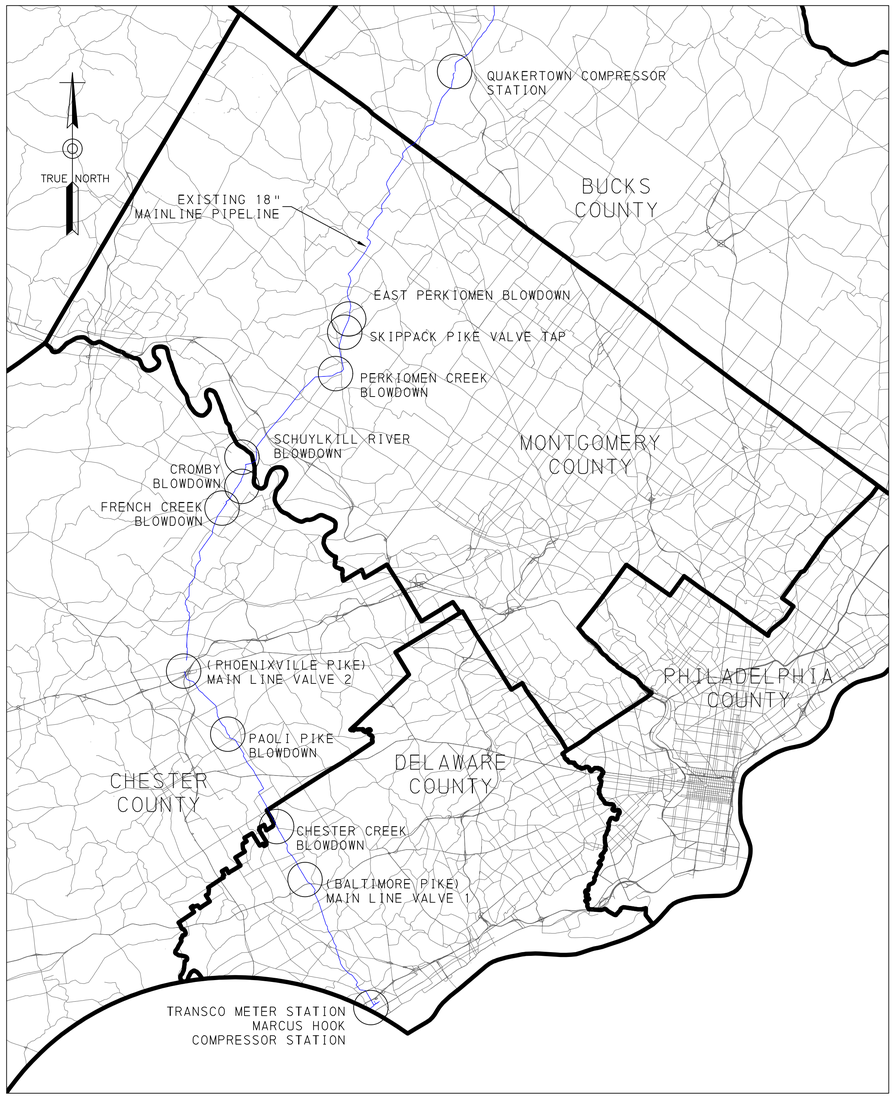
ADELPHIA GATEWAY PROJECT

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND EROSION AND SEDIMENTATION CONTROL PLAN

Chapter 105 GP111518315 and GP081518308

SITE LOCATION MAP

NOT TO SCALE



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E-3	EXISTING CONDITIONS & DEMOLITION PLAN QUAKERTOWN COMPRESSOR STATION	BUCKS
E-4	EXISTING CONDITIONS & DEMOLITION PLAN QUAKERTOWN COMPRESSOR STATION 1 OF 2	BUCKS
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ES-19	EROSION & SEDIMENTATION CONTROL SCHUYLKILL RIVER BLOWDOWN 1 OF 2	CHESTER
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ES-21	EROSION & SEDIMENTATION CONTROL PERKIOMEN CREEK BLOWDOWN	MONTGOMERY
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ES-24	EROSION & SEDIMENTATION CONTROL QUAKERTOWN COMPRESSOR STATION	BUCKS
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NOTES

1. NATURAL GAS PIPELINE AND EASEMENT LOCATION PROVIDED BY INTERSTATE ENERGY COMPANY.
2. MARCUS HOOK, TRANCSO, AND QUAKERTOWN FIELD SURVEYS WERE CONDUCTED BY JMT DURING MARCH - APRIL 2019. ADDITIONALLY, JMT COMPLETED SURVEY FOR PERKIOMEN CREEK, SKIPPACK PIKE, EAST PERKIOMEN, FRENCH CREEK, CROMBY, & SCHUYLKILL RIVER SITES IN MARCH - APRIL 2020. ALL REMAINING SURVEYS BASED ON LIDAR AND FIELD SURVEYS PERFORMED BY HUNT, GUILLOT & ASSOCIATES (HGA) MAY 2018. REFER TO HGA DRAWINGS FOR BENCHMARK AND DATUM INFORMATION.
3. PURSUANT TO THE REQUIREMENT OF PENNSYLVANIA ACT 199 (2004) AS AMENDED, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AS 1-800-242-1776, AT LEAST THREE (3) WORKING DAYS PRIOR TO EXCAVATION. EXISTING UNDERGROUND UTILITIES DEPICTED ON THIS PLAN REFLECT THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES THROUGH THE PENNSYLVANIA ONE-CALL-SYSTEM.

PROJECT GENERAL NOTES

1. INFORMATION PROVIDED WITHIN THIS PLAN BY JMT AND THE PROFESSIONAL ENGINEER (P.E.) THAT SIGNED AND SEALED THIS PLAN INCLUDES DESIGN OF EROSION AND SEDIMENTATION CONTROL (E&S) BEST MANAGEMENT PRACTICES (BMPS) FOR THE PURPOSE OF PREVENTING AND/OR MINIMIZING EROSION AND SEDIMENTATION DURING CONSTRUCTION OF THIS PROJECT. THIS PLAN HAS BEEN PREPARED FOR THE DESIGN OF E&S BMPS ONLY AND HAS BEEN PREPARED IN RELIANCE ON SOURCE DATA AS PROVIDED AND DESCRIBED IN NOTES. TOPOGRAPHY, CONTOURS, AND ALL IDENTIFICATION, CHARACTERIZATION, AND/OR LOCATION OF SITE FEATURES (E.G. STRUCTURES, ROADWAYS, ETC.) ARE ASSUMED TO BE ACCURATE. CONTRACTOR TO FIELD VERIFY ALL DATA.
2. SOURCE DATA:
   - SOILS MAPPING OBTAINED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS) SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE.
   - WATERSHED MAPPING OBTAINED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCES
   - TOPOGRAPHIC MAPPING FOR THE REMAINDER OF THE SITES OBTAINED FROM PENNSYLVANIA MAPMAKER (PAMAP) PROGRAM LIGHT DETECTION AND RANGING PROCESSING/CONTOUR ENHANCEMENT LINES OF PENNSYLVANIA (2006). BASE MAPPING FOR THESE SITES OBTAINED FROM AERIAL IMAGING.
   - IDENTIFICATION, CHARACTERIZATION, AND/OR DELINEATION OF ENVIRONMENTAL FEATURES (E.G. WETLANDS, WATERBODIES, AND RIVER/STREAMBANK) PERFORMED BY NV5, INC.
     - 100-YR FLOODPLAIN OBTAINED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD SERVICE CENTER DATABASE.
   - ADELPHIA GATEWAY, LLC, 18" MAINLINE VALVES FOR CHESTER, DELAWARE, AND MONTGOMERY COUNTIES PREPARED BY HGA, LLC.

ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE082407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
3	REVISED TO ADDRESS DEP COMMENTS	ATH	05/18/20	SMM	05/18/20
2	REVISED TO ADDRESS DEP COMMENTS	ATH	03/24/20	SMM	03/24/20
1	REVISED TO ADDRESS DEP COMMENTS	ATH	11/15/19	SMM	11/15/19

REVISION

DRAWN BY	INTL	DATE
DESIGNED BY	RY	05/18/20
CHECKED BY	AH	05/18/20
APPROVED BY	SMM	05/18/20
JOB NO.	18-00672-006	
PLOT SCALE	AS NOTED	
MODEL ID		

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ADELPHIA GATEWAY PROJECT
COVER/INDEX SHEET

SCALE	DRAWING NUMBER	REV
AS NOTED	T-1	

STANDARD E&S NOTES:

1. 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.

2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

3. 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.

4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE CONSERVATION DISTRICT OR BY THE PADEP PRIOR TO IMPLEMENTATION.

5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

7. 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.

8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH 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.

9. 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 OF ENVIRONMENTAL PROTECTION.

10. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE RESPECTIVE COUNTY CONSERVATION AGENCY FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

11. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.

12. 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 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 PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

13. 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.

14. 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.

15. SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY, OR AS NEEDED THROUGHOUT THE WORKDAY, OR AS DIRECTED BY THE LOCAL MUNICIPALITY OR THE CONSERVATION DISTRICT AND DISPOSED AS A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEPT INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.

16. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.

17. 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 TOPSOIL.

18. 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.

19. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

20. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

21. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

22. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

23. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

24. 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.

25. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

26. 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.

27. 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.

28. 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 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.

29. CONCRETE WASH WATER SHALL BE HANDLED PER CHAPTER 3 OF THE PA DEP EROSION AND SEDIMENT CONTROL POLLUTION CONTROL MANUAL. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATER OR GROUNDWATER SYSTEMS.

30. ANY DAMAGE THAT OCCURS IN WHOLE OR 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 CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.

31. 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.

32. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORM WATER 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.

33. 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 TO SCHEDULE A FINAL INSPECTION.

34. WASTE MATERIALS, SCRAP OR EXCESS CONSTRUCTION MATERIALS SHALL BE COLLECTED, STORED, AND DISPOSED OF IN ACCORDANCE WITH THE SOLID WASTE MANAGEMENT ACT (35 P.S. §§ 6018.101-6018.1003), THE MUNICIPAL WASTE PLANNING, RECYCLING AND WASTE REDUCTION ACT (53 P.S. §§ 4000.101-4000.1904), THE CLEAN STREAMS LAW (35 P.S. §§ 691.1-691.1001) AND RELATED RULES AND REGULATIONS. (TITLE 25, CHAPTER 105, SECTION 46a).

35. WETLAND BOUNDARIES WITH ACTIVE WORK AREAS WILL BE CLEARLY MARKED/FLAGGED PRIOR TO THE COMMENCEMENT OF EARTH DISTURBANCE ACTIVITIES.

36. SUBSOIL EXCAVATED AS PART OF THE PROJECT AND SEDIMENT REMOVED FROM E&S BMPS WILL BE COMBINED AND USED TO BACKFILL THE TRENCH. TYPICALLY, EXCESS SOIL IS MINIMAL AND WILL EITHER BE USED TO CREATE A CROWN OVER THE TRENCH TO COUNTERACT SETTLING OR WILL BE SPREAD EVENLY ACROSS THE RIGHT-OF-WAY (R.O.W.). WHICH WILL HAVE A NEGLIGIBLE EFFECT ON THE OVERALL GRADE. ALSO, ANY EXCESS EXCAVATED MATERIALS OR MATERIALS UNSUITABLE FOR BACKFILL WILL BE DISPOSED OF IN ACCORDANCE WITH THE APPLICABLE REGULATIONS.

37. IT IS ACCEPTABLE FOR AN E&S BMP TO BE TEMPORARILY REMOVED FROM AN EQUIPMENT CROSSING PATHWAY DURING PERIODS OF ACTIVE CONSTRUCTION. ANY E&S BMP THAT IS TEMPORARILY REMOVED MUST BE PROPERLY REINSTALLED PRIOR TO THE END OF EACH WORK DAY.

38. TEMPORARY CROSSINGS WILL BE PERMANENTLY REMOVED FROM WETLANDS AFTER SITE RESTORATION.

39. TIMBER MAT WIDTHS AT TEMPORARY CROSSINGS MUST BE SUFFICIENT TO SUPPORT CONTRACTOR EQUIPMENT AND/OR AS APPROVED BY THE ENVIRONMENTAL INSPECTOR (EI). LENGTH OF TEMPORARY CROSSING IS DEPENDENT ON THE WETLAND CROSSING LENGTH FROM START TO END.

40. A GENERAL EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE FOR EARTH DISTURBING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAS BEEN DEVELOPED AND INCLUDED IN THE PLAN DRAWINGS. IT SHOULD BE NOTED THAT CONSTRUCTION ACTIVITIES MAY OCCUR SIMULTANEOUSLY; HOWEVER, DEVIATION FROM THE SEQUENCE MUST BE APPROVED BY THE LOCAL CONSERVATION DISTRICT AND/OR REGIONAL OFFICE OF THE DEP PRIOR TO IMPLEMENTATION.

41. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE CONSTRUCTION SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

42. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN THE FOLLOWING MANNER: THE ENVIRONMENTAL INSPECTOR (EI) WILL WORK WITH THE CONTRACTOR TO MOVE THE WATER FROM THE SPRING/SEEP TO A VEGETATED AREA OF THE R.O.W. AN ENERGY DISSIPATION DEVICE WILL BE INSTALLED TO ENSURE THE FLOW DOES NOT CREATE R.O.W. EROSION. IN THE EVENT THE SURROUNDING VEGETATION IS NOT SUFFICIENT TO MANAGE THE FLOW WITHOUT CREATING AN EROSION SITUATION, THE ENVIRONMENTAL INSPECTOR (EI) WILL COORDINATE WITH THE CONTRACTOR, AND THE LOCAL CONSERVATION DISTRICT AND/OR REGIONAL OFFICE OF THE DEP TO PREVENT EROSION AND SEDIMENTATION. IF THE SPRING/SEEP DISCHARGE MUST TRAVERSE THE R.O.W., THEN CULVERTS, TIMBER MATS, OR FRENCH DRAINS WILL BE INSTALLED TO CARRY THE WATER ACROSS THE R.O.W. TO PREVENT EROSION, WHILE AT THE SAME TIME ALLOWING CONSTRUCTION IN THE AREA TO CONTINUE. ADDITIONAL BMPS WILL BE INSTALLED AROUND THE SPRING/SEEP TO PROTECT BOTH THE ON R.O.W. AND OFF R.O.W. AREAS FROM EROSION AND SEDIMENTATION. THE EI MAY REQUIRE THE CONTRACTOR TO INSTALL TIMBER MATS AT SPRING/SEEP AREAS (NON WETLANDS) TO MINIMIZE IMPACTS TO THE R.O.W. DURING SITE RESTORATION OF THE R.O.W., THE SPRING/SEEP PATH WILL BE RESTORED TO THE EXTENT POSSIBLE TO PREVENT EROSION AND SEDIMENTATION ON/OFF THE R.O.W., AND APPROPRIATE PERMANENT BMPS WILL BE INSTALLED.

43. ALL EXISTING ROADWAY DITCH AND STREAM CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL ROCKS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIAL/WASTES.

44. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE ROADWAY DITCH OR STREAM CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.

45. EROSION CONTROL BLANKETING SHALL BE IN STALLED ON ALL SLOPES 3H:1V OR STEEPER. WITHIN 100 FEET OF A SURFACE WATER, AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS. TIMBER MATS IN WETLANDS WILL BE CLEANED IN SUCH A MANNER AS TO MINIMIZE (PREVENT) THE INTRODUCTION OF UPLAND SOILS INTO THE WETLAND.

46. STREET SWEEPING: REASONABLE METHODS WHICH ARE SANCTIONED BY THE DEP AS ALTERNATIVES TO INSTALLATION OF TIRE WASH STATIONS ON PUBLIC ROAD ACCESS POINTS FOR GATHERING PIPELINE PROJECTS IN HQ/EV OR SILTATION IMPAIRED WATERSHEDS INCLUDE:

- USE OF A VACUUM TRUCK SWEEPER OR SWEEPER WITH A CATCH BIN ATTACHMENT FOR PAVED SURFACE PUBLIC ROADS;
- FOR DIRT OR GRAVEL SURFACE PUBLIC ROADS, RIGOROUS MANUAL REMOVAL OF MUD/DIRT FROM VEHICLE/EQUIPMENT TIRES PRIOR TO EXITING CONSTRUCTION SITE; SUPPLEMENTED BY IMMEDIATE REMOVAL, BY MANUAL 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.

