ENVIRONMENTAL NOTES

GENERAL NOTES:

1. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT REQUIRES AN ADVANCED 48-HOUR WRITTEN NOTIFICATION PRIOR TO THE START OF ANY LAND DISTURBANCE. A FAILURE OF THIS NOTIFICATION PRIOR TO THE START OF CONSTRUCTION WILL RESULT IN THE ISSUANCE OF A STOP CONSTRUCTION ORDER AND MAY BE CAUSE FOR LEGAL ACTION. NOTICE MAY BE FAXED TO (908) 788-0795 OR MAILED TO:
   HUNTERDON COUNTY SOIL CONSERVATION DISTRICT
   687 PITTSTOWN ROAD
   FRENCHTOWN, NJ 08825

2. LAND DISTURBANCE AND CONSTRUCTION WORK START INCLUDES ANY DEMOLITION OR CLEARING THAT TAKES PLACE ON THE PROJECT SITE. APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED AND MAINTAINED AT THE PROPOSED DEMOLITION AREAS.

3. THE PROJECT APPLICANT AND CONTRACTOR ARE TO BE AWARE THAT ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE SOIL CONSERVATION DISTRICT OR MUNICIPAL ENGINEER IF FIELD CONDITIONS OR UNFORESEEN SITUATIONS WARRANT THEM.

4. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT ENCOURAGES THE INSTALLATION AND STABILIZATION OF PERMANENT DETENTION OR RETENTION FACILITIES FROM THE START OF THE PROJECT. THIS IS PARTICULARLY IMPORTANT ON ACCOUNT OF THE STEEP TOPOGRAPHY AND SOILS OF HUNTERDON COUNTY. PRIORITY SHOULD TO BE SET ON CONSTRUCTION OF ANY THE DETENTION BASIN OR RETENTION BASIN FACILITY PRIOR TO ANY SIGNIFICANT AMOUNT OF LAND DISTURBANCE. SEDIMENT RISERS CAN BE USED ON A DETENTION BASIN AT ANY TIME AS LONG AS THEY MEET THE CRITERIA OF THE STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS. IF A SEDIMENT BASIN IS DESIGNED, AS EITHER WITHIN THE PERMANENT BASIN AREA OR AS A STAND-ALONE BASIN, THEY ARE TO BE DESIGN FULLY IN COMPLIANCE WITH THE STANDARDS AND ARE TO BE PROPERLY MAINTAINED DURING CONSTRUCTION. ALL DETENTION/RETENTION BASINS BE COMPLETED AND PERMANENTLY STABILIZED (ALONG WITH CONDUIT OUTLET PROTECTION AND LOW-FLOW CHANNEL) BEFORE ANY STORM DRAINAGE PIPING IS INSTALLED TO THE BASIN AND SAME PIPING IS FUNCTIONING. NO PAVING IS TO TAKE PLACE ON THE PROJECT SITE UNTIL ALL STORMWATER DETENTION/RETENTION FACILITIES ARE ADEQUATELY STABILIZED AS PER PLAN. FAILURE TO MAINTAIN A DETENTION, RETENTION, OR SEDIMENT FACILITY IN WORKING ORDER DURING CONSTRUCTION MAY BE GROUNDS FOR ISSUANCE OF A STOP CONSTRUCTION ORDER BY THE SOIL CONSERVATION DISTRICT.

5. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT DOES NOT SUPPORT NOR ENDORSE MASS EXCAVATION. THE AMOUNT OF SOIL DISTURBED AT ONE TIME, AND SUBJECT TO EROSION, IS TO BE KEPT TO A MINIMUM. IT IS THE POLICY OF THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT THAT LARGE DISTURBANCES OF SOIL EXPOSED AT ONE TIME ON A PROJECT WILL REQUIRE A DETAILED PLAN AND TIME-LINE FOR GETTING AREAS STABILIZED. THE STANDARD FOR SEDIMENT BARRIERS WILL BE USED FOR LIMITING LARGE AREAS OF EXCAVATION. IF EXCAVATIONS ARE PROPOSED THAT EXCEED THE SEDIMENT BARRIER STANDARD, THEN ADDITIONAL MEASURES ARE TO BE DESIGNED AND DETAILED AND A DETAILED SEQUENCE OF CONSTRUCTION BE SUBMITTED FOR RE-CERTIFICATION AND APPROVAL. AS A MINIMUM, SOILS EXPOSED FOR LONGER THAN 30 DAYS WILL REQUIRE TEMPORARY STABILIZATION FOLLOWING THE AGRONOMIC SPECIFICATIONS ON THE PLAN.

6. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN IS TO BE KEPT ON THE PROJECT SITE DURING CONSTRUCTION AND AVAILABLE FOR REVIEW BY THE CONTRACTOR AND SOIL CONSERVATION DISTRICT INSPECTORS.

