 20 ft (6 m)	0.001	0.029	0.082		
20-50 ft	0.036	0.060	0.086		
≥ 50 ft (15.2 m	<b>i)</b> 0.070	0.090	0.110		

Thickness	ASTM D6525	0.47 m. (11.94 mm)
Resiliency	ASTM D6524	91.5%
Density	ASTM D792	0.916 g/cm <sup>3</sup>
Mass/Unit Area	ASTM 6566	13.03 oz/sy (443 g/m2)
UV Stability	ASTM D4355/ 1000 hr	90%
Porosity	ECTC Guidelines	95.89%
Stiffness	ASTM D1388	0.94 in-lb (1085378 mg-cm)
Light Penetration	ASTM D6567	17.9%
Tensile Strength - MD	ASTM D6818	438 lbs/ft (6.49 kN/m)
Elongation - MD	ASTM D6818	28.1%
Tensile Strength - TD	ASTM D6818	291.9 lbs/ft (4.32 kN/m)
Elongation - TD	ASTM D6818	26.7%
Biomass Improvement	ASTM D7322	497%
Design	Permissible Shear	Stress
	Short Duration	Long Duration
Phase 1: Unvegetated	3.0 psf (144 Pa)	2.0 psf (96 Pa)
Phase 2: Partially Veg.	8.0 psf (383 Pa)	8.0 psf (383 Pa)
Phase 3: Fully Veg.	8.0 psf (383 Pa)	8.0 PSF (383 Pa)
Unvegetated Velocity	9.0 fps	(2.7 m/s)
Vegetaged Velocity	16 fps (4	4.9 m/s)

Index Property Test Method Typical

Roughness Coe	fficients - Unveg.
w Depth	Manning's n
.50 ft (0.15 m)	0.034
0 – 2.0 ft	0.034-0.020
.0 ft (0.60 m)	0.020

Compost Standards						
Organic Matter Content	25% - 100% (dry weight basis)					
Organic Portion	Fibrous and elongated					
рН	5.5 - <b>8.5</b>					
Moisture Content	30% - 60%					
Particle Size	30% - 50% pass through 3/8" sieve					
Soluble Salt Concentration 5.0 dS/m (mmhos/cm) Maximum						

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Compost Sock Fabric Minimum Specifications								
Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)			
Material	Photo-	Photo-	Bio-	Photo-	Photo-			
Characteristics	degradable	degradable	degradable	degradable	degradable			
		12"	12"	12"	12"			
Sock	12"	18"	18"	18"	18"			
Diameters	18"	24"	24"	24"	24"			
		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.		100% at 1000 hr.	100% at 1000 hr.			
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years			
		Two-ply	y systems					
				HDPE biaxial net				
Inner O		441.m av		Continuously wound				
Inner C	ontainment Ne	tting	F	Fusion-welded junctures				
			3/4	X 3/4" Max. apert	ure size			
			(Wove	n layer and non-we	oven fleece			
Oute	r Filtration Mes	sh	mechan	ically fused via ne	edle punch)			
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SUCK TADFIC	s composed of	buriap may be	e usea on proje	cis lasting o mont	ins of less.			



NOT TO SCALE



BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

## **EROSION CONTROL BLANKET INSTALLATION**

NOT TO SCALE

ACCEPTABLE.

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

## **ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE



PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND

BEGIN AT THE TOP OF THE CHANNEL 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" ACROSS THE WIDTH OF THE BLANKET.

ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. 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. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4" - 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.

5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (DEPENDING ON BLANKET TYPE) AND

7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE

8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

CRITICAL POINTS OVERLAPS AND SEAMS PROJECTED WATER LINE CHANNEL BOTTOM/SIDE SLOPE VERTICES

HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

\*\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

**CHANNEL INSTALLATION** 

NOT TO SCALE

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#### INTRODUCTION AND BACKGROUND

#### A. <u>BACKGROUND</u>

THE PROPOSED SITE OF THE DGS PENNSYLVANIA STATE POLICE DNA FACILITY IS LOCATED IN HEMPFIELD TOWNSHIP IN WESTMORELAND COUNTY, PA, APPROXIMATELY 1000 FEET NORTHWEST OF THE INTERSECTION OF WILLOW CROSSING ROAD AND US 119. SEE APPENDIX A FOR A SITE LOCATION MAP. THE PROPERTY COMPRISES APPROXIMATELY 14.3 ACRES, 9.1 ACRES OF WHICH WILL BE DISTURBED AS PART OF THIS PROJECT. THE SITE IS FORMERLY MOSTLY UNDEVELOPED LAND WITH A HOME AND BARN, WHICH WILL BE DEMOLISHED AS PART OF THIS PROJECT. THE EXISTING PROPERTY IS APPROXIMATELY 9% IMPERVIOUS, INCLUDING A PAVED ROAD (SCI LANE) AND THE TWO AFOREMENTIONED BUILDINGS. THE PROPOSED BUILDING IS A TWO-STORY LAB BUILDING, HEREAFTER REFERRED TO AS THE DNA FACILITY, AND WILL BE UTILIZED BY THE PENNSYLVANIA STATE POLICE (PSP). IN ADDITION TO THE CONSTRUCTION OF THE BUILDING, UTILITIES WILL BE INSTALLED, STORMWATER MANAGEMENT FACILITIES WILL BE CONSTRUCTED, AND PARKING AREAS WILL BE CONSTRUCTED AND PAVED. SCI LANE WILL ALSO BE EXPANDED TO PROVIDE INGRESS/EGRESS TO THE PROPOSED FACILITY. STORMWATER RUNOFF FROM THE SITE IS CONVEYED TO AN UNNAMED TRIBUTARY TO JACKS RUN, WHICH HAS A DESIGNATED USE OF WARM WATER FISHES (WWF). THESE WATERS ARE IMPAIRED DUE TO ABANDONED MINE DRAINAGE.

THE SITE IS PART OF THE SEWICKLEY CREEK WATERSHED, WHICH HAS AN APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL) FOR METALS, PH AND TDS.

#### 3. <u>PURPOSE</u>

THE PURPOSE OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN IS TO DEMONSTRATE AN EFFECTIVE AND SAFE CONTROL OF EROSION AND SEDIMENTATION ON THE SITE DURING CONSTRUCTION, ULTIMATELY PROTECTING STORMWATER INFRASTRUCTURE AND RECEIVING WATERWAYS FROM SEDIMENT POLLUTION. PREPARATION OF THE PLAN

THE ATTACHED EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED BY RAUDENBUSH ENGINEERING, INC., 29 SOUTH UNION STREET, MIDDLETOWN, PENNSYLVANIA 17057. THE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) AND DATED MARCH 2012. THE PLAN IS ALSO IN ACCORDANCE WITH THE REQUIREMENTS OF WESTMORELAND COUNTY CONSERVATION DISTRICT, HEMPFIELD TOWNSHIP, THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND OTHER ACCEPTED ENGINEERING STANDARDS AND PRACTICES.