FREQUENCY OF MECHANICAL AND/OR MANUAL CONTROLS WILL BE DEPENDENT UPON CONSTRUCTION TRAFFIC INTENSITY. WEATHER CONDITIONS, AND SOIL MOISTURE CONDITIONS. AT A MINIMUM FOR PAVED ROADS, 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 ROADWAY AT THE END OF THE WORK DAY AND PRIOR TO ANY FORECASTED RAIN EVENT. THE REQUIREMENT IS TO NOT INTRODUCE SEDIMENT LOAD FROM CONSTRUCTION TRAFFIC ONTO PUBLIC ROAD SURFACES AND INTO ROAD DITCHES WHICH WILL FLOW INTO THE HQ/EV OR SILTATION IMPAIRED WATER RESOURCES THAT ARE THE SUBJECT OF THE INCREASED PROTECTION.

47. PROJECT SITES WHICH WILL USE OR STORE FUELS, CHEMICALS, SOLVENTS, OR OTHER HAZARDOUS MATERIALS MUST HAVE A PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN ON SITE. THIS PLAN MUST BE AVAILABLE ON-SITE AND PROVIDED TO DEP UPON REQUEST.

48. A GENERAL E&S CONSTRUCTION SEQUENCE FOR EARTH DISTURBING ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF A PIPELINE MODIFICATION HAS BEEN DEVELOPED AND INCLUDED IN THE PLAN SET. IT SHOULD BE NOTED THAT CONSTRUCTION ACTIVITIES MAY OCCUR SIMULTANEOUSLY; HOWEVER, DEVIATIONS FROM THE SEQUENCE MUST BE APPROVED BY THE LOCAL CONSERVATION DISTRICT AND/OR REGIONAL OFFICE OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP).

49. E&S BMP DETAILS AND CONSTRUCTION SPECIFICATIONS CAN BE FOUND ON THE TYPICAL DETAILS PROVIDED ON THE DETAIL DRAWING SHEETS.

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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE082407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
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REVISION

DRAWN BY	INTL	DATE
DESIGNED BY	RY	05/18/20
CHECKED BY	AH	05/18/20
APPROVED BY	SMM	05/18/20
JOB NO.	18-00672-006	
PLOT SCALE	N/A	
MODEL ID		

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EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 1 OF 7

SCALE	DRAWING NUMBER	REV
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50. ADDITIONAL INFORMATION ON WATERBODY AND WETLAND CROSSING METHODS ARE ALSO DESCRIBED IN THE "WETLAND CROSSING CONSTRUCTION SEQUENCE AND GENERAL NOTES"

51. THE OWNER WILL ASSIGN AN ENVIRONMENTAL INSPECTOR (EI) TO THE PROJECT. THE ROLE OF THE ENVIRONMENTAL INSPECTOR (EI) WILL BE TO ENSURE COMPLIANCE WITH THE MITIGATION AND CONSTRUCTION PROCEDURES IDENTIFIED IN THE FERC APPLICATION; FEDERAL, STATE, AND LOCAL PERMITS ISSUED FOR THE PROJECT; AND SITE SPECIFIC CONSTRUCTION PLANS. THE EI WILL BE REQUIRED TO ADHERE TO THE SITE SPECIFIC CONSTRUCTION PLANS AND THE E&S PLAN, INCLUDING NOTES, DESCRIBED HEREIN.

52. AT LEAST SEVEN (7) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR CONTRACTOR SHALL NOTIFY A REPRESENTATIVE FROM THE RESPECTIVE LOCAL CONSERVATION DISTRICTS AND REGIONAL OFFICE OF THE PADEP.

53. A COPY OF THE APPROVED E&S PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

54. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776.

55. MAKE ALL PROPER NOTIFICATION REQUIREMENTS TO LOCAL STATE, OR FEDERAL AGENCIES PRIOR TO THE START OF CONSTRUCTION ACTIVITIES OR PRIOR TO SPECIFIC CONSTRUCTION ACTIVITIES, AS APPROPRIATE.

56. PRIOR TO COMMENCEMENT OF ANY EARTH DISTURBANCE ACTIVITY INCLUDING CLEARING AND GRUBBING, CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WATERBODIES/WETLANDS, RIPARIAN FOREST BUFFER BOUNDARIES (IF ANY), THE 50-FOOT VEGETATIVE BUFFER AT HQ WATERBODIES, THE LIMITS OF CLEARING, PIPELINE CENTERLINE WITHIN THE LIMITS OF DISTURBANCE, KNOWN CROSSINGS OF FOREIGN LINES AND UTILITIES, CONSTRUCTION ENTRANCES, TREES THAT ARE TO BE CONSERVED WITHIN THE PROJECT AREA, CULTURAL RESOURCE SITES, AND RARE SPECIES HABITAT, AS APPLICABLE. AVOIDANCE AREAS WILL BE MARKED WITH APPROPRIATE FENCING, SIGNAGE, AND/OR FLAGGING BASED ON ENVIRONMENTAL SURVEYS, LANDOWNER REQUIREMENTS, AND PERMIT CONDITIONS.

57. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM PUBLIC ROADS AT THE DIRECTION OF THE ENVIRONMENTAL INSPECTOR (EI) BASED ON SITE CONDITIONS AND CLEARING ACCESS NEEDS.

58. PERFORM ALL OTHER NECESSARY IMPROVEMENTS TO ACCESS ROADS WHERE NECESSARY INCLUDING, BUT NOT LIMITED TO MINIMAL GRADING, ADDING STONE, AND PROTECTION OF EXISTING CULVERTS.

59. INSTALL COMPOST FILTER SOCK, SEDIMENT BARRIERS, OR OTHER COUNTY CONSERVATION DISTRICT APPROVED SEDIMENT BARRIERS/BMPS PRIOR TO CLEARING AN AREA.

60. IMPLEMENT INITIAL LAND CLEARING ALONG PIPELINE IN ACCORDANCE WITH STREAM/WETLAND CONSTRUCTION SEQUENCES OUTLINED BELOW.

61. INSTALL BMPS FOR TEMPORARY EQUIPMENT CROSSINGS OF WETLANDS AND WATERBODIES, AS NECESSARY. THE SPECIFIC TYPE OF TEMPORARY EQUIPMENT STREAM CROSSING IS IDENTIFIED ON THE SITE SPECIFIC DRAWINGS BUT CAN BE ALTERED BASED ON FIELD CONDITIONS. FOR WETLAND CROSSINGS, INSTALL WETLAND/TIMBER MATS PER TYPICAL DETAILS TO PROVIDE A TRAVEL LANE. THE PLACEMENT OF COMPOST FILTER SOCK MAY NEED TO BE TEMPORARILY ADJUSTED DUE TO THE TEMPORARY EQUIPMENT CROSSING. SEE THE "STREAM CROSSING CONSTRUCTION SEQUENCE AND GENERAL NOTES" AND "WETLAND CROSSING CONSTRUCTION SEQUENCE AND GENERAL NOTES."

62, IMPLEMENT INITIAL LAND GRUBBING AND, WHERE NECESSARY, GRADING. TREES WILL NOT BE REMOVED/GRUBBED WITHIN 50 FEET OF STREAMS UNTIL CONSTRUCTION THROUGH THAT AREA.

63. IF TRENCH EXCAVATION CANNOT COMMENCE WITHIN FOUR (4) DAYS OF INITIAL LAND GRUBBING, TEMPORARY STABILIZATION MEASURES WILL BE IMPLEMENTED IMMEDIATELY.

64. COMMENCE TRENCH EXCAVATION. IF TRENCH EXCAVATION TAKES PLACE IN AN AGRICULTURAL WETLAND, OR RESIDENTIAL AREA, THEN SEGREGATION OF TOPSOIL AND SUBSOIL WILL BE PERFORMED. INSTALL STREAM CROSSINGS AND WETLAND AS THEY ARE ENCOUNTERED. IMMEDIATELY AFTER COMPLETION OF THE STREAM CROSSING, STABILIZE DISTURBED STREAM BANKS.

65. IF WATER IS ENCOUNTERED DURING EXCAVATION, INSTALL A PUMPED WATER FILTER BAG AND COMPOST FILTER SOCKS IN PREPARATION OF DEWATERING ACTIVITIES. THE LOCATION OF THE DEWATERING DEVICE AND/OR STRUCTURE AND SECONDARY STRUCTURES WILL BE AS SHOWN ON DRAWINGS OR AS DETERMINED BY THE EI BASED UPON ACTUAL FIELD CONDITIONS. EFFORTS WILL BE MADE TO PLACE THE DEWATERING FILTERS INTO A WELL-VEGETATED UPLAND AREA GREATER THAN 50 FEET FROM ANY WETLAND OR WATERBODY; THESE AREAS WILL NOT BE CLEARED OR GRUBBED. THE ENVIRONMENTAL INSPECTOR (EI) WILL MONITOR TRENCHES HOLDING WATER AND BEGIN DEWATERING ACTIVITIES AS NEEDED SO THAT SEDIMENT LADEN WATER IS NOT DISCHARGED DIRECTLY FROM THE EXCAVATED TRENCH TO RESOURCES. THE EI WILL MONITOR WEATHER REPORTS, ADVISE THE CONTRACTOR IN INSTANCES WHERE PRECIPITATION EVENTS MAY CAUSE EXCESSIVE TRENCH WATER, AND COORDINATE CREWS AS APPROPRIATE TO HANDLE TRENCH WATER.

66. BACKFILL TRENCH WITH SUITABLE EXCAVATED MATERIAL IN AREAS WHERE TOPSOIL HAS BEEN SEGREGATED, THE SUBSOIL WILL BE REPLACED FIRST, AND THE TOPSOIL WILL BE SPREAD OVER THE AREA FROM WHICH IT WAS REMOVED. FINAL GRADES SHALL BE AS CLOSE AS PRACTICABLE TO THE PRE-CONSTRUCTION CONTOURS, UNLESS PROPOSED CONTOURS ARE SHOWN ON THE PLAN.

67. IF FINAL GRADING CANNOT BE COMPLETED WITHIN TEN (10) DAYS OF BACKFILL AND PERMANENT SEEDING WITHIN FOUR (4) DAYS OF FINAL GRADING, TEMPORARY STABILIZATION MEASURES WILL BE IMPLEMENTED IMMEDIATELY.

68. THE LENGTH OF TIME TO START, COMPLETE, AND STABILIZE BLOWDOWN AND MAIN LINE VALVE SITES SHOULD NOT EXCEED 30 DAYS.

CONTRACTOR RESPONSIBILITIES:

1. THE CONTRACTOR, ALTHOUGH UNKNOWN AT TIME OF PLAN ISSUANCE, WILL BE IDENTIFIED BY THE OWNER AT CONTRACT BID. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, PROCEDURES. SEQUENCING, AND TECHNIQUES INVOLVED WITH ALL CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING AND PRESERVING THE INTEGRITY OF ALL ENVIRONMENTAL FEATURES AND/OR ALL AREAS THAT ARE NOT SUPPOSED TO BE DISTURBED (E.G. WORK OUTSIDE OF THE LIMITS OF DISTURBANCE). PRIOR TO ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THAT CONDITIONS MATCH THOSE DEPICTED ON THE PLANS AND NOTIFYING OWNER AND/OR DESIGNATED REPRESENTATIVE OF ANY DISCREPANCIES (E.G. TOPOGRAPHY, DELINEATED WETLANDS/WATERBODIES, ACCESS ROADS, AND POINTS OF INGRESS AND EGRESS.)

2. CONTRACTOR SHALL REFER TO PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, TECHNICAL GUIDANCE NUMBER 363-2134-008 FOR E&S SPECIFICATIONS.

3. UTILITIES SHOWN ARE TAKEN FROM PUBLIC RECORD. THE CONTRACTOR MUST VERIFY THE EXACT LOCATION AND DEPTH. NOT ALL UTILITIES ARE SHOWN, OR HAVE BEEN VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL PUBLIC AND PRIVATE UTILITIES. NV5 ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF UNDERGROUND UTILITIES DEPICTED ON THESE DRAWINGS. ANY REQUEST FOR ADDITIONAL UNDERGROUND UTILITIES INFORMATION SHOULD BE DIRECTED TO THE RESPECTIVE UTILITY COMPANY.

4. IN THE CASE OF CONFLICT BETWEEN ANY PART OF THESE PLANS, THE SPECIFICATIONS, OR THE CONTRACT DOCUMENTS, OR IF DISCREPANCIES ARE DISCOVERED THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY BY PHONE AND IN WRITING AND SHALL REQUEST A WRITTEN DETERMINATION PRIOR TO PROCEEDING WITH THE WORK INVOLVED. IF THE WORK PROCEEDS WITH THE KNOWLEDGE OF A DISCREPANCY AND WITHOUT A WRITTEN DETERMINATION, SUCH WORK WILL NOT BE CONSIDERED IN COMPLIANCE WITH THESE PLANS, THE SPECIFICATIONS, AND CONTRACT DOCUMENTS.

5. ALL WORK WITHIN A RIGHT OF WAY (R.O.W.) OR EASEMENT SHALL BE DONE IN ACCORDANCE WITH THE AGENCY OR ENTITY HAVING JURISDICTION OR OWNERSHIP OF THAT RO.W. OR EASEMENT. CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, INSPECTIONS, ETC. FROM THE AGENCY OF ENTITY HAVING JURISDICTION FOR THIS WORK.

6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) TO PROTECT EXISTING STRUCTURES AND FACILITIES, INCLUDING UTILITIES, NOT DESIGNATED FOR DEMOLITION OR REPLACEMENT/UPGRADE SUCH AS BUILDINGS, PIPES, INLETS, MANHOLES, CABLES/WIRES, CONDUITS, APRONS, PAVEMENTS, BRIDGES, UTILITIES, TREES, ETC. FROM DAMAGE WHICH MIGHT OCCUR DURING CONSTRUCTION. EXTREME CARE SHALL BE TAKEN IN UNDERCUT AREAS. THE CONTRACTOR(S) SHALL REPLACE OR REPAIR, AS DIRECTED BY THE OWNER OR THE ENGINEER, ANY STRUCTURES OR FACILITIES DAMAGED DURING CONSTRUCTION/THE LIFE OF THE CONTRACT. NO PAYMENT WILL BE MADE FOR REPLACEMENT OR REPAIR OF DAMAGED ITEMS.

7. THE CONTRACTOR(S) ARE RESPONSIBLE FOR THE PROTECTION OF EXISTING TREES TO REMAIN. NO EQUIPMENT, MATERIALS, SOIL, OR OTHER DEBRIS SHALL BE STORED UNDER THE DRIPLINE OF THE TREE. IF TREES ARE DAMAGED, ITEMS ARE STORED, OR AREA UNDER THE DRIP IS DISTURBED, OTHER THAN DISTURBANCE CALLED FOR ON THE PLANS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CORRECT THE DAMAGE TO THE SATISFACTION OF THE DESIGN PROFESSIONAL.

8. THE CONTRACTOR(S) SHALL KEEP ALL PUBLIC AREAS CLEAN OF DEBRIS ON A DAILY BASIS.

9. THE CONTRACTOR(S) SHALL COMPLY WITH THE CLEAN FILL REQUIREMENTS AS NOTED ON THIS DRAWING AND PER APPLICABLE LOCAL, STATE, AND/OR FEDERAL REGULATIONS.

10. ALL MATERIALS DEMOLISHED OR REMOVED FROM THE PROJECT SITE, UNLESS IDENTIFIED TO BE SAVED OR SALVAGED, SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER FEDERAL, STATE AND LOCAL REGULATIONS. ALL COSTS OF HAULING, DISPOSAL, AND TIPPING FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR AS PART OF THE BASE BID.

11. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO THE START OF CONSTRUCTION AND REPORT ANY DISCREPANCIES AND INTERFERENCES TO THE OWNER OR ENGINEER PRIOR TO THE START OF CONSTRUCTION.

12. PLAN MADE AS PER INSTRUCTIONS OF NEW JERSEY RESOURCES.

13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MEET ALL OF THE REQUIREMENTS OF FEDERAL, STATE, AND LOCAL AUTHORITIES, HEALTH DEPARTMENT, AND UTILITY COMPANIES IN ADDITION TO THE INFORMATION STATED IN THESE PLANS, THE SPECIFICATIONS, AND THE CONTRACT DOCUMENTS.