7. THE LAND DISTURBANCE IS TO PROCEED IN ACCORDANCE WITH THE APPROVED SEQUENCE OF CONSTRUCTION AND THE CERTIFIED PLAN. ALL REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED AND MAINTAINED AS OUTLINED IN THE PLAN

8. THE SOIL CONSERVATION DISTRICT IS TO BE NOTIFIED AND REPRESENTED AT A PRECONSTRUCTION CONFERENCE (USUALLY HELD AT THE MUNICIPAL ENGINEERS OFFICE) PRIOR TO THE START OF CONSTRUCTION OR ANY LAND DISTURBANCE.

9. ALL DISTURBED AREAS THAT ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED TO BE PERMANENTLY SEEDED WITHIN 30 DAYS MUST BE TEMPORARILY STABILIZED AS PER SPECIFICATIONS BELOW.

10. ALL EXPOSED AREAS WHICH ARE TO BE PERMANENTLY VEGETATED, ARE TO BE SEEDED AND MULCHED WITHIN 10 DAYS OF FINAL GRADING.

11. STRAW MULCH (HAY MULCH MAY BE SUBSTITUTED IF APPROVED BY THE DISTRICT) IS TO BE APPLIED TO ALL SEEDINGS AT A RATE OF 1-1/2 TO 2 TONS PER ACRE (APPROX. 100 TO 130 BALES PER ACRE).

12. MULCH ANCHORING IS REQUIRED AFTER MULCHING TO MINIMIZE LOSS BY WIND OR WATER. THIS IS TO BE DONE USING ONE OF THE METHODS (CRIMPING, LIQUID MULCH BINDERS, NETTINGS, ETC.) IN THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY".

13. EXISTING WEEDY AND POORLY-VEGETATED AREAS WITH LESS THAN 80 PERCENT PERENNIAL GRASS COVER MUST RECEIVE PERMANENT STABILIZATION AS PER THESE SPECIFICATIONS.

14. ALL BAGS NEED TO BE SAVED FOR LIME, FERTILIZER, SEED, AND LIQUID MULCH BINDER (IF MULCH ANCHORING METHOD). SUCH PROOFS NEED TO BE SUBMITTED TO THE DISTRICT INSPECTOR FOR VERIFICATION OF MATERIALS AND QUANTITIES USED FOR ALL SEEDINGS.

15. AN ADDITIONAL FEE PER INSPECTION (AS PER THE CURRENT HUNTERDON COUNTY SOIL CONSERVATION DISTRICT FEE SCHEDULE AT THE TIME OF INSPECTION) WILL BE ASSESSED ON THOSE SITES WHERE ADDITIONAL INSPECTIONS ARE NECESSITATED AS A RESULT OF NON-COMPLIANCE WITH THE APPROVED PLAN. THIS INCLUDES ADDITIONAL INSPECTIONS PERFORMED AFTER THE FAILURE OF AN INITIAL REPORT OF COMPLIANCE INSPECTION. THE ENTIRE PROJECT SITE IS INSPECTED AT THE TIME OF A REQUEST FOR REPORT OF COMPLIANCE.

16. SOILS IN HUNTERDON COUNTY REQUIRE THAT ALL STONE TRACKING PADS (STABILIZED CONSTRUCTION ENTRANCE) BE INSTALLED AT A MINIMUM OF 100 FT. IN LENGTH FOR ROADWAY GRADES OF 0% TO 2% AND 200 FT. FOR ACCESS GRADES GREATER THAN 2%. THIS REQUIREMENT IS THE SAME, REGARDLESS IF MAIN PROJECT ENTRANCE OR INDIVIDUAL DWELLING LOT. STONE TRACKING PADS OR OTHER MEASURES APPROVED BY THE SOIL CONSERVATION DISTRICT ARE TO BE INSTALLED AT ALL CONSTRUCTION ACCESSES TO PAVEMENT.

    THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.

    WHERE ACCUMULATING OF DUST/SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS, WHICH ARE NOT STABILIZED, SHALL BE ADEQUATELY BLOCKED OFF.

17. CONDUIT OUTLET PROTECTION (RIP-RAP APRONS OR SCOUR HOLES) MUST BE DESIGNED AND INSTALLED AT ALL PIPE OUTLETS AS PER THE CERTIFIED PLANS AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY. CONDUIT OUTLET PROTECTION MUST BE INSTALLED IMMEDIATELY FOLLOWING PIPE INSTALLATION AND PRIOR TO ANY PIPE FLOW. CONDUIT OUTLET PROTECTION MUST BE MAINTAINED AS PER DESIGN UNTIL THE COMPLETION OF THE PROJECT AND ISSUE OF FINAL REPORT OF COMPLIANCE.