#### I. EROSION & SEDIMENT CONTROL NARRATIVE

A. SOILS CLASSIFICATION AND ANALYSIS

ACCORDING TO THE NRCS WEB SOIL SURVEY AND THE SITE EVALUATION FOR STORMWATER INFILTRATION REPORT, THE SITE COMPRISES THE FOLLOWING SOIL TYPES: • DOB - DORNMONT SILT LOAM, 3 TO 8 PERCENT SLOPES, HSG D, MODERATELY WELL-DRAINED, LOW TO MODERATELY HIGH SATURATED HYDRAULIC CONDUCTIVITY. • DOC - DORNMONT SILT LOAM, 8 TO 15 PERCENT SLOPES, HSG D, MODERATELY WELL-DRAINED, LOW TO MODERATELY HIGH SATURATED HYDRAULIC CONDUCTIVITY.

#### B. <u>WATERSHED</u>

STORMWATER RUNOFF FROM THE SITE IS CONVEYED TO TWO SEPARATE UNNAMED TRIBUTARIES (UNTS) TO FISHERS RUN, WHICH BOTH HAVE A CHAPTER 93 DESIGNATED USE OF CWF, MF. FISHERS RUN IS PART OF THE LOWER YELLOW BREECHES CREEK WATERSHED (HUC 12: 020503050505). NO IMPAIRMENT OR TMDL EXISTS FOR THE UNTS TO FISHERS RUN AT THIS TIME. IN EXISTING CONDITIONS, APPROXIMATELY 12.7 ACRES OF THE SITE TO BE DEVELOPED DISCHARGES TO AN UNNAMED RIBUTARY THAT FLOWS NORTH AND ROUGHLY FOLLOWS THE WESTERNMOST PROPERTY LINE. RUNOFF IS DISCHARGED FROM THE SITE DIRECTLY TO THE UNT VIA TWO SEPARATE CULVERTS UNDER SOUTH FILEYS ROAD, ONE AT THE SOUTHWEST CORNER HE SITE, AND ONE JUST BEYOND THE NORTHWEST CORNER OF THE SITE. THE REMAINING APPROXIMATELY 12.7 ACRES OF THE AREA TO BE DEVELOPED DISCHARGES DIRECTLY TO A UNT THAT FLOWS NORTH THROUGH THE PROPERTY. ACCORDING TO PANEL 42133C0151F OF THE FLOOD INSURANCE RATE MAP (FIRM), THE PROJECT AREA IS OUTSIDE THE 100-YEAR FLOODPLAIN.

#### C. ACCELERATED EROSION CONTROL

A COMBINATION OF EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING AND AFTER CONSTRUCTION TO STABILIZE OR PREVENT ADVANCED EROSION FROM CRITICAL AREAS. TEMPORARY VEGETATION SHALL BE ESTABLISHED ON ANY STOCKPILED TOPSOIL. ALL SLOPES SHALL BE SEEDED OR STABILIZED IMMEDIATELY AFTER CONSTRUCTION IN ORDER TO PREVENT SCOUR ASSOCIATED WITH STORMWATER RUNOFF. WHEREVER POSSIBLE, A SUITABLE NATURAL VEGETATIVE BUFFER SHALL BE MAINTAINED AROUND ALL CONSTRUCTION AREAS.

## D. EROSION AND SEDIMENTATION CONTROL

SEDIMENTATION DURING CONSTRUCTION OF THE SITE IMPROVEMENTS WILL BE CONTROLLED BY STRATEGICALLY PLACED COMPOST FILTER SOCKS, TWO ROCK CONSTRUCTION ENTRANCES, AND PROPER SOIL STABILIZATION PROCEDURES. THREE COMPOST SOCKS WILL BE UTILIZED TO CONVEY OFF-SITE RUNOFF AROUND THE SITE. SIX ADDITIONAL COMPOST FILTER SOCKS WILL BE UTILIZED TO CAPTURE AND FILTER SEDIMENT-LADEN RUNOFF. FINALLY, A COMPOST FILTER SOCK SEDIMENT TRAP WILL BE UTILIZED TO TRAP SEDIMENT-LADEN RUNOFF FROM THE MAJORITY OF THE SITE AND FILTER IT PRIOR TO DISCHARGE. ALL SLOPES SHALL BE GRADED AS SHOWN ON THE PLANS AND PROPERLY STABILIZED AS PRESCRIBED IN THE CURRENT "EROSION AND SEDIMENT POLLUTION CONTROL MANUAL".

#### MONITORING AND REPORTING REQUIREMENTS A. VISUAL INSPECTIONS

NCLUDE THE FOLLOWING INFORMATION.

UNTIL THE SITE IS STABILIZED ALL E&S BMPS MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. MAINTENANCE MUS INCLUDE INSPECTION OF ALL E&S BMPS ON A WEEKLY BASIS AND AFTER EACH STORMWATER EVENT. ALL PREVENTATIVE REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGARDING, RESEEDING, RE-MULCHING, AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

#### THE CONTRACTOR SHALL MAINTAIN THE PENNSYLVANIA STATE UNIVERSITY - EROSION AND SEDIMENTATION CONTROL INSPECTION LOG SHEET TO DOCUMENT EACH INSPECTION AND ALL BMP REPAIR, OR REPLACEMENT AND MAINTENANCE ACTIVITIES. THE LOG SHEET SHALL BE MADE AVAILABLE TO ANY REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION OF THEIR REQUEST

#### B. NON-COMPLIANCE REPORTING WHERE BMPS ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE AND CO-PERMITTEE SHALL IMMEDIATELY CONTACT THE REVIEWING ENTITY. BY PHONE OR PERSONAL CONTACT. FOLLOWED B' THE SUBMISSION OF A WRITTEN REPORT WITHIN FIVE (5) DAYS OF THE INITIAL CONTACT. NON-COMPLIANCE REPORTS SHALL

(1) ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT, OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;

(2) THE PERIOD OF NON-COMPLIANCE, INCLUDING EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;

(3) STEPS BEING TAKEN TO REDUCE, ELIMINATED, AND PREVENT RECURRENCE OF THE NON-COMPLIANCE; AND

(4) THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NON-COMPLIANCE CONDITIONS. C. ADVERSE IMPACT

#### THE PERMITTEE AND CO-PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT, WHICH HAS A REASONABLE LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.

D. REDUCTION, LOSS, OR FAILURE OF THE BMPS UPON REDUCTION, LOSS OR FAILURE OF THE BMPS, THE PERMITTEE AND CO-PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPS OR PROVIDE ANY ALTERNATIVE METHOD OF TREATMENT.

## EROSION AND SEDIMENT CONTROL PLANS

- A. THE CONTRACTOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- B. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE MADE AVAILABLE AT THE SITE OF THE CONSTRUCTION ACTIVITY AT ALL TIMES.
- C. THE STAGING OF EARTH DISTURBANCE ACTIVITIES AND MAINTENANCE REQUIREMENTS CONTAINED IN THE EROSION AND SEDIMENT CONTROL PLAN MUST BE FOLLOWED AT ALL TIMES.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICES OR BMPS TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

#### RECYCLING AND DISPOSAL OF BUILDING MATERIALS AND WASTES

ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 71.1 ET SEQ., AND 287.1 ET SEQ. NO BUILDING MATERIAL OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, BUMPED, OR DISCHARGED AT THE SITE.