14. DO NOT SCALE DRAWINGS. ALL MEASUREMENTS SHALL BE TAKEN FROM DIMENSIONS SHOWN ON THE DRAWING. WHERE DIMENSIONS BETWEEN SMALL SCALE AND DETAIL DRAWINGS DIFFER, NOTIFY THE ENGINEER FOR CLARIFICATION. FIELD VERIFY ALL DIMENSIONS AND NOTIFY DESIGN PROFESSIONAL OF ANY DISCREPANCIES.

15. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT ARE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE O.S.H.A. (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION) STANDARDS.

16. THE CONTRACTOR(S) SHALL OBTAIN ALL PERMITS RELATING TO THIS PROJECT PRIOR TO CONSTRUCTION.

17. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE APPROPRIATE CONTRACT DOCUMENTS (PLANS, SPECIFICATIONS, AND OTHER INFORMATION) TO THE VARIOUS SUBCONTRACTORS AND TRADES IN ORDER FOR THEM TO COORDINATE AND PERFORM THE WORK.

18. UPON COMPLAINT OR SITE INSPECTION, THE DEPARTMENT OR CONSERVATION DISTRICT MAY REQUIRE THAT THE PCSM PLAN BE SUBMITTED FOR REVIEW AND APPROVAL TO ENSURE COMPLIANCE WITH THIS CHAPTER. CONTRACTOR/ OWNER TO PROVIDE THE NECESSARY DOCUMENTATION FOR REVIEW.

ADDITIONAL NOTES FOR CHESTER COUNTY PROJECTS:

1. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. 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 POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. §102.4(5)(XIV).

2. ALL PUMPING OF SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS. (PLEASE SHOW A DETAIL OF THIS FACILITY ON THE DETAIL SHEET.). §102.4(5)(XIV).

3. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL. §102.4(5)(XIV).

4. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE. §102.4(5)(XI).

5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. ADDITIONALLY, THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, AND HAS BEEN APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT AND/OR LOCAL MUNICIPALITY IN COMPLIANCE WITH CHAPTER 102 RULES & REGULATIONS, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL OFF SITE SOIL AND/OR ROCK SPOIL AND/OR BORROW AREAS. §102.4(5)(XIV).

ADDITIONAL NOTES FOR BUCKS COUNTY PROJECTS:

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.

2. THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

4. THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOILS AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.

5. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER AN UNDISTURBED AREA.

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

7. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.

8. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.

9. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.

10. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.

11. DISTURBED AREAS THAT ARE AT A FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

12. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% VEGETATIVE 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.

13. UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).

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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE082407

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EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 2 OF 7

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14. AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGED RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.

15. UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND REONETTING 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.

16. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.

17. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

CLEAN FILL AND SITE CONTAMINATION:

1. WITH THE EXCEPTION OF SITES ENROLLED IN DEP'S LAND RECYCLING AND ENVIRONMENTAL REMEDIATION STANDARDS (ACT 2) PROGRAM, ALL FILL MATERIAL EXCAVATED AND USED ON-SITE, IMPORTED TO THE SITE, AND EXPORTED FROM THE SITE, MUST MEET THE DEFINITION OF CLEAN FILL, AS DEFINED AS "UNCONTAMINATED, NON-WATER SOLUBLE, NONDECOMPOSABLE INERT SOLID MATERIALS. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED." REGULATED FILL MAY ONLY BE USED ON ACT 2 SITES, IN ACCORDANCE WITH STANDARDS ESTABLISHED BY THAT PROGRAM.

2. THE PERMITTEE SHALL CONDUCT ENVIRONMENTAL DUE DILIGENCE TO VERIFY THAT FILL EXCAVATED ON-SITE THAT IS USED TO ESTABLISH FINAL GRADE, FILL IMPORTED TO THE PROJECT SITE, AND FILL EXPORTED FROM THE PROJECT SITE IS CONSIDERED CLEAN FILL, AS DEFINED AS "UNCONTAMINATED, NONWATER SOLUBLE, NONDEPOSABLE INERT SOLID MATERIAL. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED." IF DUE DILIGENCE RESULTS IN EVIDENCE OF A RELEASE, AS DEFINED IN DEP'S MANAGEMENT OF FILL POLICY (285-2182-773), THAT HAS AFFECTED THE FILL MATERIAL, THE PERMITTEE SHALL TEST THE MATERIAL TO DETERMINE WHETHER THE MATERIALS QUALIFIES AS CLEAN FILL, AND FORM FP-001 (CERTIFICATION OF CLEAN FILL) MUST BE COMPLETED, RETAINED BY THE PERMITTEE OR THE PROPERTY OWNER ON-SITE, AND BE MADE AVAILABLE TO DEP/CCD UPON REQUEST.

3. IN THE EVENT THAT FILL EXCAVATED ON-SITE THAT IS USED TO ESTABLISH FINAL GRADE, FILL IMPORTED TO THE PROJECT SITE, OR FILL EXPORTED FROM THE PROJECT SITE IS FOUND TO BE REGULATED FILL DURING THE TERM OF PERMIT COVERAGE, WHERE THE UTILIZATION OF THE REGULATED FILL WILL REQUIRE A PERMIT FROM DEP'S WASTE MANAGEMENT PROGRAM, EARTH DISTURBANCE ACTIVITIES SHALL CEASE UNTIL SUCH TIME THAT THE PERMITTEE OBTAINS ALL NECESSARY PERMITS OR APPROVALS FROM DEP.

4. IF THE PERMITTEE BECOMES AWARE DURING EARTH DISTURBANCE ACTIVITIES THAT SOILS IN THE AREA OF EARTH DISTURBANCE CONTAIN CONCENTRATIONS OF REGULATED SUBSTANCES EXCEEDING THE RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS FOR SOIL IN 25 PA. CODE CHAPTER 250, THE PERMITTEE SHALL NOTIFY DEP AND CEASE EARTH DISTURBANCE ACTIVITIES IN AREAS OF KNOWN SOIL CONTAMINATION UNTIL AUTHORIZED TO RESUME BY DEP.

5. IF THE PERMITTEE ENCOUNTERS GROUNDWATER DURING EXCAVATION THAT THE PERMITTEE KNOWS OR HAS REASON TO BELIEVE IS CONTAMINATED BY ONE OR MORE POLLUTANTS AT CONCENTRATIONS EXCEEDING WATER QUALITY CRITERIA CONTAINED IN 25 PA. CODE CHAPTER 93, THE PERMITTEE SHALL NOTIFY DEP. CONTAMINATED GROUNDWATER MAY NOT BE PUMPED OR OTHERWISE DIVERTED TO SURFACE WATERS UNLESS SPECIFICALLY AUTHORIZED BY DEP.

SOIL LIMITATIONS			SOIL LIMITATIONS															
SYMBOL	SOIL NAME	SLOPE (%)	CUTBANKS CAVE	CORROSIVE TO CONCRETE/STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	HYDRIC/HYDRIC INCLUSIONS	LOW STRENGTH/ LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK - SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
AmB	AMWELL SILT LOAM	3-8%	X	C\S		X			X	X	X	X		X	X			X
Bo	BOWMANSVILLE-KNAUERS SILT LOAMS		X	C\S			X	X	X	X	X	X	X	X	X		X	X
ByB2	BUTLERTOWN SILT LOAM	3-8%	X	C\S		X		X	X	X	X	X		X				
Gb	GIBRALTAR SILT LOAM		X	C\S					X	X		X						
GeB	GLENELG CHANNERY LOAM	3-8%	X	S		X				X				X				
Ha	HATBORO SILT LOAM		X	C\S			X	X	X	X	X	X	X	X	X		X	X
MaC	MANOR LOAM	8-15%	X	C\S		X				X		X	X	X				
OtA	OTHELLO SILT LOAMS	0-2%	X	C\S				X	X	X	X	X		X	X		X	X
PeB	PENN SILT LOAM	3-8%	X	C\S		X				X		X		X				
PeC	PENN SILT LOAM	8-15%	X	C\S		X			X	X		X		X				
PeD	PENN SILT LOAM	15-25%	X	C\S		X				X		X	X	X				
ReA	READINGTON SILT LOAM	0-3%	X	C\S				X	X	X	X			X				
ReB	READINGTON SILT LOAM	3-8%	X	C\S		X		X		X	X			X				
Rt	ROWLAND SILT LOAM, TERRACE		X	C\S			X		X	X	X	X						
UdB	UDORTHENTS, SHALE AND SANDSTONE		X	C\S	X	X			X	X		X		X				
Up	URBAN LAND																	
UrB	URBAN LAND	0-8%																
UrxB	URBAN LAND-PENN COMPLEXE	0-8%	X		X	X			X	X				X				
We	WEHADKEE SILT LOAM		X	S			X	X		X	X	X	X	X	X			X

SOIL RESOLUTIONS:

LOW PH: FOR SOILS WITH PH VALUES LOWER THAN 5.5, ADJUST PH BY APPLYING LIME AT RATES DETERMINED BY SOILS TESTING IN COMBINTATION WITH SELECTING AND PLANTING VEGETATIVE SPECIES TOLERANT OF ACIDIC CONDITIONS.

LOW FERTILITY: INCORPORATE ADDITIONAL SOIL NUTRIENTS AT RATES DETERMINED BY SOIL TESTING IN COMBINATION WITH SELECTING AND PLANTING VEGETATIVE SPECIES TOLERANT OF LOW FERTILITY CONDITIONS.

DRY OR DROUGHTY SOILS: SELECT VEGETATIVE SPECIES TOLERANT OF DRY CONDITIONS.

HIGH WATER TABEL OR WET/HYDRIC SOILS PRONE TO FLOODING: SELECT VEGETATIVE SPECIES TOLERANT OF WET CONDITIONS. IF BUILDINGS ARE LOCATED IN SAID SOILS PROVIDE SUMP PUMPS WITH BACK FLOW PREVENTION DEVICES IN BASEMENTS. IF HIGH WATER IS ENCOUNTERED DURING CONSTRUCTION. CONTRACTOR SHALL UTILIZE PUMP WATER FILTRATION METHODS (I.E. DIRT BAG). FOR BASIN CONSTRUCTION IN AREAS OF WET SOILS, PREFERABLY RELOVATE STORMWATER AND SEDIMENT BASINS AND FACILITIES IN SOILS MORE CONDUCIVE TO SUCH FACILITIES. IF FACILITIES CAN NOT BE RELOCATED, PROVIDE PUMP WATER SEDIMENT REMOVAL FACILITIES FOR BASIN CONSTRUCTION, LIMIT RESERVOIR DEPTHS, AND LIMIT CLEAN OUT ELEVATIONS.

ERODIBLE SOILS TYPES: FOR SOILS WITH ERODIBILITY VALUES HIGHER THAN 0.36, CONTRACTOR SHOULD INCORPORATE SOME OR ALL OF THE FOLLOWING STABILIZATION TECHNIQUES. IN PROPOSED CHANNELS, PROVIDE TEMPORARY LININGS UNTIL GRASS IS ESTABLISHED, PROVIDE PERMANENT GRASS REINFORCED LININGS THROUGH THE INSTALLATION OF SOD OR SELECT PERMANENT LININGS OTHER THAN GRASSES. DECREASE CHANNEL GRADES AND INCREASE CHANNEL WIDTHS TO HELP REDUCE EROSION.

SOILS PRONE TO INSTABILITY PIPING AND SEEPING: IF STORMWATER OR SEDIMENT BASIN/TRAPS CAN NOT BE RELOCATED TO OTHER SOILS TYPES. LIMIT EMBANKMENT SLOPE STEEPNESS, PROVIDE CLAY EMBANKMENT CORES AND IMPORT OTHER SOILS FOR CONSTRUCTION OF EMBANKMENT FACILITIES AS NECESSARY.

SOILS UNSUITABLE FOR WINTER GRADING, PRONE TO FROST ACTION, OR DIFFICULT TO COMPACT: GRADING DURING PERIODS PRONE TO FROST SHOULD BE LIMITED. CONSTRUCTION OF STRUCTURAL EMBANKMENT SHOULD BE PERFORMED DURING THE PERIOD OF MAY TO OCTOBER IF FACILITIES CAN NOT BE RELOCATED TO AN AREA WITH MORE CONDUCIVE SOILS.

SOILS SUSCEPTIBLE TO SINKHOLE AND SOLUTION CHANNEL/CHAMBER FORMATION: LOCATE SEDIMENT BASINS, TRAPS AND STORMWATER MANAGEMENT DETENTION, RETENTION AND INFILTRATION FACILITIES IN AREAS DESIGNATED WITH SOILS MORE SUITABLE FOR SAID FACILITIES. IF THE FACILITIES CANNOT BE RELOCATED TO A MORE SUITABLE AREA, STANDING WATER DEPTHS AND RETENTION TIMES SHOULD BE LIMITED. IMPERMEABLE RESERVOIR LININGS SHOULD BE UTILIZED FOR WATER RETENTION FACILITIES, AND/OR STORMWATER DETENTION FACILITIES WITH EXTENSIVE HOLDING TIMES.

GEOLOGIC FORMATIONS

THERE ARE NO KNOWN GEOLOGIC FORMATIONS OR SOIL CONDITIONS IDENTIFIED AT THE SITE THAT HAVE A POTENTIAL TO CAUSE POLLUTION DURING CONSTRUCTION.

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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE082407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
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2	REVISED TO ADDRESS DEP COMMENTS	ATH	03/24/20	SMM	03/24/20
1	REVISED TO ADDRESS DEP COMMENTS	ATH	11/15/19	SMM	11/15/19

REVISION

DRAWN BY	INTL	DATE
DESIGNED BY	RY	05/18/20
CHECKED BY	AH	05/18/20
APPROVED BY	SMM	05/18/20
JOB NO.	18-00672-006	
PLOT SCALE	N/A	
MODEL ID		

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Philadelphia, PA 19103
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EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 3 OF 7

SCALE	DRAWING NUMBER	REV
N/A	ES-3	

MARCUS HOOK COMPRESSOR STATION E&S CONSTRUCTION SEQUENCE

1. AT LEAST SEVEN (7) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR CONTRACTOR SHALL NOTIFY A REPRESENTATIVE FROM THE RESPECTIVE LOCAL CONSERVATION DISTRICTS AND REGIONAL OFFICE OF THE PADEP.
2. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776.
3. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM PUBLIC ROADS AT THE DIRECTION OF THE ENVIRONMENTAL INSPECTOR (EI) BASED ON SITE CONDITIONS AND CLEARING ACCESS NEEDS.
4. INSTALL COMPOST FILTER SOCK, COMPOST FILTER SOCK TRAP, SEDIMENT BARRIERS, OR OTHER COUNTY CONSERVATION DISTRICT APPROVED SEDIMENT BARRIERS/BMPS PRIOR TO CLEARING AN AREA. ENSURE COMPOST FILTER SOCK TRAP IS INSTALLED TO PROTECT THE OUTLET STRUCTURE TOP OF GRATE.
5. INSTALL AND MAINTAIN PROPER E&S BMPS DURING CONSTRUCTION.
6. COMPLETE SITE GRADING, INSTALL PROPOSED DRAINAGE AND STABILIZE THE SOIL WITHIN THE LIMIT OF DISTURBANCE.
7. CONSTRUCT BUILDING, IMPERVIOUS PATHWAY AND PROPOSED SITE FEATURES OUTLINED ON THE DESIGN PLANS.
8. INSTALL THE MRC BMP DURING FINAL PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING VIA OVERLAND, INLETS, AND PIPES. DO NOT FINALIZE THE BMP EXCAVATION AND CONSTRUCTION UNTIL THE DRAINAGE AREA IS FULLY STABILIZED.
9. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO THE MRC BMP. EXCAVATE THE MRC BMP BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT THE SUBGRADE. INSTALL OUTLET CONTROL STRUCTURES, UNDERDRAIN PIPING WITH AGGREGATE ENVELOPE AND CLEANOUTS.
10. PLACE GEOTEXTILE, IMPERVIOUS LINER AND AGGREGATE IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION TO PREVENT ACCUMULATION OF DEBRIS OR SEDIMENT. PREVENT RUNOFF AND SEDIMENT FROM ENTERING THE STORAGE BED.
11. PLACE SOIL MEDIA GENTLY. DO NOT COMPACT SOIL MEDIA. THE PLACEMENT OF SOIL MEDIA SHOULD BE DONE FROM OUTSIDE THE BMP FOOTPRINT TO AVOID COMPACTION BY CONSTRUCTION EQUIPMENT. EQUIPMENT SHOULD NEVER DRIVE OVER PLACED SOIL MEDIA.
12. PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT. COMPLETE FINAL GRADING TO ACHIEVE PROPOSED BASIN DESIGN ELEVATIONS, LEAVING SPACE FOR TOPSOIL AS NEEDED.
13. SEED AND STABILIZE DISTURBED AREA, VEGETATE WITH NATIVE PLANTINGS.
14. MAINTAIN E&S BMPS UNTIL THE SITE IS FULLY STABILIZED.