18. ALL STORMWATER INLET PROTECTION NEEDS TO BE MAINTAINED PERIODICALLY WITH FRESH HAYBALES OR CLEAN STONE BERMS (STONE SIZED 1 1/2"-2 1/2") OR APPROVED METHOD TO COMPLETELY ENCIRCLE, BUT NOT BLOCK THE INLETS.

    INSPECTIONS OF STORMWATER INLET PROTECTION SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. INLET PROTECTION NEEDS TO BE MAINTAINED UNTIL ALL AREAS OF THE SITE, OR AS A MINIMUM THE AREA DRAINING TO THE INLET, ARE PERMANENTLY STABILIZED AND APPROVED BY SOIL CONSERVATION DISTRICT INSPECTORS.

19. DUST CONTROL MEASURES ARE TO BE USED DURING ALL PHASES OF CONSTRUCTION OF THE PROJECT. SEE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY PAGES 16-1 AND 16-2.

20. ALL TREES THAT ARE TO BE PROTECTED FROM ENVIRONMENTAL AND MECHANICAL INJURY DURING CONSTRUCTION ARE TO BE ADEQUATELY MARKED IN FENCED-OFF PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION. FOR FURTHER INFORMATION SEE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY PAGES 9-1 THROUGH 9-7.

21. DEWATERING METHODS ARE TO BE FOLLOWED TO PROPERLY REMOVE SUSPENDED SEDIMENTS IN WATER FROM EXCAVATIONS AND/OR TRENCHES PRIOR TO DISCHARGE TO DOWNSTREAM AREAS AND/OR WATERCOURSES. THESE METHODS ARE TO FOLLOW THOSE FOUND IN THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, PAGES 14-1TO 14-7.

22. ON SUBDIVISION PLANS, INDIVIDUAL LOTS ON STEEP SLOPES (GREATER THAN 10%) OR IN CLOSE PROXIMITY TO A DRAINAGEWAY, REQUIRE AN INDIVIDUAL SOIL EROSION AND SEDIMENT CONTROL/GRADING TO BE SUBMITTED AND CERTIFIED PRIOR TO OBTAINING A BUILDING PERMIT AND BEFORE ANY LAND DISTURBANCE ON THAT LOT. THESE INDIVIDUAL LOT PLANS ARE CONSIDERED MINOR REVISIONS TO A CERTIFIED PLAN AND WILL BE SUBJECT TO A RESUBMISSION FEE FOR REVIEW AND CERTIFICATION AS PER THE CURRENT HUNTERDON COUNTY SOIL CONSERVATION DISTRICT FEE SCHEDULE AT THE TIME OF SUBMISSION .

23. AS PER THE TRAFFIC CONTROL STANDARD IN THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (PAGE 33-1) STEEP BANKS, WETLAND BUFFERS, WATERWAYS, AND OTHER SENSITIVE AREAS ARE TO BE AVOIDED BY CONSTRUCTION TRAFFIC. WETLAND BUFFER AND WETLAND AREAS ARE TO BE ADEQUATELY MARKED IN FIELD PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION.

24. ANY FORMER AGRICULTURAL CROP FIELDS THAT ARE EITHER IN CROPS, CROP RESIDUE, OR ANNUAL WEED COVER ARE TO BE STABILIZED FOLLOWING THE AGRONOMIC SPECIFICATIONS FOR HUNTERDON COUNTY. THIS IS TO BE EITHER A COVER CROP FROM THE PERIOD OF LAST HARVEST AND CONSTRUCTION START-UP OR TEMPORARY STABILIZATION THROUGH SEEDING AND MULCHING. AREAS THAT ARE NOT GOING TO BE EITHER BUILT ON OR CONTINUED TO BE FARMED ARE TO RECEIVE PERMANENT STABILIZATION.

25. IF EXCESS FILL OR ANY OTHER MATERIAL IS TO BE REMOVED FROM THE SITE, THE PROJECT OWNER/APPLICANT SHALL BE RESPONSIBLE FOR ITS PROPER DISPOSAL AND WILL NOTIFY THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT AS TO THE PLANNED DISPOSAL SITE LOCATION. IF APPLICABLE, A SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO, REVIEWED AND CERTIFIED BY THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT PRIOR TO ANY MATERIAL REMOVAL FROM THE PROJECT SITE. REMOVAL OF ANY SOIL MATERIAL FROM THE PROJECT SITE WITHOUT WRITTEN AUTHORIZATION FROM THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT IS A VIOLATION OF THE STATE SOIL EROSION AND SEDIMENT CONTROL ACT.