#### PREPAREDNESS, PREVENTION, AND CONTINGENCY PLANS

IF THE POTENTIAL EXISTS FOR CAUSING ACCIDENTAL POLLUTION OF AIR, LAND, OR WATER, OR FOR CAUSING ENDANGERMENT OF PUBLIC HEALTH AND SAFETY THROUGH ACCIDENTAL RELEASE OF TOXIC, HAZARDOUS, OR OTHER POLLUTING MATERIALS. THE CONTRACTOR MUST DEVELOP A PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN. THE PPC PLAN SHALL BE DEVELOPED IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. THE PPC PLAN SHALL IDENTIFY RAW MATERIAL STORAGE AREAS, TEMPORARY AND

#### PERMANENT SPOILS STORAGE AREAS, MAINTENANCE AREAS, AND ANY OTHER AREAS THAT MAY HAVE THE POTENTIAL TO CAUSE NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT DUE TO THE STORAGE, HANDLING, OR DISPOSAL OF ANY TOXIC OR HAZARDOUS SUBSTANCES SUCH AS OIL, GASOLINE, PESTICIDES, HE SOLVENTS, ETC. BMPS SHALL BE DEVELOPED AND IMPLEMENTED FOR EACH IDENTIFIED AREA. THE PF BE MAINTAINED ON SITE AT ALL TIMES AND SHALL BE MADE AVAILABLE FOR REVIEW AT THE DEPART ENVIRONMENTAL PROTECTION'S OR WESTMORELAND COUNTY CONSERVATION DISTRICT'S REQUEST.

## SITE PREPARATION

ALL UNCOVERED AREAS OF GROUND SHALL BE STABILIZED IMMEDIATELY WITH SEED AND ADEQUATE STR. THEY REMAIN OPEN MORE THAN TWENTY (20) DAYS. SEE PERMANENT SEEDING AND FERTILIZER SPEC TEMPORARY SEEDING SPECIFICATIONS FOR ADDITIONAL INFORMATION.

### E. <u>GENERAL E&S NOTES</u>

- THE PURPOSE OF THIS E&S CONTROL PLAN IS TO MINIMIZE THE EXTENT AND DURATION OF EARTH DISTU MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION, AND MINIMIZE SOIL COMPACTION UTILIZES CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF.
- 2. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT TIMES. THE LOCAL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN IMPLEMENTATION OF THOSE CHANGES. THE DISTRICT MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES. REVIEW AND APPROVAL AT ITS DISCRETION.
- 3. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64 "EROSION CO AND REGULATIONS", TITLE 25, PART 1, SUBPART C, "PROTECTION OF NATURAL RESOURCES", AND ARTICL RESOURCES", CHAPTER 102 EROSION CONTROL. ALL ARE PUBLISHED BY THE PENNSYLVANIA DEPARTMENT
- ALL UNDERGROUND UTILITIES ARE SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. THE LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED PRIOR TO CONSTRUCTION, EXCAVATION, OR BLASTING, RAUDENBUSH ENGINEERING INC. ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY
- 5. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSER OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- 6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING, AND TOPSOIL STRIPPING MAY NOT COMM STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT S HAVE BEEN CONSTRUCTED, STABILIZED, AND FUNCTIONING, AS DESCRIBED IN THIS E&S PLAN, BEFORE SIT WITHIN THE TRIBUTARY AREAS TO THE CONTROLS MAY BEGIN.
- 7. THE SITE CONTRACTOR SHALL NOT DISTURB MORE AREA THAN IS NECESSARY FOR THE TASK TO BE COMF POTENTIAL FOR EROSION IS MINIMIZED.
- 8. ALL CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER SUCH THAT SOIL EROSION AND A POLLUTION IS MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE FOLLOW
- 9. ANY REFERENCE TO STABILIZATION REFERS TO A MINIMUM UNIFORM 70% VEGETATIVE GROUND COVER (PER PERMANENT AND ANNUAL FOR TEMPORARY) BEING ACHIEVED. UPON COMPLETION OF ANY STAGE OR PHA EARTH DISTURBANCE ACTIVITY, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTE ACCELERATED EROSION AND SEDIMENTATION.
- 10. SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL T REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ANY ADJACENT PROPERTIES AS A RESULT OF I RUNOFF AND/OR SEDIMENT DISPLACEMENT. SPECIAL ATTENTION SHOULD BE GIVEN TO FROZEN SLOPES. WOOD CHIPS, CRUSHED STONE AND OTHER MULCHES SHALL BE IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY EROSION PROBLEMS.
- 11. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTUF BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF B AND GRUBBING OPERATION BEGIN.
- 12. ALL AREAS OF LIMITED SOIL COMPACTION SHALL BE MARKED WITH CONSTRUCTION FENCING AS INDICATED THESE AREAS SHALL BE AVOIDED BY CONSTRUCTION EQUIPMENT AND REMAIN MARKED UNTIL THE CONSTR THAT PARTICULAR BMP OR ON-LOT SEWER FACILITY IS REQUIRED.
- 13. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACT MINIMIZE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND NOTIFY THE LOC/ CONSERVATION DISTRICT.
- 14. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PU FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
- 15. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
- 16. ALL E&S BMPS MUST REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMAN STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION (
- 17. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY E&S BMPS MUST BE REMOVED OR CO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL CONVERSION OF THE BMPS MUST BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL / CONVERSIONS SHOULD BE DONE ONLY DURING THE GERMINATING SEASON.
- 18. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE EARTH DISTURBANCE ACTIVITY, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO\$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
- 19. ONLY LIMITED DISTURBANCE WILL BE PERMITTED TO INITIALLY ACCESS AND ACQUIRE BORROW TO CONSTRUCT CONTROL FACILITIES. BEFORE GENERAL SITE ALTERATION BEGINS.
- 20. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- 21. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- 22. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND FOR MAKING SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED AND FULLY IMPLEMENTED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.
- 23. 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 25PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
- 24. 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 FIRM 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).
- 25. ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL AND MUST BE KEPT ON SITE AND MADE AVAILABLE UPON REQUEST BY THE DEPARTMENT OF AUTHORIZED CONSERVATION DISTRICT. FAILURE TO PRODUCE THE FORM UPON REQUEST MAY RESULT IN THE REVOKING, SUSPENSION OR TERMINATION OF YOUR PERMIT COVERAGE. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.
- 26. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: 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 QUESTIONNAIRE IRANSACTION 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 A 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 CLEAN FILL."
- 27. 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.
- 28. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR

E THE POTENTIAL GE, HANDLING, BICIDES, C PLAN SHALL TMENT OF	CONVERTED TO PE OR CONVERSION C DISTURBED AREAS	Erman DF The 5, SUC	IENT POST CC E BMPS SHALI H REMOVAL/C	NSTRUC L BE ST/ CONVERSI	TION STORMWA ABILIZED IMMET IONS ARE TO I	TER MANAGEME DIATELY. IN OF BE DONE ONLY	ENT BMPS. AREAS DISTURBED DU RDER TO ENSURE RAPID REVEGET/ DURING THE GERMINATING SEASC	IRING REMOVAL ATION OF IN.
	29. UPON COMPLETION THE OWNER AND/	OR OF	PERATOR SHA	LL CONT	ACT THE LOCA	AND PERMANE	INT STABILIZATION OF ALL DISTOR ON DISTRICT TO SCHEDULE A FINA	BED AREAS, L INSPECTION.
AW MULCH IF	F. SOIL LIMITATIONS & RE	<u>Esolu'</u>	<u>TIONS</u>					
	SOIL USE LIMITATI REPORT MAY BE F DURING CONSTRUC	ons a Found Ction.	ND POTENTIA IN APPENDIX	l resol ( b. no	UTIONS ARE LI GEOLOGIC OR	ISTED IN TABLE SOIL CONDITION	: 1. A WEB SOIL SURVEY SOIL RE IS ARE ANTICIPATED TO CAUSE P	Source Ollution
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RBANCE, DN. THIS PLAN	S Syi	Soil mbol	Soil Description	Slope (%)	Hydrologic Soil Group	Limitations	Potential Resolutions	
OT SITE AT ALL	-		•			Depth to saturated zone	If saturated zone is encountered, properly dewater the soils using a pumped water filter bag or other approved dewatering techniques.	
NGES FOR	C	лв	Clarksburg silt	3 to 8	C/D	Dusty	When dusty soils are encountered, ensure that bare soils are covered, and consider tillage and dust control agents.	
e III "Water T of						Unstable excavation	When excavation walls are unstable, the contractor shall implement proper excavation techniques in accordance with all	
						wans	applicable OSHA standards and	

regulations

In areas of steep slopes, the

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I THE PLAN VATION DISTRICT					Slope Depth to	excavation techniques in accordance with all applicable OSHA standards and regulations If saturated zone is encountered, properly dewater the soils using
STAGE OF THE IENCE IN ANY STAGE OR PHASE IE DISTURBANCE	CIC	Clarksburg silt	8 to 15	C/D	Dusty	approved dewatering techniques. When dusty soils are encountered ensure that bare soils are covered and consider tillage and dust control agents.
IPLETED SO THAT					Unstable excavation walls	When excavation walls are unstable, the contractor shall implement proper excavation techniques in accordance with all applicable OSHA standards and regulations
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	Soil	Soil	Slope	Hydrologic Seil Crewn	T local de all anno	Detertial Developtions
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ASE OF AN ECTED FROM					Depth to saturated zone	properly dewater the soils using a pumped water filter bag or other approved dewatering techniques.
KE ACTION TO NCREASED STOCKPILES OF 1 THE		Dormant silt			Too Clayey	When clayey soil is encountered, the contractor shall implement proper excavation techniques in accordance with all applicable OSHA standards and regulations
RBANCE	DoB	loam	3 to 8	D	Dusty	When dusty soils are encountered ensure that bare soils are covered and consider tillage and dust control agents.
ON THE PLAN. RUCTION OF					Unstable excavation walls	When excavation walls are unstable, the contractor shall implement proper excavation techniques in accordance with al applicable OSHA standards and regulations.
) EROSION TICES TO CAL					Slope	In areas of steep slopes, the contractor shall implement prope excavation techniques in accordance with all applicable OSHA standards and regulations
PUMPED WATER					Depth to saturated zone	If saturated zone is encountered, properly dewater the soils using a pumped water filter bag or other approved dewatering techniques.
CUT SLOPES IN	DoC			D	Too Clayey	When clayey soil is encountered, the contractor shall implement proper excavation techniques in accordance with all applicable OSHA standards and regulations
IENTLY DISTRICT OR DEP.					Dusty	When dusty soils are encountere ensure that bare soils are covered and consider tillage and dust
DNVERTED TO						control agents. When excavation walls are

G. STABILIZATION SPECIFICATIONS

1. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.

Unstable

walls

excavation

- PERMANENT STABILIZATION IS DEFINED AS 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.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED ARÈÁS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
- 4. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES, 6 TO 12 INCHES ON COMPACTED SOILS, PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF
- 5. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET. OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
- 6. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- 7. AN EROSION CONTROL BLANKET, OR OTHER APPROVED MEANS OF STABILIZATION, SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.
- H. <u>TEMPORARY CONTROLS</u>
- A COMBINATION OF TEMPORARY EROSION CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION. SEE THE DRAWINGS FOR SPECIFIC LOCATIONS OF CONTROL MEASURES. FOLLOWING ARE PURPOSES, APPLICABILITY, INSTALLATION AND MAINTENANCE DETAIL REFERENCES FOR SPECIFIC CONTROL MEASURES. . COMPOST FILTER SOCK / SILT BARRIER
- THIS IS A PRIMARY CONTROL MEASURE USED AT VARIOUS LOCATIONS WITHIN THE LIMIT OF DISTURBANCE, AS WELL AS THE PRIMARY PERIMETER CONTROL. SEE THE DETAILS ON THE DRAWINGS FOR INSTALLATION AND MAINTENANCE GUIDELINES. THE CONTRACTOR HAS THE OPTION TO USE TRADITIONAL FILTER FABRIC FENCE. SEE APPENDIX C FOR DESIGN CALCULATIONS.
- 2. WEIGHTED SEDIMENT FILTER TUBE THIS IS A PRIMARY CONTROL MEASURE USED IN PROPOSED SWALES TO FILTER SEDIMENT-LADEN RUNOFF. THE TUBES ARE STABILIZED WITH METAL T—POSTS TO PROTECT AGAINST DISPLACEMENT. FILTER TUBES WERE SIZED TO BE FITHER 12" OR 18", DEPENDING ON THE MAXIMUM RECOMMENDED SLOPE AND SLOPE LENGTH PER THE PADEP EROSION AND

- SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. SEE DETAIL ON THE DRAWINGS.
- 3. ROCK / STABILIZED CONSTRUCTION ENTRANCE THIS SHALL BE UTILIZED AT THE POINT OF CONSTRUCTION VEHICLE ACCESS ONTO EXISTING PAVING TO ELIMINATE MUD ONTO PAVEMENT. SEE THE DRAWINGS FOR LOCATION. SEE THE DETAIL ON THE DRAWINGS FOR INSTALLATION AND MAINTENANCE PROCEDURES.
- 4. FACILITY FOR PUMPED WATER THIS SHALL BE UTILIZED IF WATER ACCUMULATES IN TRENCHES, TO A DEPTH THAT CAN BE PUMPED. SEE A DETAIL ON THE DRAWING. NO SPECIFIC LOCATION FOR THIS MEASURE IS SHOWN ON THE DRAWINGS SINCE IT WILL BE USED ON AN AS-NEEDED BASIS
- 5. EROSION CONTROL MATTING SWALES SHALL BE LINED WITH PERMANENT EROSION CONTROL MATTING TO STABILIZE SOILS IN THE TEMPORARY AND PERMANENT CONDITION. SEE APPENDIX C FOR SOIL STABILITY CALCULATIONS. THE MATTING SHALL BE CAPABLE OF INCREASING SOIL AND VEGETATED SHEAR RESISTANCE TO AT LEAST THE DESIGN SHEAR STRESS. THE MATTING SHALL BE CAPABLE OF ADDROVED FOLLWALENT. BE NORTH AMERICAN GREEN ERONET P300 OR APPROVED EQUIVALENT.
- 6. TEMPORARY SEEDING THE CONTRACTOR SHALL IMMEDIATELY TEMPORARILY STABILIZE ANY ROUGH GRADED AREA, TOPSOIL STOCKPILE OR UNUSED EXCAVATED FILL MATERIAL THAT WILL BE LEFT IDLE FOR LESS THAN 1 YEAR. THE GRASS WILL PROVIDE INTERIM PROTECTION AGAINST THE IMPACT OF PRECIPITATION, RUNNING WATER AND WIND. PERMANENTLY SEED ANY AREA THAT WILL BE IDLE FOR MORE THAN 1 YEAR. TEMPORARY SEEDING SCHEDULE IS AS FOLLOWS:

TEMPORARY STABILIZATION SPECIFICATIONS					
	MATERIAL	RATE			
LIMESTONE:	PULVERIZED AGRICULTURAL LIMESTONE	410 LBS. / 1000 S.Y			
FERTILIZER:	10-10-10 OR EQUIV. FERTILIZER	100 LBS. / 1000 S.Y			
SEEDING	PENNDOT FORMULA E ANNUAL RYE GRASS				
SEEDING.	PURE LIVE SEED: 88.2%	10 LBS. / 1000 S.Y.			
	APPLICATION DATE: MARCH 15 TO OCTOBER 15				
MULCH:	HAY OR STRAW	1240 LBS. / 1000 S.			

WHEN SEEDING IS NOT POSSIBLE DUE TO THE TIME OF YEAR OR OTHER LIMITATIONS, DISTURBED AREA SHALL BE MULCHED WITH STRAWBALES AT THE RATE ABOVE. AN EROSION CONTROL BLANKET OR RIPRAP MUST BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, AND ALL AREAS WITH CONCENTRATED FLOWS. MATTING CAN BE NORTH AMERICAN GREEN 'S75' OR APPROVED EQUIVALENT. MAINTENANCE PROCEDURE:

- a. MAINTAIN A MINIMUM 70% SOIL SURFACE COVERAGE WITH GRASS AND/OR MULCH.
- b. IF A WASHOUT, SLOPE FAILURE OR SIMILAR DISTURBANCE OCCURS, CORRECT DRAINAGE PROBLEM IF NECESSARY, THEN REAPPLY SOIL TO THE PROPER GRADE, AND REAPPLY SOIL AMENDMENTS, SEED AND MULCH.

### I. PERMANENT CONTROLS

- THE FOLLOWING MEASURES SHALL PROVIDE LONG-TERM SOIL PROTECTION.
- 1. PERMANENT SEEDING ALL DISTURBED SOIL NOT TO BE COVERED WITH IMPERVIOUS SURFACES OR LANDSCAPING MULCH SHALL BI PERMANENTLY SEEDED TO PROVIDE PROTECTION AGAINST THE IMPACT OF PRECIPITATION, RUNNING WATER AND WIND. PERMANENT SEEDING SCHEDULE FOR THE GENERAL PROJECT AREA IS AS FOLLOWS:

	PERMANENT STABILIZATION SPECIFICA	TIONS
MATERIAL		RATE
TOPSOIL PL	ACEMENT DEPTH:	6" MINIMUM
LIMESTONE	PULVERIZED AGRICULTURAL LIMESTONE	800 LBS / 1000 SY
FERTILIZER	10-20-20 OR EQUIV. FERTILIZER	140 LBS / 1000 SY
FERTILIZER	38-0-0 UREAFORM OR EQUIV. FERTILIZER	50 LBS / 1000 SY
SEEDING	PENNDOT FORMULA B	21 LBS / 1000 SY
	PERENNIAL RYEGRASS (20% BY WEIGHT)	
	PURE LIVE SEED: 88.2%	4 LBS / 1000 SY
	CREEPING RED FESCUE (30% BY WEIGHT)	
	PURE LIVE SEED: 83.3%	6 LBS / 1000 SY
	BLUEGRASS MIXTURE (50% BY WEIGHT)	
	PURE LIVE SEED: 78.4%	11 LBS / 1000 SY
	APPLICATION DATE: MARCH 15 TO JUNE	
	1 AUGUST 1 TO SEPTEMBER 15	
MULCH	HAY OR STRAW	1240 LBS / 1000 SY

AGENTS TOXIC TO PLANT OR ANIMAL LIFE, UNIFORMLY APPLIED AT THE RATE OF 31 GALLONS PER 1,000 SQUARE YARDS. SYNTHETIC BINDERS (CHEMICAL BINDERS) MAY BE USED PER MANUFACTURER'S RECOMMENDATION PROVIDED THEY ARE NON-TOXIC TO PLANT AND ANIMAL SPECIES.

A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED PRIOR TO SEEDING.