TRANSCO METER STATION E&S CONSTRUCTION SEQUENCE

1. AT LEAST SEVEN (7) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR CONTRACTOR SHALL NOTIFY A REPRESENTATIVE FROM THE RESPECTIVE LOCAL CONSERVATION DISTRICTS AND REGIONAL OFFICE OF THE PADEP.
2. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776.
3. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM PUBLIC ROADS AT THE DIRECTION OF THE ENVIRONMENTAL INSPECTOR (EI) BASED ON SITE CONDITIONS AND CLEARING ACCESS NEEDS.
4. INSTALL COMPOST FILTER SOCK, SEDIMENT BARRIERS, OR OTHER COUNTY CONSERVATION DISTRICT APPROVED SEDIMENT BARRIERS/BMPS PRIOR TO CLEARING AN AREA.
5. PROTECT SUBSURFACE INFILTRATION BED AREA FROM COMPACTION PRIOR TO INSTALLATION.
6. AREAS FOR PROPOSED STORMTANK SYSTEM SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE DURING CONSTRUCTION.
7. PROVIDE E&S PROPOSED ON THE SITE SO THAT THE CONSTRUCTION RUNOFF IS DIRECTED AWAY FROM THE STORMTANK SYSTEM.
8. COMPLETE SITE GRADING AND STABILIZE THE SOIL WITHIN THE LIMIT OF THE DISTURBANCE, DO NOT FINALIZE THE STORMTANK'S SYSTEM'S EXCAVATION AND CONSTRUCTION UNTIL THE DRAINAGE AREA IS FULLY STABILIZED.
9. EXCAVATE TO THE PROPOSED INVERT DEPTHS. MANUALLY GRADE AND SCARIFY THE EXISTING SOIL SURFACE. THE BOTTOM OF THE SYSTEM SHALL BE AT LEVEL GRADE. DO NOT COMPACT IN-SITU SOILS.
10. PLACE GEOTEXTILE AND AGGREGATE TO PREVENT ACCUMULATION OF DEBRIS OR SEDIMENT. PREVENT RUNOFF AND SEDIMENT FROM ENTERING THE STORAGE BED.
11. INSTALL STORMTANK MODULES BY HAND, AS INDICATED ON SHOP DRAWINGS. TAKE CARE TO AVOID DAMAGE TO GEOTEXTILE.
12. UPON COMPLETION OF MODULE INSTALLATION, WRAP THE MODULE IN GEOTEXTILE FABRIC. PLACE STONE AGGREGATE ON TOP OF THE GEOTEXTILE. INSPECT ALL GEOTEXTILE, ENSURING THAT NO DAMAGE EXISTS WHICH WILL ALLOW SEDIMENT INTO THE SYSTEM.
13. COMPLETE SURFACE GRADING ABOVE THE STORMTANK SYSTEM, USING SUITABLE EQUIPMENT TO AVOID EXCESS COMPACTION.
10. COMPLETE GRADING AT THE SOIL AMENDMENT AND RESTORATION AREA AS INDICATED ON THE CONTRACT DRAWINGS. PLACE MIXTURE PER THE SCHEDULE IN THE CONTRACT DRAWINGS.
11. INSTALL THE JELLYFISH MEMBRANE FILTRATION SYSTEM, AS INDICATED ON THE SHOP DRAWINGS AND SPECIFICATIONS FROM CONTECH.
12. INSTALL LEVEL SPREADER, AS INDICATED ON CONTRACT DRAWINGS..
13. MAINTAIN E&S BMPS UNTIL THE SITE IS FULLY STABILIZED.

MAIN LINE VALVE 1 (BALTIMORE) E&S CONSTRUCTION SEQUENCE

1. AT LEAST SEVEN (7) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR CONTRACTOR SHALL NOTIFY A REPRESENTATIVE FROM THE RESPECTIVE LOCAL CONSERVATION DISTRICTS AND REGIONAL OFFICE OF THE PADEP.
2. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776.
3. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION.
4. AREAS FROM PUBLIC ROADS AT THE DIRECTION OF THE ENVIRONMENTAL INSPECTOR (EI) BASED ON SITE CONDITIONS AND CLEARING ACCESS NEEDS.
5. STAKE OUT THE LIMIT OF DISTURBANCE. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.
6. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.
7. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.
8. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.
9. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.
10. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.
11. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

CHESTER CREEK BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE AND CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WATERBODIES AND WETLANDS. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.
2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.
3. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.
4. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.
5. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.
6. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.
7. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

PAOLI PIKE BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE AND CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WATERBODIES, WETLANDS AND RIPARIAN BUFFERS. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.
2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.
3. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AND COMPOST SOCK WASHOUT AS SHOWN ON THE PLANS AND DETAILS.
4. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.
5. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.
6. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.
7. REMOVE WOOD MATTING FOR WETLANDS. ALL DISTURBED AREAS WITHIN THE WETLANDS MUST BE STABILIZED AND RESTORED TO EXISTING CONDITIONS.
8. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

MAIN LINE VALVE 2 (PHOENIXVILLE) E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.
2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.
3. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.
4. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.
5. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.
6. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.
7. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

FRENCH CREEK BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE AND CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WATERBODIES. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.
2. INSTALL WOOD MATTING TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE. WHENEVER POSSIBLE, WORK SHOULD BE SCHEDULED FOR LOW FLOW SEASONS.
3. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.
4. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.
5. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.
6. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.
7. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.
8. REMOVE WOOD MATTING. ALL DISTURBED AREAS WITHIN THE WETLANDS MUST BE STABILIZED AND RESTORED TO EXISTING CONDITIONS.
9. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

CROMBY BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.
2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.
3. INSTALL WOOD MATTING TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE. WHENEVER POSSIBLE, WORK SHOULD BE SCHEDULED FOR LOW FLOW SEASONS.
4. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AND COMPOST SOCK WASHOUT AS SHOWN ON THE PLANS AND DETAILS.
5. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.
6. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.
7. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.
8. REMOVE WOOD MATTING. ALL DISTURBED AREAS WITHIN THE WETLANDS MUST BE STABILIZED AND RESTORED TO EXISTING CONDITIONS.
9. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE084407

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REVISION

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MODEL ID		

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EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 4 OF 7

SCALE	DRAWING NUMBER	REV
N/A	ES-4	

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SCHUYLKILL RIVER BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE AND CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WATERBODIES AND WETLANDS. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.

2. INSTALL WOOD MATTING AND TEMPORARY CROSSINGS FOR WETLANDS TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE. WHENEVER POSSIBLE, WORK SHOULD BE SCHEDULED FOR LOW FLOW SEASONS.

3. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.

4. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.

5. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.

6. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS. REMOVE FENCE AS SHOWN ON THE PLANS.

7. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.

8. REMOVE WOOD MATTING AND TEMPORARY CROSSINGS FOR WETLANDS. ALL DISTURBED AREAS WITHIN WETLANDS MUST BE STABILIZED AND RESTORED TO EXISTING CONDITIONS.

9. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS. STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

PERKIOMEN CREEK BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE AND CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WETLANDS. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.

2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.

3. INSTALL WOOD MATTING AND TEMPORARY CROSSINGS FOR WETLANDS TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE. WHENEVER POSSIBLE, WORK SHOULD BE SCHEDULED FOR LOW FLOW SEASONS.

4. INSTALL TEMPORARY STREAM CROSSING AS SHOWN ON THE PLANS.

5. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.

6. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.

7. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS. REMOVE FENCE AS SHOWN ON THE PLANS.

8. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.

9. REMOVE WOOD MATTING AND TEMPORARY CROSSINGS FOR WETLANDS. ALL DISTURBED AREAS WITHIN THE WETLANDS MUST BE STABILIZED AND RESTORED TO EXISTING CONDITIONS.

10. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS. STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

SKIPPACK PIKE VALVE TAP E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.

2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.

3. INSTALL WOOD MATTING TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE. WHENEVER POSSIBLE, WORK SHOULD BE SCHEDULED FOR LOW FLOW SEASONS.

4. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AND INLET PROTECTION ON EXISTING INLETS AS SHOWN ON THE PLANS AND DETAILS.

5. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.

6. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS.

7. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.

8. REMOVE WOOD MATTING. ALL DISTURBED AREAS WITHIN THE WETLANDS MUST BE STABILIZED AND RESTORED TO EXISTING CONDITIONS.

9. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS. STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

EAST PERKIOMEN BLOWDOWN E&S CONSTRUCTION SEQUENCE

1. STAKE OUT THE LIMIT OF DISTURBANCE AND CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WETLANDS. THE AREA TO BE USED FOR THE INSTALLATION OF PIPELINE AND VALVES SHALL BE CLEARLY MARKED BEFORE ANY SITE WORK BEGINS TO AVOID SOIL DISTURBANCE AND COMPACTION DURING CONSTRUCTION.

2. INSTALL THE ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS AND AS NECESSARY TO PROVIDE INGRESS/ENGRESS TO THE LIMIT OF DISTURBANCE.

3. INSTALL ALL E&S CONTROL DEVICES SUCH AS: COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND DETAILS.

4. PRESERVE EXISTING TREES TO REMAIN. INSTALL TREE PROTECTION FENCE AS SHOWN ON THE PLANS AND DETAILS.

5. PERFORM CLEARING AND GRUBBING AS NEEDED FOR THE PROJECT. LIMIT CLEARING AND GRUBBING TO THE AREAS OF THE PROJECT THAT ARE BEING CONSTRUCTED.

6. CONSTRUCT PROPOSED MECHANICAL PIPING AND VALVES AS SHOWN ON THE PLANS. REMOVE FENCE AS SHOWN ON THE PLANS.

7. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES UPON COMPLETION AND STABILIZATION OF WORK AREA.

8. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS. STABILIZE DISTURBED AREAS IMMEDIATELY PER THE SITE RESTORATION SCHEDULE ON SHEET ES-6. DECOMPACT SUBGRADE OF DISTURBED AREAS TO A DEPTH OF 12 INCHES.

QUAKERTOWN COMPRESSOR STATION (UNDERGROUND STORAGE CHAMBER) E&S CONSTRUCTION SEQUENCE

1. AT LEAST SEVEN (7) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR CONTRACTOR SHALL NOTIFY A REPRESENTATIVE FROM THE RESPECTIVE LOCAL CONSERVATION DISTRICTS AND REGIONAL OFFICE OF THE PADEP.

2. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776.

3. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES WITH WASH RACK WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM PUBLIC ROADS AT THE DIRECTION OF THE ENVIRONMENTAL INSPECTOR (EI) BASED ON SITE CONDITIONS AND CLEARING ACCESS NEEDS.

4. INSTALL WOOD MATTING AND PROTECTIVE FENCE TO PROVIDE INGRESS/EGRESS TO THE LIMIT OF DISTURBANCE. WHENEVER POSSIBLE, WORK SHOULD BE SCHEDULED FOR LOW FLOW SEASONS.

5. INSTALL COMPOST FILTER SOCK, SEDIMENT BARRIERS, OR OTHER COUNTY CONSERVATION DISTRICT APPROVED SEDIMENT BARRIERS/BMPS PRIOR TO CLEARING AN AREA. CONTRACTOR TO UTILIZE ABACT E&S BMP TECHNOLOGIES TO MINIMIZE SEDIMENT IMPAIRMENT TO SILTATION IMPAIRED WATERS.

6. INSTALL THE MRC BMP DURING FINAL PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING VIA OVERLAND, INLETS, AND PIPES.

7. INSTALL AND MAINTAIN PROPER E&S BMPS DURING CONSTRUCTION. PROVIDE E&S PROPOSED ON THE SITE SO THAT THE CONSTRUCTION RUNOFF IS DIRECTED AWAY FROM THE STORMTANK SYSTEM.

8. COMPLETE SITE GRADING AND STABILIZE THE SOIL WITHIN THE LIMIT OF DISTURBANCE. DO NOT FINALIZE THE BMP EXCAVATION AND CONSTRUCTION UNTIL THE DRAINAGE AREA IS FULLY STABILIZED.

9. INSTALL THE JELLYFISH MEMBRANE FILTRATION SYSTEM, AS INDICATED ON THE SHOP DRAWINGS AND SPECIFICATIONS FROM CONTECH.

10. EXCAVATE TO THE PROPOSED INVERT DEPTHS. MANUALLY GRADE AND SCARIFY THE EXISTING SOIL SURFACE. THE BOTTOM OF THE SYSTEM SHALL BE AT LEVEL GRADE. DO NOT COMPACT IN-SITU SOILS.

11. PLACE GEOTEXTILE AND AGGREGATE TO PREVENT ACCUMULATION OF DEBRIS OR SEDIMENT. PREVENT RUNOFF AND SEDIMENT FROM ENTERING THE STORAGE BED.

12. INSTALL STORMTANK MODULES BY HAND, AS INDICATED ON SHOP DRAWINGS. TAKE CARE TO AVOID DAMAGE TO GEOTEXTILE.

13. UPON COMPLETION OF MODULE INSTALLATION, WRAP THE MODULE IN GEOTEXTILE FABRIC. PLACE STONE AGGREGATE ON TOP OF THE GEOTEXTILE. INSPECT ALL GEOTEXTILE, ENSURING THAT NO DAMAGE EXISTS WHICH WILL ALLOW SEDIMENT INTO THE SYSTEM.

14. COMPLETE SURFACE GRADING ABOVE THE STORMTANK SYSTEM, USING SUITABLE EQUIPMENT TO AVOID EXCESS COMPACTION.

15. MAINTAIN E&S BMPS UNTIL THE SITE IS FULLY STABILIZED.

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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SHINY M. MATHEW
ENGINEER
NO. PE063407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
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EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 5 OF 7

SCALE	DRAWING NUMBER	REV
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SITE RESTORATION SCHEDULE

GENERAL:

1. AFTER FINAL GRADE IS ESTABLISHED, INSTALL/IMPLEMENT APPROPRIATE BMPS TO ALL DISTURBED AREAS INCLUDING, BUT NOT LIMITED TO: SURFACE ROUGHNING/SCARIFICATION, PERMANENT SEEDING, AND MULCHING. SEED AND SOIL AMENDMENTS SHALL BE APPLIED AS DEFINED WITHIN THIS PLAN. WHERE REQUIRED AND AFTER SEEDING AND SOIL AMENDMENTS, INSTALL EROSION CONTROL BLANKET/FABRIC. EROSION CONTROL BLANKET/FABRIC SHALL BE APPLIED WITHIN 100 FEET OF STREAM BANKS IN HQ WATERSHEDS (UNLESS LOCATED WITHIN A WETLAND) AND ON SLOPES WHICH ARE 3H:1V OR STEEPER, AS DEPICTED ON THE PLANS. REMOVE TEMPORARY CROSSINGS OF STREAMS AND WETLANDS ONCE EQUIPMENT ACCESS ACROSS ASSOCIATED FEATURE IS NO LONGER NECESSARY.

2. THE OWNER WILL CONTINUE TO CONDUCT INSPECTIONS UNTIL THE PROJECT AREA HAS REACHED PERMANENT STABILIZATION. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM PERENNIAL 70% VEGETATIVE COVER OR OTHER 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. TEMPORARY E&S BMPS MAY BE REMOVED AFTER THE ENTIRE DISTURBED AREA TRIBUTARY TO EACH BMP REACHES PERMANENT STABILIZATION. REMOVE ALL REMAINING TEMPORARY CROSSINGS OF STREAMS AND WETLANDS. IMMEDIATELY STABILIZE ANY DISTURBANCES ASSOCIATED WITH THE REMOVAL OF THE BMPS.

3. ALL DISTURBED AREAS CONTAINING EXISTING GRAVEL COVER MUST BE REPLACED AND REFRESHED IN KIND WITH THE PLACEMENT OF GEOTECH FABRIC, 4" DENSE GRADE BASE TOPPED WITH 2 INCHES OF #57 STONE. SEE - ADELPHIA GATEWAY, LLC, 18" MAINLINE VALVES FOR CHESTER, DELAWARE, AND MONTGOMERY COUNTIES PREPARED BY HGA, LLC.