26. STOCKPILING OF FINES (SAND, QUARRY-PROCESS-BLEND, ETC.) IS NOT ALLOWED ON PAVED SURFACES OF THE PROJECT SITE.

27. ANY GABION BASKETS USED ON THE PROJECT ARE TO BE COATED WITH PLASTIC OR PVC AND FILLED WITH 4"-7" ANGULAR ROCK. THE GABION THICKNESS IS TO BE AT LEAST THE CALCULATED STONE D50 SIZE OF A REGULAR RIP-RAP APRON. FILTER FABRIC IS TO BE INSTALLED BETWEEN THE SUBGRADE AND THE GABIONS.

28. THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS ARE NOT TO BE EXCEEDED UNLESS AUTHORIZED BY THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT AND A REVISED PLAN SUBMITTED FOR CERTIFICATION.

29. ALL DISTURBED ROADSIDE AREAS NEED TO BE TOPSOILED, FINAL-GRADED, LIMED, FERTILIZED, SEEDED, MULCHED, AND MULCH-ANCHORED (FOLLOWING DISTRICT AGRONOMIC SPECIFICATIONS FOR PERMANENT SEEDING)FOR A MINIMUM DISTANCE APPROVED BY THE DISTRICT BACK FROM THE CURB-LINE PRIOR TO APPROVAL OF PERMANENT IMPROVEMENT.

30. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT DOES NOT RECOMMEND THE USE OF RIP-RAP D50 SIZES SMALLER THAN 6" FOR APRONS OR SCOUR HOLES SINCE SMALLER STONE SIZES (3" OR 4") TEND TO WASH/ERODE UNDER HIGH INTENSITY RAIN STORMS. THE HUNTERDON DISTRICT RECOMMENDS THAT THE SMALLEST D50 STONE SIZE BE SPECIFIED AS 6" WITH THICKNESS SPECIFIED AS 12" WITH FILTER FABRIC OR 18" WITHOUT FABRIC.

31. DIVERSIONS TO DIRECT WATER OFF OF A GRADED RIGHT-OF-WAY ONTO A STABLE AREA ARE NEEDED DURING CONSTRUCTION.

32. A SEDIMENT BARRIER MUST BE INSTALLED ABOVE ANY DETENTION/RETENTION BASINS (BETWEEN THE ROADWAY/BUILDING CONSTRUCTION AND DETENTION BASIN). THIS IS TO PROTECT THE DETENTION BASIN NEWLY GRADED/SEEDED AREAS WHILE THE OTHER CONSTRUCTION IS BEING COMPLETED AND ALL UPSTREAM AREAS ARE PERMANENTLY STABILIZED.

33. HYDROSEEDING/HYDROMULCHING ARE NOT RECOMMENDED PRACTICES IN HUNTERDON COUNTY DUE TO THE HIGH FAILURE RATE OF SEEDINGS, STEEP TOPOGRAPHY, POOR SEED-TO-SOIL CONTACT AND POOR GROUND SURFACE COVERAGE. ALL SEED MUST BE INCORPORATED INTO THE SOIL. HYDROSEEDING EQUIPMENT MAY BE USED IN CONJUNCTION WITH STRAW/HAY MULCH FOR THE PURPOSE OF ANCHORING THE MULCH WITH LIQUID MULCH BINDERS.

34. IF SUBSURFACE WATER PROBLEMS ARE DISCOVERED DURING CONSTRUCTION, THEY WILL BE RECTIFIED FOLLOWING THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (SUBSURFACE DRAINAGE, PAGE 32-1 THROUGH 32-4).

35. ALL DEVELOPMENT ROADWAYS ARE TO BE KEPT SCRAPED/SWEPT TO REMOVE SEDIMENT ACCUMULATIONS ALONG CURBS AND AROUND STORMWATER INLETS.

36. THE MAXIMUM ALLOWABLE VEGETATED SLOPE IS 2:1. SLOPES IN EXCESS OF 3:1 (BETWEEN 2:1 AND 3:1) REQUIRE TEMPORARY EROSION CONTROL MATTING, SUCH AS EXCELSIOR "CURLEX" OR EQUIVALENT, FOR STABILIZATION. THE MATTING IS TO BE PROPERLY INSTALLED WITH SPECIFIED OVERLAP, CHECK SLOTS, ANCHORING SPACING, AND ANCHORING DEVICE TYPE, GAUGE, AND SIZE.

37. ALL DISTURBED AREAS THAT ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED TO BE PERMANENTLY SEEDED WITHIN 30 DAYS MUST BE TEMPORARILY STABILIZED AS PER THE AGRONOMIC SPECIFICATIONS.

38. A REPORT OF COMPLIANCE FROM THE SOIL CONSERVATION DISTRICT IS REQUIRED FOR EACH DWELLING LOT PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY ON THAT LOT. FAILURE TO MAINTAIN OR COMPLY WITH THE SOIL EROSION AND SEDIMENT CONTROL PLAN FOR THE PROJECT WILL BE CAUSE FOR COMPLIANCE FAILURE ON AN INDIVIDUAL LOT.