- 2. PROTECTIVE LINING FOR CHANNEL A PERMANENT CHANNEL UTILIZED AS A BYPASS FOR OFF-SITE FLOW WILL BE LINED WITH A PERMANENT MATTING TO FNSURE SOIL STABILITY. THE DESIGN FLOW OF THE CHANNEL IS THE 10-YEAR FLOW FROM WASHINGTON FLEMENTAR PROPERTY. THIS FLOW RATE HAS BEEN IDENTIFIED AS 18.75 CFS PER THE APPROVED STORMWATER MANAGEMENT REPORT FOR THE PROJECT SITE, AS CALCULATED BY ELA GROUP. THE NARRATIVE OF THIS REPORT, DOCUMENTING THIS FLOW RATE, HAS BEEN PROVIDED IN APPENDIX C. MATTING CAN BE NORTH AMERICAN GREEN P300' OR APPROVED EQUIVALENT. THE REQUIRED MINIMUM SPECIFICATIONS FOR THE PROTECTIVE LINER, IN ADDITION TO CHANNEL STABILITY AND CAPACITY CALCULATIONS, MAY ALSO BE FOUND IN APPENDIX C.
- J. RECOMMENDED STAGING OF EARTHMOVING ACTIVITIES ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING BY THE LOCAL CONSERVATION DISTRICT.
- 1. A LICENSED PROFESSIONAL OR THEIR DESIGNEE SHALL BE PRESENT ONSITE DURING CONSTRUCTION TO OBSERVE AND DOCUMENT THE FOLLOWING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE PADEP OR LOCAL CONSERVATION DISTRICT INFILTRATION BASIN 1 (IB-1)
  - INFILTRATION BASIN 2 (IB-2) INFILTRATION BASIN 3 (IB-3)
- 2. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES. INCLUDING CLEARING AND GRUBBING. THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, 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 PRE-CONSTRUCTION MEETING.
- 3. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES. PA ONE CALL SYSTEM INCORPORATED SITE IDENTIFICATION NO. 2014-0940349.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION AND IMPLEMENTATION OF AN EROSION AND SEDIMENT CONTROL PLAN FOR THE SITE, AS WELL AS AREAS ASSOCIATED WITH MATERIALS REMOVED FROM THIS PROJECT.
- 5. THE CONTRACTOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE WESTMORELAND COUNTY CONSERVATION DISTRICT.
- 6. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS, THE CONTRACTOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE WESTMORELAND COUNTY CONSERVATION
- 7. CLEARLY FIELD MARK THE LIMITS OF DISTURBANCE AND FENCE OFF THE OUTER LIMITS OF THE BOTTOM OF THE INFILTRATION TRENCHES AND BIORETENTION FACILITY AS SHOWN ON THE PLAN.
- 8. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED TO ONLY THOSE AREAS DESCRIBED IN EACH STAGE.
- 9. EROSION AND SEDIMENT CONTROL DEVICES/BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THE DEVICES. ONLY LIMITED DISTURBANCE SHALL BE PERMITTED TO PROVIDE ACCESS TO INSTALL THOSE DEVICES.
- 10. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
- 11. THE CONTRACTOR SHALL INSTALL ROCK CONSTRUCTION ENTRANCES 1 & 2, AND SILT FENCE/SOCK, AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.
- 12. GRADE IN BYPASS SWALE AND STABILIZE IN ACCORDANCE WITH STABILIZATION SPECIFICATIONS, BEGIN INSTALLING STORM SEWER SYSTEM AND IMMEDIATELY INSTALL INLET PROTECTION UPON INSTALLATION OF EACH NEW INLET.
- 13. BEGIN DEMOLITION OF EXISTING BUILDINGS. CONCURRENTLY, BEGIN EXCAVATION AND REMOVAL OF EXISTING PAVED AREAS. BEGIN ROUGH GRADING SITE.

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14.	BEGIN CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES. INSTALL NEW STORMWATER INLETS, PIPE AND UNDERGROUND UTILITIES. INSTALL STONE AGGREGATE BASE IN ROADWAY AND NEW PARKING AREAS TO STABILIZE.			
15.	CONCURRENTLY, BEGIN CONSTRUCTION OF NEW BUILDINGS.			EVISION
16.	BEGIN CONSTRUCTION OF STORMWATER BMPS. PERMANENT BMPS SHALL BE INSTALLED PER THE POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) PLAN. REFER TO THE PCSM PLAN SET AND REPORT. UPON EXCAVATION OF EACH			2 2 2
17.	COMPLETE CONSTRUCTION OF NEW BUILDINGS. INSTALL PAVEMENT BASE COURSE AND WEARING COURSE.			
18.	UPON FINAL SITE STABILIZATION (MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE GROUND COVER) CONTACT THE			
	DEVICE/BMPS SHALL BE THOROUGHLY CLEANED OF LATENT SEDIMENT, INCLUDING THE STORM SEDIMENT CONTROL DEVICE/BMPS SHALL BE THOROUGHLY CLEANED OF LATENT SEDIMENT, INCLUDING THE STORM SEWER SYSTEM. ANY ADDAS DURING THE DEVICE AND OF LATENT SEDIMENT, INCLUDING THE STORM SEWER SYSTEM. ANY			
	IMMEDIATELY. COMPOST FILTER SOCKS, INCLUDING THOSE AS PART OF THE DEVICES/BMP STALL BE REDRESSED AND STABILIZED BE REMOVED UPON FINAL APPROVAL. STAKES ARE TO BE REMOVED, FILTER SOCK MESH IS TO BE CUT OPEN AND MULCH IS TO BE SPREAD OVER VEGETATED AREAS AS A SOUL SUPPLEMENT.			DATE
<u>MAI</u>	NTENANCE OF EROSION & SEDIMENT CONTROL BMPS			NO.
1.	UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL 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 CLEANOUT REPAIR	THIS DRAWING	AND INFORMATION	IS AN
	REPLACEMENT, RE-GRADING, RESEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.	COPIED OR USE WRITTEN AUTHOR ENGINEERING, INC.	D IN ANY WAY W IZATION OF RAUDE THIS DRAWING I	THOUT INBUSH NOT FOR
2.	SEDIMENT CLEANED FROM THE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE GRADED ON SITE AND STABILIZED.	ALL DIMENSION	S MUST BE VERIFIED	BY
	THAT HAVE BECOME STRIPPED OF VEGETATION SHALL BE RE-ESTABLISHED WITH APPROPRIATE STABILIZATION MATERIALS IN A TIMELY FASHION. THIS PROCEDURE SHALL BE REPEATED AFTER EVERY MEASURABLE STORM EVENT UNTIL NO SIGNS OF EROSION ARE EVIDENT. AT MONTHLY INTERVALS, THEREAFTER, INSPECTIONS AND NECESSARY CLEANING WILL BE	NOTIFIED OF AN PROCEEDING	Y DISCREPANCIES BE WITH CONSTRUCTION	GINEER FORE N.
	DONE. THE AREA AROUND THE OUTLET STRUCTURE MUST REMAIN CLEAR OF BRUSH AND OTHER VEGETATIVE DEBRIS. ALL LOCAL REGULATIONS SHALL BE COMPLIED WITH. MAINTENANCE OF ALL STORMWATER/EROSION CONTROL/BMP FACILITIES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR UNTIL THE SOIL FOR THE ENTIRE PROJECT HAS	<u>DO NOT 1</u>	<u>SCALE DRAWINGS.</u>	
3.	BEEN PROPERLY STABILIZED, MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE GROUND COVER. A LOG SHOWING THE DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE		• •	
	THAT THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO THE LOCAL CONSERVATION DISTRICT OR OTHER REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.			
4.	SEE THE CONSTRUCTION DETAILS AND SEEDING SPECIFICATIONS FOR MAINTENANCE PROCEDURES FOR THE VARIOUS CONTROL MEASURES.			•
5.	SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER OR SURFACE WATER.			
6.	MAINTENANCE OF PERMANENT STORMWATER MANAGEMENT, BMP, EROSION AND SEDIMENT CONTROL, AND DRAINAGE			
	SHALL NOT BE RESPONSIBLE FOR ANY PERMANENT STORMWATER MANAGEMENT, BMP, EROSION AND SEDIMENT CONTROL, AND DRAINAGE FACILITIES THAT ARE NOT DEDICATED TO THE MUNICIPALITY. HOWEVER, THE MUNICIPALITY WILL HAVE THE RIGHT TO ACCESS THE PROPERTY AT ANY TIME TO INSPECT THE PERMANENT STORWWATER MANAGEMENT BMP, FROSION	PROFESSIC I HEREBY CERTIFY TH PREPARED OR APPR	NAL CERTIFICATION HAT THESE DOCUM OVED BY ME AND	<u>I</u> ENTS WERE THAT I AM
	AND SEDIMENT CONTROL, AND DRAINAGE FACILITIES.	A DULY LICENSED UNDER THE L/ PEI	AWS OF THE STATI	NGINEER E OF
		EXPIRATION DA	TE:	
	5' (MIN )			
	ETE 6" THICK AASHTO #57*			
	5' (MIN.)			
	DISSIPATER <u>SECTION THROUGH SPILLWAY</u> COMPACTED - 1' 1'			
	$\begin{array}{c} - \\ \hline \\$			PA
				<u> </u>
	INSIDE FACE EMBANK. SPILLWAY CLEAN			
	TRAPZ1Z2HhTOPCRESTOUTBOTTOMSPILLWAYNO.(FT)(FT)(FT)(FT)ELEV.ELEV.ELEV.ELEV.ELEV.NO.(FT)(FT)(FT)(FT)ETESCECOEBESW	<b>∑</b> ິ		COL
	1 2.0 2.0 2.5 1.00 1012.50 1012.00 1011.00 1010.00 5.00   2 2.0 2.0 1.34 1012.00 1011.34 1010.00 5.00			QN
	EMBANKMENT OUTLET SHALL BE COMPOSED ENTIRELY OF ROCK ABOVE CLEAN OUT ELEVATION (COE); MAIN BODY R-3 OR LARGER. R-4 TO BE USED FOR DRAINAGE AREAS GREATER THAN			LELA
	S.U ACRES, INSIDE FACE AASHID # 57 STONE OR SMALLER. AP 6 THICK LATER OF COMPOSI, COMPOST SOCK, OR CLEAN SAND SHALL BE INSTALLED ON TOP OF THE AASHTO #57 STONE AND SECURELY ANCHORED IN HQ WATERSHEDS. 24" DIAMETER COMPOST SOCK(S) SHALL BE USED IN DACE OF EUTER FARPIC AND AASHTO #57 STONE IN EV WATERSHEDS			MOF
	FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE			EST
	EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 9". THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 6".	A O		3
	UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.	╞┥		d I
	ALL SEDIMENT TRAFS SHALL BE INSPECTED AT LEAST WEEKT AND AFTER EACH RONOFF EVENT. ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.			NSF
	A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE			TOW
	STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.	Ö		ב
	CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS.			■ ∃IJd
	DISPLACED RIPRAP WITHIN THE SPILLWAY OR OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.			M M M M
	ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. TO ASSIST IN REMOVING SEDIMENT, WHICH MAY BE SATURATED, A DEVICE SUCH AS IS SHOWN IN STANDARD		T NO.: 1	5006
	CONSTRUCTION DETAIL #7-18 MAY BE USED TO DEWATER THE SEDIMENT PRIOR TO ITS REMOVAL. EMBANKMENT SEDIMENT TRAP	DESIGNED E	BY:	DPG
	NOT TO SCALE	DRAWN BY:		BKK
		DATE:	07/27/	2018
		SCALE:		IOWN
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SHEET 5 OF 5