4. ALL DISTURBED AREAS CONTAINING EXISTING VEGETATIVE COVER MUST BE RESTORED WITH PERMANENT SEEDING. REFER TO PERMANENT SEED SCHEDULE AND TABLES.

5. ALL DISTURBED AREAS SHALL BE DECOMPACTED TO SUBGRADE TO A DEPTH OF 12 INCHES.

6. SITE RESTORATION IS A CRITICAL STAGE AND IS TO BE WITNESSED AND CERTIFIED BY A LICENSED PROFESSIONAL DURING CONSTRUCTION. THIS WILL BE A REQUIREMENT OF THE NOTICE OF TERMINATION (NOT).

PERMANENT SEEDING

SITE PREPARATION AND ESTABLISHMENT OF PERMANENT VEGETATION SHALL BE CONDUCTED AS FOLLOWS:

1. INSTALL ANY NECESSARY SURFACE WATER CONTROL MEASURES.
2. IN LOCATIONS WHERE WOOD MATS ARE REMOVED, AERATE THE SOIL TO DECOMPACT TOP 6" OF GROUND. IF EXISTING VEGETATION HAS BEEN KILLED DUE TO MATTING, SCARIFY AND SEED ACCORDING TO STEPS BELOW.
3. GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3-5 INCHES TO PERMIT BONDING OF TOPSOIL. DISTRIBUTE TOPSOIL THROUGHOUT DISTURBED AREAS TO A DEPTH OF 4-6 INCHES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH MINIMUM TILLAGE.
4. HYDROSEED OR FOLLOW STEPS 3 THROUGH 6 BELOW.
5. PERFORM AGRICULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPES.
6. AGRICULTURAL LIME APPLICATION RATES CAN BE DETERMINED BY FIELD PH TESTING. TESTING MAY BE PERFORMED AT A RATE OF 1 TEST PER ACRE (MIN.). IN THE ABSENCE OF TESTING, APPLY AT 6 TONS/ACRE.
7. APPLY DRY 10-20-20 FORMULATION OF FERTILIZER AT THE RATE OF 1,000 LB/ACRE OR AT A RATE DETERMINED BY FIELD TESTING.
8. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES USING APPROPRIATE EQUIPMENT.
9. SEED MIXTURE - SEE LINE LIST FOR LANDOWNER REQUIREMENT AND PROJECT RESTORATION PLAN. IN ABSENCE OF A SPECIFIED MIXTURE, SEED MIXTURE SHALL BE IN ACCORDANCE WITH THE SEEDING TABLE PROVIDED; OR IN ACCORDANCE WITH TABLE 11.4 AND TABLE 11.5 OF THE DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (TECHNICAL GUIDANCE NO. 363-2134-008) AS APPROVED BY THE OWNER.
10. IF NOT HYDROSEEDING. APPLY MULCH.

TEMPORARY SEEDING

EXCLUDING AREAS OF ACTIVE CONSTRUCTION, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED IN DISTURBED AREAS WHERE THE SOIL WILL BE EXPOSED FOR A PERIOD GREATER THAN FOUR (4) DAYS. SEED MIXTURE FOR TEMPORARY VEGETATION SHALL CONSIST OF 100% ANNUAL RYEGRASS. SEED SHALL BE APPLIED AT THE RATE OF 40 LB/ACRE OR AS RECOMMENDED BY A LOCAL RECOGNIZED SEED SUPPLIER AS APPROVED BY THE OWNER. PRIOR TO SEEDING, APPLY 1 TON OF AGRICULTURAL GRADE LIMESTONE PER ACRE PLUS 10-10-10 FERTILIZER AT THE RATE OF 500 LB/ACRE (UNLESS APPLICATION RATES HAVE BEEN DETERMINED OTHERWISE BY FIELD PH TESTING) AND WORK INTO SOIL.

SOIL AMENDMENT AND RESTORATION

AMENDED SOIL IS TO CONSIST OF SANDY LOAM OR LOAMY SAND. SOIL IS TO MEET THE FOLLOWING REQUIREMENTS:

- NO LESS THAN 72% AND NO MORE THAT 85% SAND
- NO GREATER THAN 10% CLAY CONSIDERING ONLY THE MINERAL FRACTION OF THE SOIL.
- PH RANGE: 5.2 TO 7.5
- SOLUBLE SALTS: 500 PPM MAXIMUM
- ORGANIC MATTER: 5-20%
- PHOSPHOROUS: SOIL P-INDEX BETWEEN 15 - 40
- SOIL ADDED TO MEET TEXTURAL CLASS IS TO BE CLEAN AND MEET AASHTO M-6 OR ASTM C-33 WITH A GRAIN SIZE OF 0.02 - 0.04 INCHES.
- SUPPLY SOIL MIXES CERTIFIED BY A QUALIFIED LABORATORY. PERFORM 1 TEST PER 100 CY YDS OF SOIL.

PRIOR TO PLACEMENT, UNIFORMLY MIX TOPSOIL, COMPOST, AND SAND. PLACE MIXTURE IN SOILS AMENDMENT AND RESTORATION AREA, AS INDICATED ON CONTRACT DRAWINGS. LIGHTLY TAMP SOIL WITH BACKHOE BUCKET OR BY HAND. DO NOT RUN HEAVY EQUIPMENT OVER BIORETENTION MIX AREAS AFTER PLACEMENT.

PERMANENT SEEDING TABLE (NON-LAWN AREAS)

SCIENTIFIC NAME	COMMON NAME	REQUIRED VARIETIES	MINIMUM PURITY (%)	MINIMUM GERMINATION (%)	SEED RATE (LB/1000 SF)	SEEDING RATE (LB/ACRE)
LOLIUM PERENNE	PERENNIAL RYEGRASS	A MIXTURE OF AT LEAST 2 FINE-LEAF, TURF-TYPE VARIETIES ADAPTED TO LOCAL CONDITIONS	98	90	0.8	35
FESTUCA RUBRA	RED FESCUE	"PENNLAWN"	98	85	0.8	35
LOTUS CORNICULATUS	BIRDSFOOT TREFOIL (BIRDSFOOT DEER-VETCH)	"VIKING", "EMPIRE", "LEO", OR "NORCEN" (PLUS 5X LEGUME INOCULATION RATE)	98	80	0.7	30

PLUS, DEPENDING ON THE SEASON AND AVAILABILITY, ALSO ADD ONE OF THE FOLLOWING "NURSE CROP" SPECIES:						
AVENA SATIVA	OATS APRIL 1 TO SEPT 1	COMMON SEED	98	85	0.7	32
SECALE CEREALE	WINTER RYE APRIL 1 TO OCTOBER 1	"AROOSTOCK"** OR COMMON SEED	98	85	1.3	56
SECALE CEREALE	WINTER RYE OCTOBER 1 TO APRIL 1	"AROOSTOCK"** OR COMMON SEED	98	85	2.6	112
				TOTAL:	3 TO 5	132 TO 212

* IF THE ABOVE SEEDING DATES CANNOT BE OBSERVED, USE ONE OF THE APPROPRIATE TEMPORARY SEEDING MIXTURE SPECIES IDENTIFIED IN TABLE 11.4 OF THE PADEP E&S MANUAL.

** "AROOSTOOK" VARIETY OF WINTER RYE IS RECOMMENDED FOR LATE SEEDING WHERE WINTERS ARE COLD.

IN WETLAND AREAS, EXCAVATED TOPSOIL WITH THE VEGETATIVE ROOT MASS SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. LIME AND FERTILIZER ARE NOT TO BE APPLIED TO THE BACKFILL TRENCH. ANNUAL RYEGRASS MAY BE APPLIED AT THE RATE OF 40 LB/ACRE WHERE NEEDED TO AREAS WITHOUT STANDING WATER IF TEMPORARY STABILIZATION IS REQUIRED; OTHERWISE, THE WETLAND AREAS WILL BE PERMANENTLY SEEDED IN ACCORDANCE WITH THE PROJECT RESTORATION PLAN. STRAW MULCH SHOULD BE APPLIED AT THE RATE OF 3 TONS/ACRE AND WITHOUT BINDING AGENTS.

PERMANENT SEEDING TABLE (LAWN AREAS)

SCIENTIFIC NAME	COMMON NAME	REQUIRED VARIETIES	MINIMUM PURITY (%)	MINIMUM GERMINATION (%)	SEED RATE (LB/1000 SF)	SEEDING RATE (LB/ACRE)
LOLIUM PERENNE	PYRENNIAL RYEGRASS	A MIXTURE OF AT LEAST 2 FINE-LEAF, TURF-TYPE VARIETIES ADAPTED TO LOCAL CONDITIONS	98	90	0.9	42
FESTUCA RUBRA	RED FESCUE	"PENNLAWN"	98	85	1.4	65
POA PRATENSIS	KENTUCKY BLUEGRASS MIXTURE	A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL BLUEGRASS COMPONENT	97	80	2.3	107
				TOTAL:	4.6	214

* PERMANENT SEEDING (MRC BASIN AT MARCUS HOOK COMPRESSOR STATION): ERNST SEED RAIN GARDEN MIX, ERNX-180, OR APPROVED EQUAL.
SEEDING RATE: 20 LB/ACRE WITH A COVER CROP OF GRAIN RYE AT 30 LB/ACRE.

STREAM AND/OR WETLAND CROSSING NOTES

1. EQUIPMENT WORKING WITHIN OR DRIVING ACROSS WETLAND AREAS WILL REQUIRE THE USE OF WOOD MATS.
2. SEGREGATE TOPSOIL FROM THE WETLAND AREA DISTURBED BY TRENCHING, EXCEPT IN AREAS WHERE STANDING WATER IS PRESENT OR SOILS ARE SATURATED OR FROZEN.
3. TOPSOIL WILL BE STOCKPILED IN A TEMPORARY WORKSPACE OR ADDITIONAL TEMPORARY WORKSPACE DEPENDING UPON SITE SPECIFIC CONDITIONS AND AT THE DISCRETION OF THE EI.
4. LIQUID MULCH BINDERS SHALL NOT BE USED WITHIN 100 FEET OF ANY WETLAND/WATERBODY.
5. EROSION CONTROL BLANKETS WILL BE INSTALLED WITHIN 100 FEET OF HQ AND EV WATERBODIES, UNLESS WATERBODY IS LOCATED WITHIN A WETLAND, AND ON ANY SLOPE 3H:1V OR STEEPER.
6. WHERE TRAVEL LANES INTERSECT COMPOST FILTER SOCK FOR A WETLAND OR STREAM, THE COMPOST FILTER SOCKS WILL BE MOVED AT THE DISCRETION OF THE EI TO MAINTAIN E&S PROTECTION. THE COMPOST FILTER SOCKS WILL BE REPLACED AT THE END OF EACH WORK DAY. STRAW BALES WILL NOT BE USED AS A SEDIMENT BARRIER AT WETLAND OR STREAM CROSSINGS IN HQ OR EV WATERSHEDS.
7. IT IS ACCEPTABLE FOR E&S BMPS TO BE TEMPORARILY REMOVED FROM EQUIPMENT CROSSING PATHWAYS DURING PERIODS OF ACTIVE CONSTRUCTION IF THESE CONTROLS WILL BE PROPERLY REINSTALLED AT THE END OF EACH WORK DAY. THE EI WILL DIRECT THE PLACEMENT OF TEMPORARY CONTROLS, AS NECESSARY, DURING THE ACTIVE PERIODS OF CONSTRUCTION.
8. THE DRAWINGS ILLUSTRATE GENERAL FEATURES AND PLACEMENT OF E&S CONTROLS. THE FINAL CONFIGURATIONS MAY BE DETERMINED IN THE FIELD BY THE EI BASED ON SITE CONDITIONS. THE APPROPRIATE EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE IMPLEMENTED WITHIN THE WORK AREA.
9. WHEN WETLAND AREAS ARE TEMPORARILY DISTURBED, ISOLATE AND STOCKPILE THE TOPSOIL FOR REPLACEMENT AFTER GRADING IS COMPLETED. IF TEMPORARY VEGETATIVE STABILIZATION IS NECESSARY, APPLY ANNUAL RYEGRASS AT A RATE NOT EXCEEDING 48 LB. PLS/ACRE. MULCH USING CLEAN STRAW AT A RATE OF 3 T/ACRE NO SOIL AMENDMENTS SHALL BE USED ON WETLAND AREAS.

GENERAL WETLAND CROSSING NOTES

THE FOLLOWING ARE CONSTRUCTION SEQUENCES FOR EARTH DISTURBING ACTIVITIES ASSOCIATED WITH CONSTRUCTION THROUGH WETLAND AREAS. IT SHOULD BE NOTED THAT CONSTRUCTION ACTIVITIES MAY OCCUR SIMULTANEOUSLY AND MAY NOT OCCUR IN THE EXACT ORDER LISTED BELOW. THE MAIN OBJECTIVES OF ANY WETLAND CROSSING ARE TO CONSTRUCT THE PIPELINE, RESTORE THE ORIGINAL CONTOUR OF THE WETLAND, RESTORE THE HYDROLOGY OF THE WETLAND, AND ESTABLISH NATIVE, NON-INVASIVE HYDROPHYTIC VEGETATION IN THE WETLAND. WETLAND BOUNDARIES WILL BE MARKED WITH SIGNS, FENCING, AND/OR HIGHLY VISIBLE FLAGGING UNTIL CONSTRUCTION IS COMPLETE AND MAINTAINED THROUGHOUT CONSTRUCTION.

- FOR WETLAND CROSSINGS WITHOUT STANDING WATER OR SATURATED SOILS, THE TOP 12 INCHES OF EXCAVATED SOIL (WHERE AVAILABLE) SHALL BE STOCKPILED SEPARATELY FROM THE REMAINING EXCAVATED MATERIAL. THE TRAVEL LANE IN THE CONSTRUCTION ROW MAY BE USED AS TYPICAL ACCESS WHEN THE WETLAND SOIL IS FIRM ENOUGH TO AVOID RUTTING OR IF THE CONSTRUCTION ROW HAS BEEN APPROPRIATELY STABILIZED TO AVOID RUTTING (E.G., WITH TIMBER MATS, PREFABRICATED EQUIPMENT MATS). IN WETLANDS THAT CANNOT BE APPROPRIATELY STABILIZED, ALL CONSTRUCTION EQUIPMENT, OTHER THAN THAT NEEDED TO INSTALL THE WETLAND CROSSING, SHALL USE ALTERNATE MEANS OF TRANSIT THAT DOES NOT INVOLVE CROSSING THE WETLAND.
- WETLAND CROSSINGS WILL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE THE AMOUNT OF TIME CONSTRUCTION ACTIVITIES ARE OCCURRING IN THE WETLAND, SUCH AS THE LENGTH OF TIME THE TOPSOIL IS SEGREGATED AND THE TRENCH IS OPEN.
- TREE STUMPS, BRUSH, ROCK, GRAVEL, OR SOIL IMPORTED FROM OUTSIDE THE WETLAND WILL NOT BE USED TO STABILIZE THE CONSTRUCTION WORK AREA OR AS EQUIPMENT PADS IN THE WETLANDS. ALL EQUIPMENT MATS AND TIMBER MATS WILL BE REMOVED DURING THE FINAL RESTORATION OF THE WETLAND.
- CONSTRUCTION EQUIPMENT WILL BE LIMITED IN WETLAND AREAS TO THAT NEEDED TO PROVIDE CONSTRUCTION ACCESS ACROSS THE WETLAND, CLEAR THE CONSTRUCTION WORK AREA, DIG THE TRENCH, FABRICATE AND INSTALL THE PIPELINE, BACKFILL THE TRENCH, AND RESTORE THE LOD.
- THE PROJECT LOD IS DEPICTED ON THE E&S PLAN. NO ACTIVITIES ARE AUTHORIZED OUTSIDE THE LOD UNLESS PRIOR APPROVAL IS RECEIVED FROM THE LOCAL COUNTY CONSERVATION DISTRICT AND OR REGIONAL OFFICE OF DEP.
- CONSTRUCTION IN THE WETLAND WILL BE POSTPONED IF WATER LEVELS ARE DEEMED TO BE UNUSUALLY HIGH.
- LIQUID MULCH BINDERS SHALL NOT BE USED WITHIN 100 FEET OF ANY WETLAND.