39. IT IS THE OWNER/APPLICANTS RESPONSIBILITY TO NOTIFY THE DISTRICT OF ALL PROPERTY CONVEYANCES AND SALE OF INDIVIDUAL LOTS ON A PROJECT. SOIL EROSION AND SEDIMENT CONTROL PLAN APPLICATIONS ARE TO BE FILED BY ANY NEW OWNERS ON PROJECTS/LOTS WHERE CONSTRUCTION ACTIVITIES ARE TO STILL TAKE PLACE.

40. PURSUANT TO THE NEW JERSEY SOIL EROSION AND SEDIMENT CONTROL ACT, CHAPTER 251, P.L. 1975, THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT HAS REVIEWED THE PLANS FOR THIS PROJECT AND CERTIFIES THE SOIL EROSION AND SEDIMENT CONTROL PLAN. THE APPROVAL OF THE SOIL EROSION AND SEDIMENT CONTROL PLANS BY THE SOIL CONSERVATION DISTRICT IS LIMITED TO THE SOIL EROSION, SEDIMENTATION, AND RELATED STORMWATER MANAGEMENT CONTROLS SPECIFIED IN THIS PLAN. IT IS NOT AUTHORIZATION TO ENGAGE IN THE PROPOSED LAND USE UNLESS THE MUNICIPALITY OR OTHER CONTROLLING AGENCY HAS PREVIOUSLY APPROVED SUCH USE.

41. PLANS SUBMITTED TO THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT MUST BE CONSISTENT WITH PLANS ANY PLANS SUBMITTED TO A REGULATORY AGENCY SUCH AS NJDEP, MUNICIPALITY, ETC. ANY REVISIONS REQUIRED BY ANY REVIEWING AUTHORITY WOULD REQUIRE A RESUBMISSION TO THE DISTRICT FOR REVIEW.

42. ALL REVISIONS AND MUNICIPAL RENEWALS OF THIS PROJECT WILL REQUIRE RESUBMISSION AND APPROVAL BY THE SOIL CONSERVATION DISTRICT.

43. REPORT OF COMPLIANCE: A REPORT OF COMPLIANCE APPROVING PERMANENT STABILIZATION MEASURES (OR A SOIL EROSION AND SEDIMENT CONTROL COMPLETION BOND AGREEMENT WITH TEMPORARY STABILIZATION FOR THE WINTER SEASON) IS TO BE ISSUED BY THE SOIL CONSERVATION DISTRICT ON ALL PROJECTS AT THEIR COMPLETION. BEFORE ANY CERTIFICATE OF OCCUPANCY (PERMANENT OR TEMPORARY) CAN BE GRANTED BY THE MUNICIPALITY OR STATE, A WRITTEN REPORT OF COMPLIANCE MUST BE ISSUED BY THE SOIL CONSERVATION DISTRICT.

44. PURSUANT TO AUTHORITY GRANTED BY N.J.S.A. 4:24_47, THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT PERIODICALLY INSPECTS THE PROJECT SITE FOR COMPLIANCE WITH THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS AND THE STATE SOIL EROSION AND SEDIMENT CONTROL ACT. FAILURE TO COMPLY WITH THE PLANS AND THE ACT MAY BE CAUSE FOR COURT ACTION AND PENALTIES, PURSUANT TO N.J.S.A. 4:24_53. THE MAXIMUM STATUTORY PENALTY PROVIDED BY LAW FOR VIOLATIONS OF THE SOIL EROSION AND SEDIMENT CONTROL ACT IS A FINE OF UP TO $3,000 EACH DAY AND AN INJUNCTIVE ORDER OF THE SUPERIOR COURT.

45. IT IS POLICY OF THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT TO PERIODICALLY EVALUATE ALL PROJECTS TO DETERMINE IF THE COSTS FOR REVIEW AND INSPECTION EXCEED THE PAID FEES. PRIOR TO THE FEES BEING EXCEEDED AN ADDITIONAL FEE WILL BE ASSESSED. THIS FEE WILL BE BASED ON THE INCOMPLETE PORTION(S) OF THE PROJECT, REGARDLESS IF PRESENTLY UNDER CONSTRUCTION OR NOT, AS PER THE CURRENT HUNTERDON COUNTY SOIL CONSERVATION DISTRICT FEE SCHEDULE AT THE TIME OF EVALUATION.