# **POST CONSTRUCTION STORMWATER MANAGEMENT PLAN** FOR



## JULY 27, 2018



LOCATION MAP SCALE: 1"=2000'

SHEET INDEX						
DRAWING NUMBER	DESCRIPTION					
PCSM-1	COVER SHEET					
PCSM-2	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN					
PCSM-3	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS AND NOTES					



Know what's **below** Call before you dig.

PENNSYLVANIA ACT 38(1991)/187(1996) REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH. PA ONE CALL SERIAL NO: 20160360536

NO.	DATE	REVISION			BY	APRV'D
PRO	JECT NO	0.: 15006	DRAV	WING N	NUMBER	
DESI	GNED B	Y: DPG				
DRA	WN BY:	вкк	<b>C</b>	S	M.	-1
СНК'	D BY:	DPG		<u> </u>		
DATE	:	07/27/2018 SH	IEET	1 (	OF 3	





AMENDED SOILS TO CONSIST OF 60% SAND/PEA GRAVEL, 20% TOPSOIL, AND 20% ORGANIC MATTER BY VOLUME TO ACHIEVE AN INFILTRATION RATE OF 3"/HR. PROVIDE TEST RESULTS PRIOR TO INSTALLATION.





**OBESERVATION WELL / CLEANOUT** 

NOT TO SCALE





#### GENERAL NOTES:

- THE PURPOSE OF THIS POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) PLAN IS TO PROTECT THE FUNCTION OF FLOODPLAINS, WETLANDS AND WOODED AREAS. PROTECT NATIVE PLANT COMMUNITIES, IMPROVE NATURAL DRAINAGEWAYS FROM EROSION, MINIMIZE THERMAL IMPACTS TO WATERS OF THE COMMONWEALTH, AND TO DISCONNECT IMPERVIOUS SURFACES BY DIRECTING RUNOFF TO PERVIOUS AREAS WHEREVER POSSIBLE. THE PLAN WILL PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM. THE PLAN WILL MINIMIZE IMPERVIOUS AREAS AND MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION. THE PLAN WILL MINIMIZE LAND CLEARING AND GRADING AND MINIMIZE SOIL COMPACTION.
- THE DESIGN INTENT OF THIS PCSM PLAN IS TO PROTECT THE HEALTH, SAFETY AND WELFARE OF PEOPLE AND PROPERTY, AND TO MEET THE WATER QUALITY GOALS OF THE TOWNSHIP OF HEMPFIELD ORDINANCES CHAPTER 72 - STORMWATER MANAGEMENT AND LAND DISTURBANCE ACTIVITY (TOWNSHIP ORDINANCE) AND PA CODE TITLE 25, CHAPTER 102 (CHAPTER 102). THIS REPORT IDENTIFIES MEASURES TAKEN TO MEET THIS INTENT.
- 3. THE TOPOGRAPHIC SURVEY IS BASED ON A FIELD SURVEY PERFORMED BY RAUDENBUSH ENGINEERING, INC. IN FEBRUARY AND MAY OF 2016.
- 4. THE PROPERTY BOUNDARY DEPICTED ON THIS PLAN IS BASED ON A FINAL SUBDIVISION PLAN FOR THE LANDS OF COMMONWEALTH OF PENNSYLVANIA PREPARED BY NAVTECH, INC. DATED APRIL 21, 2014 AND RECORDED IN THE WESTMORELAND COUNTY RECORDER OF DEEDS OFFICE ON OCTOBER 9, 2014 TO INSTRUMENT NUMBER 20140090032897. RAUDENBUSH ENGINEERING, INC. DID NOT PERFORM A BOUNDARY SURVEY.
- A PA ONE-CALL SYSTEM NOTIFICATION HAS BEEN MADE, SERIAL NO. 20160360536. THE CONTRACTOR SHALL CONTACT PA ONE-CALL BEFORE ANY CONSTRUCTION BEGINS.