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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE082407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
3	REVISED TO ADDRESS DEP COMMENTS	ATH	05/18/20	SMM	05/18/20
2	REVISED TO ADDRESS DEP COMMENTS	ATH	03/24/20	SMM	03/24/20
1	REVISED TO ADDRESS DEP COMMENTS	ATH	11/15/19	SMM	11/15/19

REVISION

DRAWN BY	INTL	DATE
DESIGNED BY	RY	05/18/20
CHECKED BY	AH	05/18/20
APPROVED BY	SMM	05/18/20
JOB NO.	18-00672-006	
PLOT SCALE	N/A	
MODEL ID		

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EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 6 OF 7

SCALE	DRAWING NUMBER	REV
N/A	ES-6	

WETLAND CROSSING CONSTRUCTION SEQUENCES

FOR SATURATED WETLANDS CROSSINGS, THE E&S CONSTRUCTION SEQUENCE WILL BE IMPLEMENTED WITH THE FOLLOWING PROVISIONS:

1. THE EI WILL VERIFY THAT CLEAN-UP KITS FOR POTENTIAL FLUID SPILLS ARE AVAILABLE AT THE WETLAND CROSSING SITE PRIOR TO THE ENTRY OF ANY EQUIPMENT INTO THE WETLAND CONSTRUCTION AREA.
2. TIMBER MATS WILL INSTALLED ACROSS THE WETLAND ALONG THE TRAVEL LINE, IF NECESSARY ACCORDING TO SATURATION CONDITIONS.
3. THE CONSTRUCTION WORK AREA THROUGH THE WETLAND WILL BE CLEARED TO THE SPECIFIC WIDTH AS SHOWN ON THE E&S PLAN DRAWINGS. TREES WILL NOT BE REMOVED/GRUBBED WITHIN 50 FEET OS STREAMS UNTIL CONSTRUCTION THROUGH THAT AREA. ALL BRUSH AND TREES WILL BE FELLED INTO THE CONSTRUCTION WORK AREA TO PREVENT OFF-CONSTRUCTION WORK AREA DAMAGE TO TREES AND STRUCTURES. ALL CLEARED MATERIALS WILL BE STAGED FOR DISPOSAL, IF NECESSARY AT LEAST 50 FEET OUTSIDE OF THE WETLAND. STUMP REMOVAL SHALL BE LIMITED TO THE TRENCH LINE, UNLESS THE STUMPS CAUSE UNSAFE WORKING CONDITIONS.
4. TEMPORARY E&S CONTROLS WILL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES TO MINIMIZE IMPACTS TO THE ENVIRONMENT. THIS INCLUDES INSTALLATION OF APPROPRIATE SIZED COMPOST FILTER SOCK SEDIMENT BARRIERS OR OTHER APPROVED EROSION AND SEDIMENT CONTROL DEVICES IN HQ WATERSHEDS AS DEPICTED ON THE E&S PLAN.
5. THE EI WILL EXAMINE THE TEMPORARY E&S CONTROLS AT LEAST EVERY SEVEN CALENDAR DAYS FOLLOWING THEIR INSTALLATION AND FOLLOWING PRECIPITATION EVENTS THAT CAUSE RUNOFF. THE GOAL OF THE EXAMINATION WILL BE TO ENSURE THAT SEDIMENT GENERATED WITHIN THE WORK SPACE CANNOT REACH THE WETLAND. IF ADDITIONAL E&S CONTROLS ARE REQUIRED, THESE WILL BE INSTALLED PROMPTLY BY THE CONTRACTOR.
6. THE TRENCH WILL BE EXCAVATED ACROSS THE WETLAND. WETLAND TOPSOIL SHALL BE SEPARATED FROM SUBSOIL DURING EXCAVATION, TO THE EXTENT POSSIBLE IN SATURATED CONDITIONS.
7. PUMPS MAY BE REQUIRED TO DEWATER THE EXCAVATED TRENCH AT VARIOUS TIMES DURING CONSTRUCTION. WATER FROM THE PUMPING OPERATION WILL BE DISCHARGED TO A FILTER BAG LOCATED IN A WELL VEGETATED UPLAND AREA. THE EI WILL VERIFY THAT THESE STRUCTURES ARE PLACED IN AN APPROPRIATE LOCATION. ANY DEWATERING STRUCTURE WILL BE REMOVED AS SOON AS POSSIBLE AFTER THE COMPLETION OF DEWATERING ACTIVITIES.
8. THE TRENCH WILL BE BACKFILLED WITH MATERIAL FROM THE MATERIAL STOCKPILES. PLACE THE SUBSOIL IN THE TRENCH FIRST AND FILL THE WETLAND TOPSOIL LAST. CARE WILL BE TAKEN TO ENSURE THAT THE FINAL GRADE WITHIN THE WETLAND APPROXIMATES THE ORIGINAL GRADE. ANY EXCESS SOIL WILL BE DISPOSED OF IN UPLAND AREAS. NO EXCESSIVE SOIL WILL BE PLACED IN WETLANDS.
9. WHEN WETLAND CONSTRUCTION AND RESTORATION IS COMPLETED AND ACCESS ACROSS THE WETLAND WILL NO LONGER BE NEEDED, THE TIMBER MATS WILL BE REMOVED. TIMBER MATS MAY REMAIN IN PLACE AS A TRAVEL LANE ACROSS THE WETLAND BUT WILL BE REMOVED WHEN NO LONGER NECESSARY.
10. APPLY ANNUAL RYEGRASS AT A RATE NOT EXCEEDING 48 LB PURE LIVE SEED ("PLS")/ACRE. MULCH USING CLEAN STRAW AT A RATE OF 3 TONS/ACRE. NO SOIL AMENDMENTS SHALL BE USED ON WETLAND AREAS.

HQ/EV WATERSHEDS

THE FOLLOWING SITES ARE LOCATED IN HIGH QUALITY (HQ) OR EXCEPTIONAL VALUE (EV) WATERSHEDS:

- PAOLI PIKE BLOWDOWN (HQ, RIDLEY CREEK WATERSHED)
- CROMBY BLOWDOWN (HQ, STONY RUN WATERSHED)

E&S MAINTENANCE PLAN

THE ENVIRONMENTAL INSPECTOR (EI) WILL BE PRESENT DURING CONSTRUCTION ACTIVITIES TO INSPECT BMPS AT LEAST EVERY SEVEN (7) CALENDAR DAYS FOLLOWING THEIR INSTALLATION AND WITHIN 24 HOURS OF THE END OF A STORMWATER EVENT. 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 MORE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION. BMPS WILL BE MAINTAINED, AS FOLLOWS:

1. REGRADE OR ADD GRAVEL TO THE ACCESS ROAD IF EXCESSIVE RUTTING OR EROSION IS OBSERVED.
2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH ONE-HALF OF THE ABOVEGROUND EIGHT OF THE BARRIER (I.E. COMPOST FILTER SOCK).
3. SECTION OF SILT BARRIER WHICH HAS BEEN UNDERMINED OR OVERTOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.
4. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH ONE-THIRD THE HEIGHT OF THE ROCK FILTER OUTLET.
5. EXISTING CULVERTS ALONG ACCESS ROADS WILL BE CLEARED OUT, REPAIRED, OR REPLACED AS NECESSARY.
6. EARTH DISTURBANCE AREAS WILL BE REPAIRED WHERE SIGNS OF ACCELERATED EROSION ARE DETECTED.
7. PUMPED WATER FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ONE-HALF FULL.
8. IF NECESSARY, REPLACEMENT OF COMPOST FILTER SOCK SHALL BE AS FOLLOWS: BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER SIX MONTHS IF PERMANENT STABILIZATION HAS NOT BEEN DETERMINED SUCCESSFUL; PHOTODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER ONE YEAR; POLYPROPYLENE COMPOST FILTER SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
9. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FEET INCREMENTS UNTIL CONDITION IS ALLEVIATED. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWER, CULVERTS, OR OTHER DRAINAGE WAYS IS NOT ACCEPTABLE.
10. A MINIMUM ROCK THICKNESS OF 8 INCHES SHALL BE MAINTAINED AT THE ROCK CONSTRUCTION ENTRANCE THROUGHOUT CONSTRUCTION. A STOCKPILE SHALL BE MAINTAINED ON THE CONSTRUCTION SITE FOR THIS PURPOSE.
11. IF THE SITE DOES NOT ACHIEVE PERMANENT STABILIZATION WITHIN THE ALLOTTED TIME FRAME FOR THE PROJECT, THEN REMEDIAL ACTION WILL BE TAKEN, SUCH AS RESEEDING. THESE AREAS SHALL BE MONITORED UNTIL PERMANENT STABILIZATION HAS BECOME ESTABLISHED.
12. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR/CONTRACTOR SHALL IMPLEMENT APPROPRIATE BMPS TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
13. SEDIMENT REMOVED FROM BMPS WILL BE REPLACED IN AN UPLAND CONSTRUCTION AREA AND SPREAD OUT. ALL WASTE OR EXCESS MATERIALS NOT SUITABLE FOR THE ON-SITE STOCKPILE SHALL BE DISPOSED OF OFF-SITE AT A PADEP OR LOCAL COUNTY CONSERVATION DISTRICT APPROVED FACILITY. MATERIALS WILL BE RE-USED OR RECYCLED IF POSSIBLE, INCLUDING TOPSOIL AND OTHER MATERIALS AS APPROPRIATE ANY OFF-SITE STOCKPILE/SPOIL PILES SHALL BE AT A PADEP OR LOCAL COUNTY CONSERVATION DISTRICT APPROVED FACILITY WITH AN APPROVED E&S PLAN. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THAT AN OFF-SITE FACILITY HAS APPROPRIATE PERMITS/PLANS IN PLACE AND IS APPROVED TO ACCEPT ASSOCIATED WASTES OR EXCESS MATERIALS.

STORAGE YARD/STAGING AREA CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF ANY EARTH DISTURBANCE ACTIVITY INCLUDING CLEARING AND GRUBBING, CLEARLY DELINEATE SENSITIVE AREAS INCLUDING WATERBODIES/WETLANDS, RIPARIAN FOREST BUFFER BOUNDARIES (IF ANY), THE LIMITS OF CLEARING, LOCATIONS OF UTILITIES, TREES THAT ARE TO REMAIN UNDISTURBED WITHIN THE PROJECT SITE, CULTURAL RESOURCE SITES AND RARE SPECIES HABITAT, AS APPLICABLE. AVOIDANCE AREAS WILL BE MARKED WITH APPROPRIATE FENCING, SIGNAGE, AND/OR FLAGGING BASED ON ENVIRONMENTAL SURVEYS AND PERMIT CONDITIONS.
2. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES ENTER CONSTRUCTION AREAS FROM PUBLIC ROADS. ACCESS POINTS TO STORAGE YARDS ARE DEPICTED ON PLAN DRAWINGS; THE EI MAY ASSIST IN RELOCATING ACCESS POINTS IF SITE CONDITIONS REQUIRE.
3. INSTALL WOOD MATTING WHERE NOTED ON THE PLANS OVER SENSITIVE AREAS, SUCH AS WETLANDS.
4. INSTALL COMPOST FILTER SOCK SEDIMENT BARRIERS AFTER THE CONSTRUCTION SITE IS ACCESSED, KEEPING ASSOCIATED CLEARING AND GRUBBING LIMITED TO ONLY THAT AMOUNT REQUIRED FOR INSTALLATION OF PERIMETER BMPS.
5. IMPLEMENT LAND CLEARING AND GRADING ONLY AFTER ALL DOWN SLOPE E&S BMPS HAVE BEEN CONSTRUCTED. SITE WILL BE GRADED FOR THE STORAGE OF PIPE, STOCKPILED SOIL, PARKING AND OTHER APPROVED CONSTRUCTION SUPPORT ACTIVITIES, AS NECESSARY. THESE GRADING EFFORTS ARE ANTICIPATED TO BE MINOR AND WILL ONLY BE TO THE EXTENT NECESSARY FOR SAFE UTILIZATION OF THE AREA. SPECIFIC AREAS TO BE GRADED WILL BE DETERMINED BASED ON THE NEEDS OF THE CONTRACTOR AT THE TIME OF USE.
6. PERFORM TOPSOIL STRIPPING AND SEGREGATION, AND GRAVEL PLACEMENT (IF NECESSARY) OR OTHER UPGRADES TO THE STORAGE YARD AREA. PLACE GEOTEXTILE UNDERNEATH AREAS WHERE GRAVEL WILL BE PLACED SO GRAVEL CAN BE REMOVED WHEN YARD WILL NO LONGER BE USED.
7. UPON COMPLETION OF THE USE OF THE STORAGE YARD, RETURN SITE TO ITS PRE-CONSTRUCTION CONTOURS AND CONDITIONS, INCLUDING THE REMOVAL OF ADDED GRAVEL AREAS.
8. INSTALL STABILIZATION BMPS AND MEASURES TO ALL DISTURBED AREAS IN ACCORDANCE WITH STABILIZATION SPECIFICATION DEFINED WITHIN THIS PLAN INCLUDING: SURFACE ROUGHENING/SACRIFICATION, APPLICATION OF FERTILIZER AND LIME, PERMANENT SEEDING, MULCHING AND/OR APPLICATION OF EROSION CONTROL BLANKET.
9. TEMPORARY E&S BMPS MAY BE REMOVED AFTER THE ENTIRE DISTURBED AREA TRIBUTARY TO EACH BMP REACHES PERMANENT STABILIZATION. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. REMOVE ALL REMAINING SEDIMENT BARRIERS, ADDED GRAVEL AREAS, ROCK CONSTRUCTION ENTRANCES. IMMEDIATELY STABILIZE ANY DISTURBANCES ASSOCIATED WITH THE REMOVAL OF THE BMPS

TREE PROTECTION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF TREES DURING CONSTRUCTION. CARE SHALL BE TAKEN TO PROTECT TREES BY CONTROLLING THE ACTIVITIES OCCURRING WITHIN TREE PROTECTION ZONES.
2. ALL ON-SITE WORKERS SHALL BE AWARE OF THE TREE PROTECTION MEASURES AND THE CONSEQUENT RESTRICTIONS AND REGULATIONS IMPLIED.
3. THE CONTRACTOR SHALL IDENTIFY THE "TREE PROTECTION ZONE". THE TREE PROTECTION ZONE IS THE AREA WITHIN THE DRIP LINE OF EXISTING TREES, OR WITHIN THE PERIMETER DRIPLINE OF GROUPS OF TREES, OR WITHIN TEN (10) FT. OF THE TRUNK (WHICHEVER IS GREATER), UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
4. ANY DAMAGE TO EXISTING TREES DURING CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL MITIGATE SUCH DAMAGED TREES AT THE DIRECTION OF THE OWNER OR LOCAL AUTHORITIES, AT THE CONTRACTOR'S EXPENSE.
5. TEMPORARY WOODEN TREE GUARDS SHALL BE INSTALLED AT EACH EXISTING TREE TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION, AND A TEMPORARY SNOW FENCE BOUNDARY SHALL BE INSTALLED AT THE PERIMETER OF THE TPZ OR AS SHOWN ON THE DRAWINGS.
6. TREE GUARDS WITH WRAP FOR INDIVIDUAL TREES, AND TEMPORARY SNOW FENCE BOUNDARY SHALL BE MAINTAINED THROUGHOUT THE COURSE OF THE CONTRACT. TREE GUARDS ARE NOT TO BE REMOVED UNTIL ALL WORK AROUND EXISTING TREES IS COMPLETE. IF REQUIRED TO INSTALL PROPOSED WORK, PROTECTION SHALL BE REMOVED UNTIL THE WORK IS COMPLETE.
7. THE CONTRACTOR SHALL TAKE EXTREME CARE TO PROTECT THE ROOT SYSTEMS OF EXISTING TREES. BULK MATERIAL, EQUIPMENT, OR VEHICLES SHALL NOT BE STOCKPILED OR PARKED WITHIN THE TPZ TO MINIMIZE SURFACE AND SUBSURFACE ROOT AND SOIL COMPACTION. THIS APPLIES TO ALL AREAS WITHIN OR OUTSIDE THE CONTRACT LIMITS.
8. IF STOCKPILING OCCURS WITHIN THE TPZ, A STOP WORK ORDER SHALL BE ISSUED IMMEDIATELY. WORK SHALL NOT RE-COMMENCE UNTIL ALL STOCKPILED MATERIAL IS REMOVED FROM THE ZONE AND TREE REMEDIATION IS SATISFIED.
9. NO RUNOFF OR SPILLAGE OF NOXIOUS MATERIALS OR EXCESSIVE WETTING CAUSED BY CONSTRUCTION OPERATIONS SHALL OCCUR WITHIN TREE PROTECTION ZONES.
10. HEAT SOURCES, FLAMES, IGNITION SOURCES, AND SMOKING ARE PROHIBITED WITHIN OR NEAR WOODCHIP MULCH TREE PROTECTION ZONES.
11. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN REMOVING CONCRETE SIDEWALK AND BASE MATERIAL WITHIN THE DRIPLINE OF EXISTING TREES - LIFTING RATHER THAN DRAGGING PIECES OF PAVING.

ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE084407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
3	REVISED TO ADDRESS DEP COMMENTS	ATH	05/18/20	SMM	05/18/20
2	REVISED TO ADDRESS DEP COMMENTS	ATH	03/24/20	SMM	03/24/20
1	REVISED TO ADDRESS DEP COMMENTS	ATH	11/15/19	SMM	11/15/19

REVISION

DRAWN BY	INTL	DATE
DESIGNED BY	RY	05/18/20
CHECKED BY	AH	05/18/20
APPROVED BY	SMM	05/18/20
JOB NO.	18-00672-006	
PLOT SCALE	N/A	
MODEL ID		

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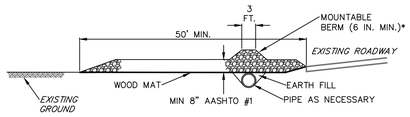
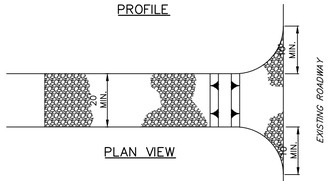
EROSION & SEDIMENT CONTROL PLAN GENERAL NOTES SHEET 7 OF 7

SCALE	DRAWING NUMBER	REV
N/A	ES-6	



PROFILE



PLAN VIEW

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

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

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

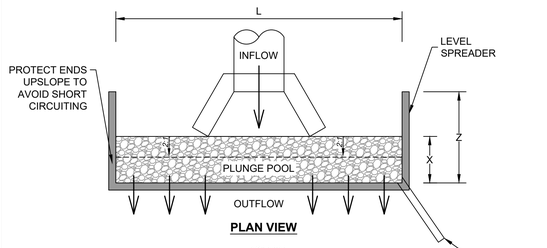
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

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

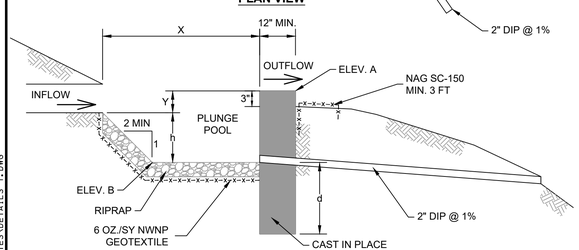
ON SITES WHERE ROCK CONSTRUCTION ENTRANCE ARE PROPOSED ACROSS WETLAND AREAS, CONTRACTOR TO INSTALL WOOD MATS BENEATH ROCK CONSTRUCTION ENTRANCES TO MINIMIZE IMPACT TO WETLAND AREAS. AFTER REMOVING THE ROCK CONSTRUCTION ENTRANCE AND WOODEN MATS, CONTRACTOR TO RESTORE WETLAND AREAS.

ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



PLAN VIEW



PROFILE VIEW

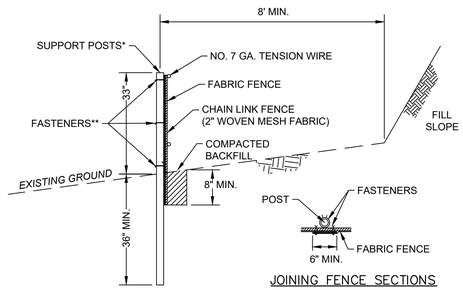
LEVEL SPREADER	RIPRAP SIZE (R-)	RIPRAP THICK. Rt (IN)	DIMENSIONS Y (FT)	h (FT)	X (FT)	Z (FT)	L (FT)	ELEV. A (FT)	ELEV. B (FT)	MIN. DEPTH d (FT)
LEVEL SPREADER 1	R-3	4	0.5	1	8	12	19	61.00	59.50	1

NOTES:

1. LEVEL SPREADER SHALL BE CONSTRUCTED AND MAINTAINED LEVEL. SMALL VARIATIONS IN HEIGHT ON THE DOWNSTREAM LIP SHALL BE LESS THAN 0.05% SLOPE ALONG THE WEIR.
2. VARIATIONS IN EXISTING GROUND ELEVATION SHALL ME LESS THAN 4 INCHES.
3. CLEAR DEBRIS (I.E. EARTH, WOOD, AND OTHER ORGANIC MATTER) LOCATED WITHIN 15 FEET DOWNSLOPE OF THE LEVEL SPREADER THAT MAY ACCUMULATE.
4. TO PRESERVE INFILTRATION CAPACITY, THE UNDERLYING SOILS SHOULD REMAIN UNDISTURBED, UN COMPACTED, AND PROTECTED FROM HEAVY EQUIPMENT.

LEVEL SPREADER

NOT TO SCALE



JOINING FENCE SECTIONS

* POSTS SPACED @ 10' MAX. USE 2 1/2" DIA. HEAVY DUTY GALVANIZED OR ALUMINUM POSTS.

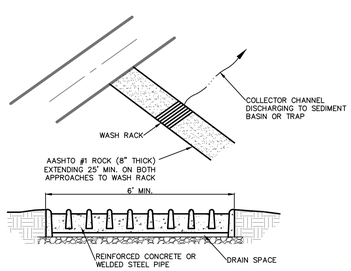
** CHAIN LINK TO POST FASTENERS SPACED @ 14" MAX. USE NO. 9 GA. ALUMINUM WIRE OR NO. 9 GALVANIZED STEEL PRE-FORMED CLIPS. CHAIN LINK TO TENSION WIRE FASTENERS SPACED @ 60" MAX. USE NO. 13.5 GA. GALVANIZED STEEL WIRE. FABRIC TO CHAIN FASTENERS SPACED @ 24" MAX. C TO C

NOTES:

1. FILTER FABRIC WIDTH SHALL BE 42" MINIMUM.
2. POSTS SHALL BE INSTALLED USING A POST HOLE DRILL.
3. CHAIN LINK SHALL BE GALVANIZED NO. 11.5 GA. STEEL WIRE WITH 2¼" OPENING, NO. 11 GA. ALUMINUM COATED STEEL WIRE IN ACCORDANCE WITH ASTM-A-491, OR GALVANIZED NO. 9 GA. STEEL WIRE TOP AND BOTTOM WITH GALVANIZED NO. 11 GA. STEEL INTERMEDIATE WIRES. NO. 7 GAGE TENSION WIRE TO BE INSTALLED HORIZONTALLY THROUGH HOLES AT TOP AND BOTTOM OF CHAIN-LINK FENCE OR ATTACHED WITH HOG RINGS AT 5' (MAX.) CENTERS.
4. SILT FENCE SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.
5. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.
6. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY

SUPER SILT FENCE

NOT TO SCALE



NOTES:

WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

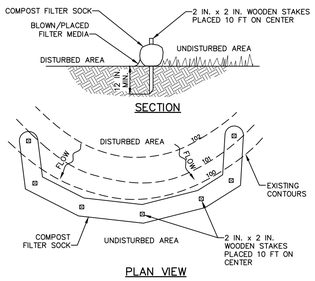
A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

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 ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ON SITES WHERE ROCK CONSTRUCTION ENTRANCE ARE PROPOSED ACROSS WETLAND AREAS, CONTRACTOR TO INSTALL WOOD MATS BENEATH ROCK CONSTRUCTION ENTRANCES TO MINIMIZE IMPACT TO WETLAND AREAS. AFTER REMOVING THE ROCK CONSTRUCTION ENTRANCE AND WOODEN MATS, CONTRACTOR TO RESTORE WETLAND AREAS.

ROCK CONSTRUCTION ACCESS WITH WASH RACK

NOT TO SCALE



PLAN VIEW

TABLE 4.1
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 Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 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 systems					
Inner Containment Netting				HDPE biaxial net	
				Continuously wound	
				Fusion-welded junctures	
				3/4" X 3/4" Max. aperture size	
Outer Filtration Mesh				Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)	
				3/16" Max. aperture size	
Sock fabrics composed of burlap may be used on projects lasting 6 months or less.					

Filtrexx & JMD

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

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

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

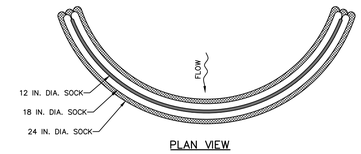
UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

NOTES:

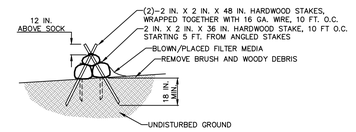
COMPOST FILTER SOCK SHALL BE MINIMUM 5 MIL HDPE BIODEGRADABLE FABRIC OR AS APPROVED BY OWNER MEETING COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS IDENTIFIED IN TABLE 4.1.

COMPOST FILTER SOCK

NOT TO SCALE



PLAN VIEW



STAKING DETAIL

DESIGN NOTES:

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

NOTES:

SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.

COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

NUMBER	LOCATION	DRAINAGE AREA (AC)	REQUIRED VOL. (CF)	BOTTOM ELEV.	CLEAN OUT ELEV.	TOP OF TRAP ELEV.	FREEBOARD (FT)
CSST-1	MARCUS HOOK	2.19	4,380	27.25	27.91	29.25	1.34
CSST-2A	PERKIOMEN CREEK	0.20	390	136.00	138.00	139.00	1.00
CSST-2B	PERKIOMEN CREEK	0.16	321	136.00	138.00	139.00	1.00

COMPOST SOCK SEDIMENT TRAP

NOT TO SCALE

TABLE 4.2
COMPOST STANDARDS

ORGANIC MATTER CONTENT	80%-100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5-8.0
MOISTURE CONTENT	35%-55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAX

REF: FIGURE 4.2 MAXIMUM PERMISSIBLE SLOPE LENGTH ABOVE COMPOST FILTER SOCKS, PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUEL, 2012

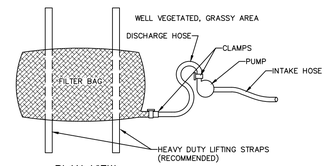
MAXIMUM SLOPE LENGTHS FOR COMPOST FILTER SOCK

% SLOPE	12" DIAMETER	18" DIAMETER	24" DIAMETER	32" DIAMETER
2 (OR LESS)	510	700	1000	1300
5	270	340	500	650
10	150	250	300	400
15	100	200	250	350
20	70	150	200	250
25	50	100	150	180
30	40	90	100	125
35	40	70	90	100
40	30	60	70	90
45	30	40	60	80
50	20	30	40	50

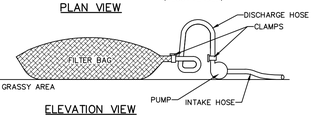
NOTES:

COMPOST SHALL BE WELL DECOMPOSED, WEED-FREE ORGANIC MATTER DERIVED FROM AGRICULTURAL, FOOD, STUMP GRINDINGS, AND YARD OR WOOD/BARK MATTER SOURCES. THE COMPOST SHOULD BE AEROBICALLY COMPOSTED. THE COMPOST SHOULD POSSESS NO OBJECTIONABLE ODORS AND SHOULD BE REASONABLY FREE (< 1% BY DRY WEIGHT) OF MAN-MADE FOREIGN MATTER. THE COMPOST PRODUCT SHOULD NOT RESEMBLE THE RAW MATERIAL FROM WHICH IT IS DERIVED. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

THE PHYSICAL PARAMETERS OF THE COMPOST SHOULD COMPLY WITH THE STANDARDS IN TABLE 4.2. THE STANDARDS CONTAINED IN PENNDOT PUBUCATION 408 ARE AN ACCEPTABLE ALTERNATIVE.



PLAN VIEW



ELEVATION VIEW

NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

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

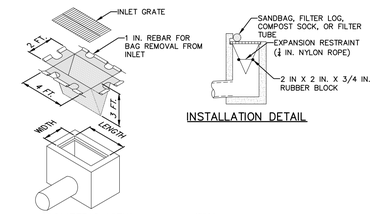
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

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

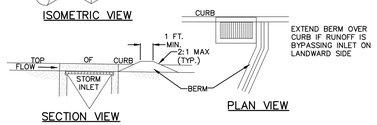
PUMPED WATER FILTER BAG

NOT TO SCALE



ISOMETRIC VIEW

INSTALLATION DETAIL



SECTION VIEW

PLAN VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

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

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS

FILTER BAG INLET PROTECTION

NOT TO SCALE

NOT TO SCALE

DATE PRINTED: 5/18/2020 8:19:02 PM
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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SHINY M. MATHEW
ENGINEER
NO. PE082407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
3	REVISED TO ADDRESS DEP COMMENTS	ATH	05/18/20	SMM	05/18/20
2	REVISED TO ADDRESS DEP COMMENTS	ATH	03/24/20	SMM	03/24/20
1	REVISED TO ADDRESS DEP COMMENTS	ATH	11/15/19	SMM	11/15/19

REVISION

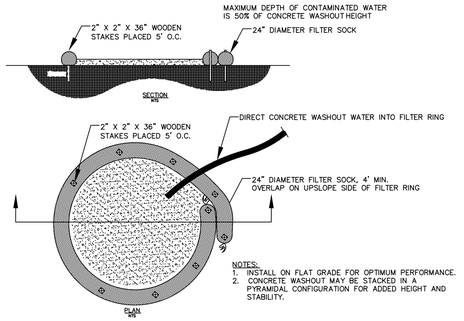
DRAWN BY	INTL	DATE	
DESIGNED BY	RY	05/18/20	
CHECKED BY	AH	05/18/20	
APPROVED BY	SMM	05/18/20	
JOB NO.	18-00672-004		
PLOT SCALE	N/A		
MODEL ID			

JMT

Johnson, Mirmiran & Thompson
1600 Market Street, Suite 520
Philadelphia, PA 19103
T: 267-256-0300

EROSION & SEDIMENT CONTROL PLAN DETAILS SHEET 1 OF 2

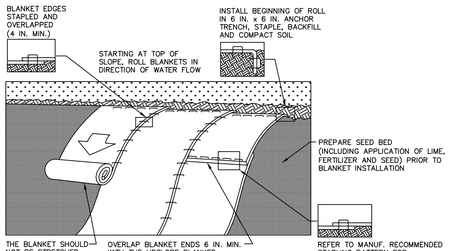
SCALE	DRAWING NUMBER	REV
N/A	ES-8	



NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. CONCRETE WASHOUT MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY.
3. ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS MUST BE FOLLOWED IN THE USE. HANDLING, AND DISPOSAL OF POTENTIALLY HAZARDOUS MATERIALS.
4. IF CONCRETE WILL BE POURED OR OTHERWISE FORMED ON SITE, A SUITABLE WASHOUT FACILITY MUST BE PROVIDED FOR THE CLEANING OF CHUTES, MIXERS, AND HOPPERS OF THE DELIVERY VEHICLES UNLESS SUCH A FACILITY WILL BE USED AT THE SOURCE OF THE CONCRETE. UNDER NO CIRCUMSTANCES MAY WASH WATER FROM THESE VEHICLES BE ALLOWED TO ENTER ANY SURFACE WATERS.
5. DRIVERS WILL BE MADE AWARE OF WASHOUT FACILITIES THROUGH THE USE OF PROPER SIGNAGE.
6. WASHOUT FACILITIES WILL NOT BE PLACED WITHIN 50 FEET OF STORM DRAINS, OPEN DITCHES OR SURFACE WATERS.
7. WHEREVER POSSIBLE, WASHOUT FACILITIES SHOULD BE LOCATED ON SLOPES NOT EXCEEDING A 2% GRADE.
8. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
9. COMPOST SOCKS SHOULD BE STAKED AS RECOMMENDED BY THE MANUFACTURER AROUND THE PERIMETER OF THE GEOMEMBRANE SO AS TO FORM A RING WITH THE ENDS OF THE SOCK LOCATED AT THE UPSLOPE CORNER.
10. CARE SHOULD BE TAKEN TO ENSURE CONTINUOUS CONTACT OF THE SOCK WITH THE GEOMEMBRANE AT ALL LOCATIONS.
11. WHERE NECESSARY, AN 18 DIAMETER SOCK MAY BE STACKED AND STAKED ONTO DOUBLE 24 SOCKS IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
12. PREFABRICATED WASHOUT CONTAINERS AND/OR SELF-INSTALLED WASHOUTS MAY BE USED IN LIEU OF COMPOST FILTER SOCK WASHOUTS AS NECESSARY PREFABRICATED WASHOUT CONTAINERS AND SELF-INSTALLED WASHOUTS SHALL BE INSTALLED AND OPERATED IN ACCORDANCE OF THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MARCH 2012).