46. SOIL COMPACTION: AREAS OF TRAVEL WITHIN A PROJECT SITE AND/OR STAGING AND PARKING AREAS MAY HAVE SOILS COMPACTED DURING THE COURSE OF PROJECT CONSTRUCTION. ALL SOIL COMPACTION IS TO BE CORRECTED PRIOR TO ANY PERMANENT STABILIZATION AND COMPLETION OF PROJECT. THE TOPSOILING STANDARD (NJ SE&SC STANDARDS PAGE 8-2) STATES THAT WHERE THERE IS COMPACTION, THE SURFACE IS TO BE SCARIFIED 6" TO 12" PRIOR TO APPLYING TOPSOIL FOR PERMANENT STABILIZATION. THE SOIL CONSERVATION DISTRICT WILL BE INSPECTING FOR THIS TO BE EMPLOYED PRIOR TO ANY PERMANENT STABILIZATION AND PRIOR TO ISSUE OF ANY REPORT OF COMPLIANCE. WHERE TOPSOIL IS NOT BEING STRIPPED DURING CONSTRUCTION, PRE AND POST COMPACTION TEST MAY BE USED TO VERIFY THAT CONSTRUCTION TRAFFIC HAS NOT CAUSED A SOIL COMPACTION PROBLEM TO THE SITE.

NOTICES TO CONTRACTOR:

1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO WORK.
2. THE CONTRACTOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. WATERBARS IN AGRICULTURAL OR RESIDENTIAL AREAS ARE TEMPORARY AND SHALL BE REMOVED AS PART OF FINAL SITE GRADING. SEEDING IS NOT REQUIRED IN CULTIVATED CROPLANDS UNLESS REQUESTED BY THE LANDOWNER.
4. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE AGENCY HAVING JURISDICTION.
5. FURNISH & INSTALL SWALES WHENEVER CONCENTRATED FLOWS HAVE THE POTENTIAL TO RUN ONTO OR THROUGH THE CONSTRUCTION AREA. DIRECT THE SWALE DISCHARGE TO A RIPRAP ENERGY DISSIPATER AND VEGETATED AREA.
6. CONTRACTOR SHALL MINIMIZE THE TOTAL AREA OF DISTURBANCE.
7. CONTRACTOR SHALL INSTALL SEED MIXTURE AS DIRECTED BY PENNEAST. SEED MIXTURE USE WILL VARY ACCORDING TO PROJECT, LANDOWNER REQUEST AND ENVIRONMENTAL REQUIREMENTS.
8. ONCE ANY EROSION CONTROL MEASURES ARE INSTALLED, THE MAINTENANCE AND INSPECTION PROCEDURES SHALL BEGIN. THE CONTRACTOR SHOULD BE AWARE THAT THE INSPECTION FORMS BECOME AN INTEGRAL PART ESCP AND SHALL BE MADE READILY AVAILABLE TO THE GOVERNMENT INSPECTION OFFICIALS. THE PROJECT OWNER'S ENGINEER, AND THE PROJECT OWNER FOR REVIEW UPON REQUEST DURING VISITS TO THE PROJECT SITE.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE DATE 08/01/2019

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR
PennEast PIPELINE

PREPARED BY
MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT
SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E & S GENERAL NOTES
HUNTERDON COUNTY

SCALE	DRAWING NO.	REVISION
AS SHOWN	000-01-01-003A	A

ENVIRONMENTAL NOTES

PENNEAST'S ENVIRONMENTAL INSPECTOR(S) SHALL BE RESPONSIBLE FOR:

1. INSPECTING CONSTRUCTION ACTIVITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THIS E&SCP, THE CONSTRUCTION DRAWINGS, THE ENVIRONMENTAL CONDITIONS OF THE FERC'S ORDERS (IF APPLICABLE), PROPOSED MITIGATION MEASURES, OTHER FEDERAL OR STATE ENVIRONMENTAL PERMITS AND APPROVALS, AND ENVIRONMENTAL REQUIREMENTS IN LANDOWNER EASEMENT AGREEMENTS.
2. IDENTIFYING, DOCUMENTING, AND OVERSEEING CORRECTIVE ACTIONS, AS NECESSARY TO BRING AN ACTIVITY BACK INTO COMPLIANCE.
3. VERIFYING THAT THE LIMITS OF AUTHORIZED CONSTRUCTION WORK AREAS AND LOCATIONS OF ACCESS ROADS ARE VISIBLY MARKED BEFORE CLEARING, AND MAINTAINED THROUGHOUT CONSTRUCTION.
4. VERIFYING THE LOCATION OF SIGNS AND HIGHLY VISIBLE FLAGGING MARKING THE BOUNDARIES OF SENSITIVE RESOURCE AREAS, WATERCOURSES, WETLANDS, OR AREAS WITH SPECIAL REQUIREMENTS ALONG THE CONSTRUCTION WORK AREA.
5. IDENTIFYING EROSION/SEDIMENT CONTROL AND STABILIZATION NEEDS IN ALL AREAS.
6. VERIFYING THAT THE LOCATION DESIGN OF WATERBARS WILL NOT CAUSE EROSION OR DIRECT WATER INTO SENSITIVE ENVIRONMENTAL RESOURCE AREAS, INCLUDING CULTURAL RESOURCES SITES, WETLANDS, WATERCOURSES, AND SENSITIVE SPECIES HABITAT.
7. VERIFYING THAT DEWATERING ACTIVITIES ARE PROPERLY MONITORED AND DO NOT RESULT IN THE DEPOSITION OF SAND, SILT, AND/OR SEDIMENT INTO A SENSITIVE ENVIRONMENTAL RESOURCE AREAS, INCLUDING WETLAND OR WATERCOURSE, CULTURAL RESOURCE SITES, AND SENSITIVE SPECIES HABITATS; STOPPING DEWATERING ACTIVITIES IF SUCH DEPOSITION IS OCCURRING AND CHECKING THAT THE DESIGN OF THE DISCHARGE IS CHANGED TO PREVENT REOCCURRENCE; AND VERIFYING THAT DEWATERING STRUCTURES ARE REMOVED AFTER COMPLETION OF DEWATERING ACTIVITIES.
8. VERIFYING THAT SUBSOIL AND TOPSOIL ARE TESTED IN AGRICULTURAL AREAS TO MEASURE COMPACTION AND DETERMINE THE NEED FOR CORRECTIVE ACTION.
9. ADVISING THE CHIEF INSPECTOR WHEN ENVIRONMENTAL CONDITIONS (SUCH AS WET WEATHER OR FROZEN SOIL) MAKE IT ADVISABLE TO RESTRICT OR DELAY CONSTRUCTION ACTIVITIES TO AVOID TOPSOIL MIXING OR EXCESSIVE COMPACTION.
10. CHECKING RESTORATION OF CONTOURS AND TOPSOIL.
11. VERIFYING THAT THE SOILS IMPORTED FOR AGRICULTURAL OR RESIDENTIAL USE HAVE BEEN CERTIFIED AS FREE OF NOXIOUS WEEDS AND SOIL PESTS, UNLESS OTHERWISE APPROVED BY THE LANDOWNER.
12. VERIFYING THAT EROSION CONTROLS ARE PROPERLY INSTALLED TO PREVENT SEDIMENT FLOW INTO ENVIRONMENTAL RESOURCE (E.G., WETLANDS, WATERCOURSES, CULTURAL RESOURCE SITES, AND SENSITIVE SPECIES HABITATS) AND ONTO ROADS AND DETERMINING THE NEED FOR ADDITIONAL EROSION CONTROL DEVICES.
13. INSPECTING TEMPORARY EROSION CONTROL MEASURES AT LEAST:
    a) ON A DAILY BASIS IN AREAS OF ACTIVE CONSTRUCTION OR EQUIPMENT OPERATION;
    b) ON A WEEKLY BASIS IN AREAS WITH NO CONSTRUCTION OR EQUIPMENT OPERATION; AND
    c) WITHIN 24 HOURS OF EACH 0.5 INCH OF RAINFALL.

    NOTE: THIS RESPONSIBILITY MAY BE TRANSFERRED TO FIELD OPERATIONS AFTER CONSTRUCTION IS COMPLETE BUT BEFORE RESTORATION IS SUCCESSFUL.
14. CHECKING THE REPAIR OF ALL INEFFECTIVE TEMPORARY EROSION AND CONTROL MEASURES WITHIN 24 HOURS OF IDENTIFICATION, OR AS SOON AS CONDITIONS ALLOW IF COMPLIANCE WITH THIS TIMEFRAME WOULD RESULT IN GREATER ENVIRONMENTAL IMPACTS.
15. IDENTIFYING AREAS THAT SHOULD BE GIVEN SPECIAL ATTENTION TO VERIFY STABILIZATION AND RESTORATION AFTER THE CONSTRUCTION PHASE.
16. VERIFYING THAT THE CONTRACTOR IMPLEMENTS AND COMPLIES WITH PENNEAST'S PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN.
17. KEEPING RECORDS OF COMPLIANCE WITH THE ENVIRONMENTAL CONDITIONS OF THE FERC'S ORDERS, PROPOSED MITIGATION MEASURES, AND OTHER FEDERAL OR STATE ENVIRONMENTAL PERMITS DURING ACTIVE CONSTRUCTION AND RESTORATION.
18. VERIFYING THAT LOCATIONS FOR ANY DISPOSAL OF EXCESS CONSTRUCTION MATERIALS FOR BENEFICIAL REUSE.