STAGING OF EARTHMOVING ACTIVITIES FOR CONSTRUCTION OF PCSM BMPS: GENERAL NOTES:

- 1. A LICENSED PROFESSIONAL OR THEIR DESIGNEE SHALL BE PRESENT ONSITE DURING CONSTRUCTION TO OBSERVE AND DOCUMENT THE FOLLOWING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE PADEP OR LOCAL COUNTY CONSERVATION DISTRICT: INFILTRATION BASIN 1 (IB-1)
- INFILTRATION BASIN 2 (IB-2 INFILTRATION BASIN 3 (IB-3)
- 2. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- 3. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SPECIFIC SEQUENCING. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING BY THE LOCAL COUNTY CONSERVATION DISTRICT.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RATES SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY SEEDING VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING VEGETATIVE STABILIZATION SPECIFICATIONS.
- 7. ALL BUILDING MATERIALS AND WASTE 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 WASTE OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE
- 8. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
- SPECIFIC STAGING OF EARTHMOVING ACTIVITIES:

STAGE 1. SEE THE APPROVED EROSION & SEDIMENT CONTROL PLAN FOR STAGING OF EARTHMOVING ACTIVITIES DURING CONSTRUCTION.

- STAGE 2. ALL CONSTRUCTION MUST BE COMPLETE, TEMPORARY E&S BMPS MUST BE PROPERLY REMOVED AND ALL DISTURBED AREAS MUST BE PERMANENTLY STABILIZED, IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE LISTED ON THE APPROVED E&S CONTROL PLAN, BEFORE FINAL CONSTRUCTION OF THE PCSM INFILTRATION BASINS (BASINS) MAY BEGIN.
- STAGE 3. BEFORE PROCEEDING WITH THIS CONSTRUCTION SEQUENCE, THE BOTTOM OF THE SEDIMENT TRAP / INFILTRATION BASINS MUST BE DRY AND PRECIPITATION SHOULD NOT BE ANTICIPATED WITHIN THE ESTIMATED TIMEFRAME FOR COMPLETION OF THE PCSM CONSTRUCTION SEQUENCE. IF PONDING WATER IS PRESENT IN THE SEDIMENT TRAP, THE CONTRACTOR MAY USE A PUMPED WATER FILTER BAG, IN ACCORDANCE WITH GENERAL NOTE 8 ABOVE, TO EXPEDITE THE DRYING PROCESS.
- STAGE 4. DURING THE FOLLOWING STAGES OF CONSTRUCTION, CAUTION MUST BE TAKEN TO AVOID EXCESSIVE SOIL COMPACTION OF THE BASIN BOTTOM. THE USE OF RELATIVELY LIGHT TRACK MOUNTED CONSTRUCTION EQUIPMENT AND AVOIDING THE USE OF LARGE HEAVY TIRE MOUNTED CONSTRUCTION EQUIPMENT IS RECOMMENDED.
- STAGE 5. REMOVE THE SEDIMENT TRAP EMBANKMENTS AND CONSTRUCT THE BASINS AS INDICATED ON THE PLAN AND ASSOCIATED DETAILS. REMOVE AND PROPERLY DISPOSE OF ANY ACCUMULATED SEDIMENT AND OVER EXCAVATE THE BOTTOM OF THE BASINS TO ALLOW FOR SOIL AMENDMENTS AS INDICATED BY THE BASIN DETAIL. PLACE THE AMENDED SOILS IN THE BOTTOM OF THE BASIN AND PERMANENTLY STABILIZE ALL DISTURBED AREAS AS INDICATED ON THE PLAN.
- STAGE 6. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO THE REMOVAL OF ANY REMAINING E&S CONTROL BMP'S.
- STAGE 7. TEMPORARY E&S CONTROL BMPS CAN ONLY BE REMOVED WHEN THE WATERSHED DRAINING TO THE BMP IS PERMANENTLY STABILIZED AND REMOVAL IS AUTHORIZED BY THE LOCAL COUNTY CONSERVATION DISTRICT. PERMANENTLY STABILIZED IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY CAPABLE OF RESISTING ACCELERATED SURFACE EROSION, AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. UPON AUTHORIZATION BY THE LOCAL COUNTY CONSERVATION DISTRICT, PROPERLY REMOVE AND/OR DEMOLISH IN PLACE ALL REMAINING E&S CONTROL BMPS, INCLUDING TEMPORARY CONTROLS PLACED ON THE PERMANENT BASIN OUTLET STRUCTURE, AND IMMEDIATELY PERMANENTLY STABILIZE ALL DISTURBED AREAS.
- STAGE 8. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY E&S CONTROL BMPS, INSTALLATION OF ALL PERMANENT PCSM BMPS, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OPERATORS SHALL CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION.

STORMWATER BMP OPERATION AND MAINTENANCE PLAN:

SHALL BE RE-SEEDED IMMEDIATELY.

THE STORMWATER BEST MANAGEMENT PRACTICES (BMPS) AS SHOWN ON THIS PLAN SHALL BE MAINTAINED TO FUNCTION AS DESIGNED AS PER THE PROCEDURES DESCRIBED BELOW. FACILITIES SHALL BE OWNED AND MAINTAINED BY THE OWNER(S) OF THE LOT ON WHICH THE FACILITIES ARE LOCATED.

THE FACILITIES ARE TO REMAIN PERMANENT AND CAN ONLY BE REMOVED OR ALTERED AFTER APPROVAL BY ONE OR MORE OF THE FOLLOWING ENTITIES WHICH MAY HAVE JURISDICTION: HEMPFIELD TOWNSHIP, WESTMORELAND CONSERVATION DISTRICT, AND/OR PADEP.

FOR ANY STRUCTURAL FACILITY (PIPE, INLET), IT MUST BE REPAIRED OR REPLACED IF DAMAGED MORE THAN SUPERFICIALLY, IN A WAY THAT IS A SAFETY HAZARD, IF STRUCTURALLY UNSOUND, OR IF NOT SUBSTANTIALLY PERFORMING AS IT IS INTENDED PER THE ORIGINAL DESIGN. THE RESPONSIBLE OWNERS SHALL KEEP A RECORD OF ANY REPAIRED OR REPLACED FACILITY, INCLUDING COSTS, DATES, MATERIALS REMOVED, MATERIALS PLACED, AND THE CONTRACTOR(S) INFORMATION.

INSPECTION AND MAINTENANCE TASKS FOR INFILTRATION BASINS & OUTLET CONTROL STRUCTURES:

- BASINS TO BE INSPECTED ANNUALLY FOR THE FIRST FIVE (5) YEARS AND ONCE EVERY THREE (3) YEARS THEREAFTER. • BASINS TO BE INSPECTED DURING OR IMMEDIATELY AFTER THE CESSATION OF A 10-YEAR OR GREATER STORM.
- ALL PIPES AND OUTLET CONTROL STRUCTURES TO BE KEPT FREE OF DEBRIS OR OTHER OBSTRUCTION AND IN ORIGINAL DESIGN CONDITION. • SCOURED AREAS OR AREAS WHERE VEGETATION HAS NOT BEEN SUCCESSFULLY ESTABLISHED