FILTER SOCK CONCRETE WASHOUT

NOT TO SCALE



NOTES:

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

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

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

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

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

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

EROSION CONTROL BLANKET INSTALLATION

NOT TO SCALE

NOTE:
NO MATERIAL OR EQUIPMENT SHALL BE STORED OR STOCKPILED WITHIN THE AREA SURROUNDED BY TREE PROTECTION FENCING

ALL CLEARING, GRUBBING, GRADING, AND TRENCHING WITHIN 15 FEET OF TREE IS TO BE PERFORMED BY HAND

TREE PROTECTION

NOT TO SCALE

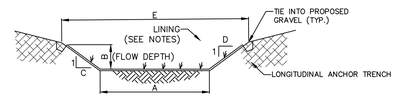
CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS

DEPTH (IN.)	PER 1,000 SQUARE FEET	PER ACRE
6	18.6	806

TOPSOIL NOTES:
1. GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN SLOPE.
2. TOPSOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF 4 TO 8 INCHES MINIMUM -- 2 INCHES ON FILL OUTSLOPES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS UNLESS SUCH DEPRESSIONS ARE PART OF THE PCSM PLAN.
3. 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 WHEREVER POSSIBLE PRIOR TO SEEDING.

TOPSOIL SPECIFICATIONS

NOT TO SCALE



CHANNEL NUMBER	LOCATION	TEMPORARY OR PERMANENT	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	CHANNEL SLOPE	GEOTEXTILE LINING	PERMANENT LINING
CH-1	QUAKERTOWN	PERMANENT	2	0.59	3	3	8.51	1.0%	SC150	R-3
CH-2A	TRANSCO	PERMANENT	2	0.15	3	3	5.90	5.0%	SC150	VEGETATION
CH-2B	TRANSCO	PERMANENT	2	0.16	2	2	4.62	6.7%	SC150	VEGETATION
CH-2C	TRANSCO	PERMANENT	2	0.20	2	2	4.82	4.0%	SC150	VEGETATION

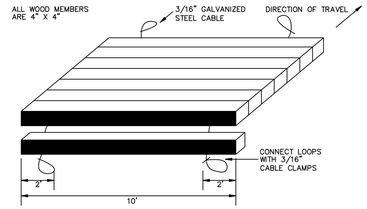
NOTES:

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

RIPRAP PLACEMENT THICKNESS IN ACCORDANCE WITH PADEP E&S BMP MANUAL RIPRAP SPECIFICATIONS

STORMWATER DIVERSION CHANNEL

NOT TO SCALE



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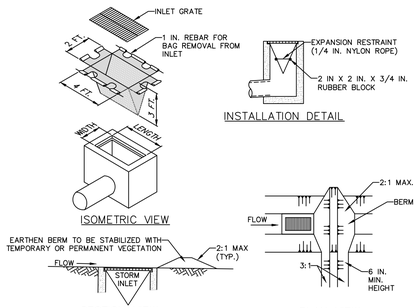
A GEOTEXTILE UNDERLAYMENT SHALL BE USED UNDER THE WOOD MAT.

TYPICAL WOOD MAT FOR WETLAND CROSSING OR ACCESS ROUTE

NOT TO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

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

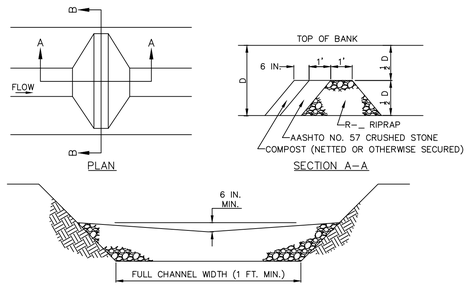
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

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

FILTER BAG INLET PROTECTION TYPE M INLET

NOT TO SCALE



ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE (R-__)
RF-1	MARCUS HOOK	1.0	R-3
RF-2	MARCUS HOOK	1.0	R-3

FOR D ≥ 3 FT. - USE R-4
FOR D ≥ 2 FT. TO D < 3 FT. - USE R-3
NOT APPLICABLE FOR D < 2 FT.

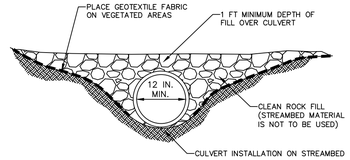
NOTES:

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.

IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

ROCK FILTER/CHECK DAM

NOT TO SCALE



NOTES:

PROVIDE 50' STABILIZED ACCESS TO CROSSING ON BOTH SIDES OF STREAM CHANNEL (SEE STANDARD CONSTRUCTION DETAIL #3-12).

PIPES SHALL EXTEND BEYOND THE TOE OF THE ROADWAY.

RUNOFF FROM THE ROADWAY SHALL BE DIVERTED OFF THE ROADWAY AND INTO A SEDIMENT REMOVAL BMP BEFORE IT REACHES THE ROCK APPROACH TO THE CROSSING.

MAINTENANCE

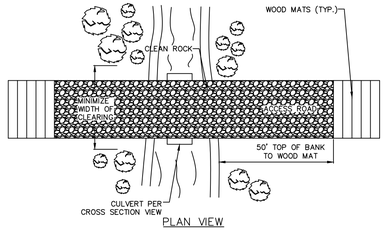
1. TEMPORARY STREAM CROSSINGS SHALL BE INSPECTED ON A DAILY BASIS.
2. DAMAGED CROSSINGS SHALL BE REPAIRED WITHIN 24 HOURS OF THE INSPECTION AND BEFORE ANY SUBSEQUENT USE.
3. SEDIMENT DEPOSITS ON THE CROSSING OR ITS APPROACHES SHALL BE REMOVED WITHIN 24 HOURS OF THE INSPECTION.

AS SOON AS THE TEMPORARY CROSSING IS NO LONGER NEEDED, IT SHALL BE REMOVED. ALL MATERIALS SHALL BE DISPOSED OF PROPERLY AND DISTURBED AREAS STABILIZED.

TEMPORARY CROSSING - SECTION VIEW

NOT TO SCALE

TEMPORARY STREAM CROSSING	LOCATION	D (IN.)	PIPE MATERIAL
1	SCHUYLKILL	24	RCP
2	SCHUYLKILL	36	RCP



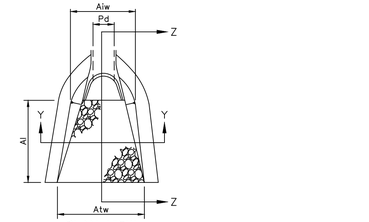
NOTES:

FOLLOW PERMIT CONDITIONS REGARDING REMOVAL OF CROSSING.

INSTALLATION TO OCCUR DURING DRY WEATHER ONLY

TEMPORARY CROSSING - PLAN VIEW

NOT TO SCALE



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE R-__	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
M-1	12	R-3	12	6	3	9
Q-1	12	R-3	12	6	3	9

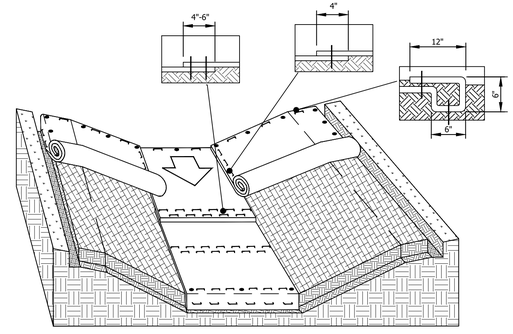
NOTES:

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

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

RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE



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

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET

N.T.S.

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ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SHINY M. MATHEW
ENGINEER
NO. PE082407

DATE: _____

REV	DESCRIPTION	CHK	DATE	APP	DATE
3	REVISED TO ADDRESS DEP COMMENTS	ATH	05/18/20	SMM	05/18/20
2	REVISED TO ADDRESS DEP COMMENTS	ATH	03/24/20	SMM	03/24/20
1	REVISED TO ADDRESS DEP COMMENTS	ATH	11/15/19	SMM	11/15/19

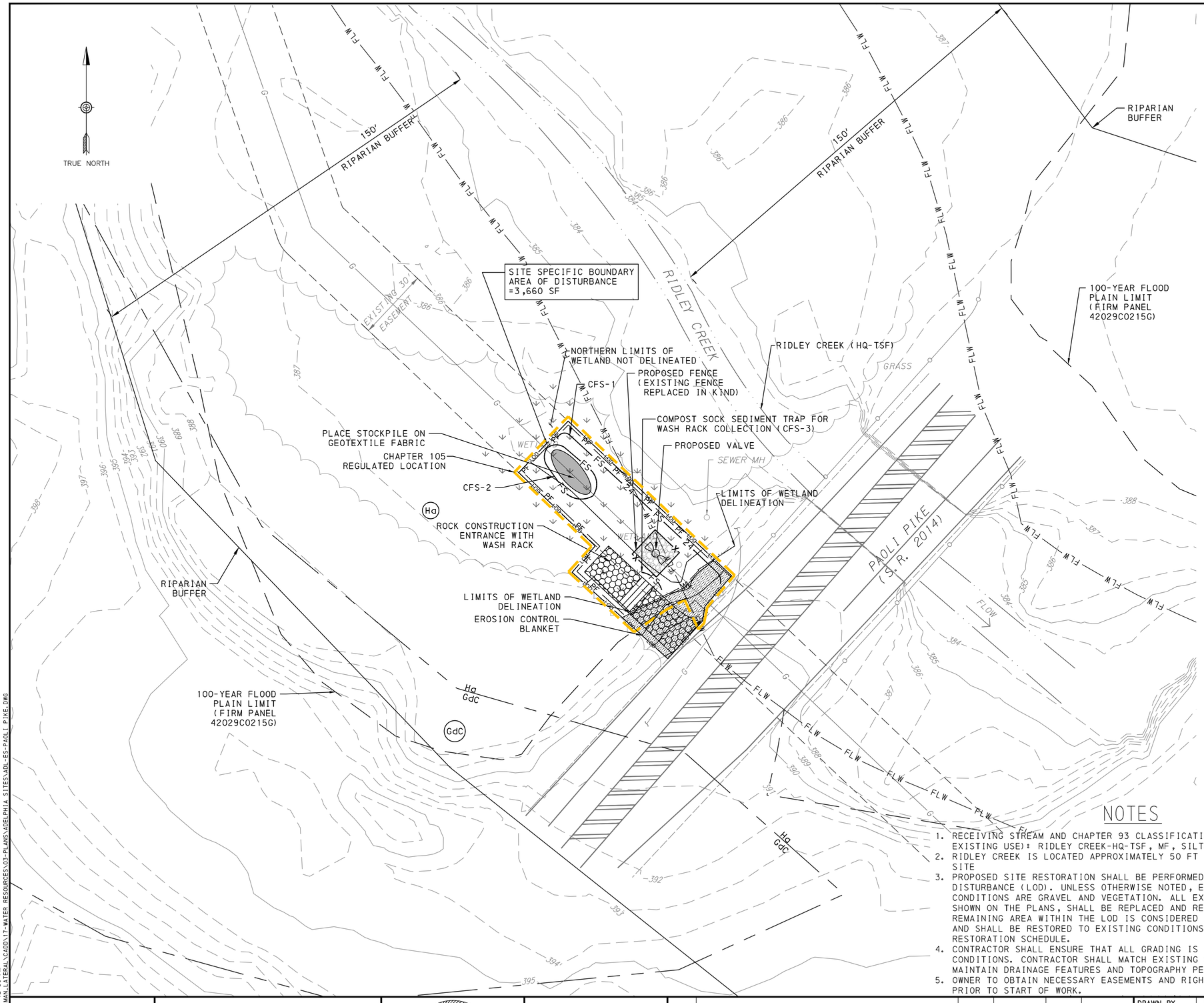
REVISION

DRAWN BY	INTL	DATE	
DESIGNED BY	RY	05/18/20	
CHECKED BY	AH	05/18/20	
APPROVED BY	SMM	05/18/20	
JOB NO.	18-00672-004		
PLOT SCALE	N/A		
MODEL ID			

Johnson, Mirmiran & Thompson
1600 Market Street, Suite 520
Philadelphia, PA 19103
T: 267-256-0300

EROSION & SEDIMENT CONTROL PLAN DETAILS SHEET 2 OF 2

SCALE	DRAWING NUMBER	REV
N/A	ES-9	



LEGEND

- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- EXISTING TREE LINE
- EXISTING FENCE LINE
- PROPOSED FENCE LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UTILITY POLE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING SEWER LINE
- EXISTING GAS EASEMENT
- UTILITY EASEMENT
- EXISTING PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- EXISTING WETLAND AREA
- 100-YEAR FLOOD PLAIN
- 100-YEAR FLOOD WAY
- SOIL BOUNDARY
- SOIL TYPE
- LIMIT OF DISTURBANCE/ PERMIT BOUNDARY
- DRAINAGE AREA
- CHAPTER 105 REGULATED LOCATION (PERMITTED BY OTHERS)
- PROPOSED TEST PIT LOCATION
- PROPOSED VALVE LOCATION
- WOOD MATS
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET
- EXISTING GRAVEL TO BE REPLACED AND REFRESHED (IN KIND)
- INLET PROTECTION
- TREE PROTECTION
- COMPOST FILTER SOCK (12" DIA.)
- COMPOST FILTER SOCK (18" DIA.)
- COMPOST FILTER SOCK (24" DIA.)
- SUPER SILT FENCE

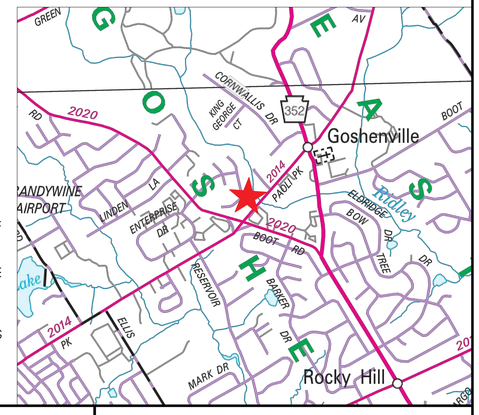
Chapter 105 GP111518315 and GP081518308

NOTES

1. RECEIVING STREAM AND CHAPTER 93 CLASSIFICATION (DESIGNATED AND EXISTING USE): RIDLEY CREEK-HQ-TSF, MF, SILTATION-IMPAIRED
2. RIDLEY CREEK IS LOCATED APPROXIMATELY 50 FT NE OF THE PROJECT SITE
3. PROPOSED SITE RESTORATION SHALL BE PERFORMED WITHIN THE LIMIT OF DISTURBANCE (LOD). UNLESS OTHERWISE NOTED, EXISTING COVER CONDITIONS ARE GRAVEL AND VEGETATION. ALL EXISTING GRAVEL, AS SHOWN ON THE PLANS, SHALL BE REPLACED AND REFRESHED IN KIND. THE REMAINING AREA WITHIN THE LOD IS CONSIDERED EXISTING VEGETATION AND SHALL BE RESTORED TO EXISTING CONDITIONS. REFER TO THE SITE RESTORATION SCHEDULE.
4. CONTRACTOR SHALL ENSURE THAT ALL GRADING IS RESTORED TO EXISTING CONDITIONS. CONTRACTOR SHALL MATCH EXISTING CONTOURS AND MAINTAIN DRAINAGE FEATURES AND TOPOGRAPHY PER SITE CONDITIONS.
5. OWNER TO OBTAIN NECESSARY EASEMENTS AND RIGHT TO ENTER APPROVAL PRIOR TO START OF WORK.

LOCATION MAP

NOT TO SCALE



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DESIGNED BY	RY	05/18/20
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APPROVED BY	SMM	05/18/20
JOB NO.	18-00672-006	
PLOT SCALE	1"=20'	
MODEL ID		

ADELPHIA GATEWAY

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SHINY M. MATHEW — ENGINEER NO. PE083407

10 0 20 40

SCALE: 1"= 20'

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E&SC & SITE RESTORATION PLAN
PAOLI PIKE BLOWDOWN

CHESTER COUNTY

SCALE	DRAWING NUMBER	REV
1"=20'	ES-14	

DATE PRINTED: 5/18/2020 7:12:30 PM
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