THE INDIVIDUAL(S) RESPONSIBLE FOR POST-STORM AND STORM EVENT BMP INSPECTIONS, AND THE QUALIFIED PERSON(S) ASSIGNED RESPONSIBILITY TO ENSURE FULL COMPLIANCE WITH THE PERMIT AND IMPLEMENTATION OF ALL ELEMENTS OF THE ESCP, INCLUDING THE PREPARATION OF THE ANNUAL COMPLIANCE EVALUATION AND THE ELIMINATION OF ALL UNAUTHORIZED DISCHARGES ARE:

NAME:_____

PHONE NUMBER:_____EMERGENCY PHONE #:_____

COMPANY:_____

RESPONSIBILITIES:_____

NAME:_____

PHONE NUMBER:_____EMERGENCY PHONE #:_____

COMPANY:_____

RESPONSIBILITIES:_____

MAINTENANCE PROGRAM

THE FOLLOWING INSPECTION AND MAINTENANCE PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS AND STABILIZATION MEASURES. REFER TO BMP DETAILS FOR SPECIFIC OPERATION AND MAINTENANCE REQUIREMENTS.

1. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED ONCE EVERY SEVEN DAYS AND AFTER EACH RUNOFF EVENT. A WRITTEN REPORT MUST ALSO BE COMPLETED DOCUMENTING EACH INSPECTION AND, IF NECESSARY, ANY REPAIR, REPLACEMENT OR MAINTENANCE ACTIVITY.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIRS OR ADDITIONAL MEASURES ARE FOUND TO BE NECESSARY, THEY WILL BE INITIATED WITHIN 24 HOURS OF THE INSPECTION REPORT.
3. BUILT UP SEDIMENT WILL BE REMOVED FROM PERIMETER BMPS WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE BMP.
4. PERIMETER BMPS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, DAMAGE, ETC., TO ENSURE THE MEASURE IS IN PROPER WORKING ORDER, AND THAT ANY POSTS/WOOD STAKES ARE SECURELY IN THE GROUND.
5. TEMPORARY SEDIMENT TRAPS, IF PRESENT, WILL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES THE DESIGN CLEANOUT DEPTH
6. TEMPORARY AND PERMANENT SEEDING, AND OTHER STABILIZATION MEASURES, WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
7. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. COPIES OF THE REPORT FORMS TO BE COMPLETED BY THE INSPECTOR ARE INCLUDED IN THIS ESCP.
8. THE INSPECTOR WILL IMPLEMENT INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS THAT ARE USED ON THE SITE IN GOOD WORKING ORDER. THE INSPECTOR WILL ALSO BE TRAINED IN THE COMPLETION OF, INITIATION OF ACTIONS REQUIRED BY, AND THE FILING OF THE INSPECTION FORMS.
9. DISTURBED AREAS AND MATERIALS STORAGE AREAS WILL BE INSPECTED FOR EVIDENCE OF OR POTENTIAL FOR POLLUTANTS ENTERING THE STORMWATER.

SUMMARY MAINTENANCE SCHEDULE FOR TEMPORARY BMPS:

ACTIVITY	FREQUENCY
Culverts	
Inspect culverts and remove accumulated debris immediately	Weekly and after each runoff event
Remove accumulated sediment and accumulated organic matter	Every spring and fall and after stormwater events over 1-inch of rainfall
Inspect culvert inlet and sediment control barriers, clean and replace as needed.	Weekly and after each runoff event
Inspect riprap aprons. Replace displaced riprap within the apron immediately.	Weekly and after each runoff event
Rock Construction Entrance	
Inspect rock construction entrance	Weekly and after each runoff event
Add rock to maintain specified dimensions and capacity to remove sediment from the tires	As needed
Remove sediment deposited on paved roadways and return to the construction site	Immediately, as needed
Inlet Filter Bags	
Inspect inlet filter bags and make necessary repairs immediately after the inspection	Weekly and after each runoff event
Clean or replace the filter bag	When bag is 1/2 full or flow capacity has been reduced so as to cause flooding or bypassing of inlet
Pumped Water Filter Bag	
Inspect filter bag. Cease pumping if any problem is detected.	Daily
Replace filter bag	When filter bag becomes 1/2 full of sediment or fails
Sediment Barriers	
Inspect sediment barriers. Repair according to manufacturer's specifications or replace within 24	Weekly and after each runoff event
Remove accumulated sediment	When accumulations reach half the aboveground height of the compost filter sock or silt fence
Install a rock filter outlet where a sediment barrier fails due to unanticipated concentrated flow	As needed
Remove accumulated sediment from rock filter outlets	When accumulations reach 1/3 of the height of the outlet
Waterbars	
Inspect waterbars. Repair waterbars and remove debris and obstructions from channels as needed.	Weekly and after each runoff event
Hydrostatic Dewatering Structure	
Monitor dewatering structure	During dewatering activities
Remove sediment	When accumulations reach 1/3 the aboveground height of the barrier.
Replace damaged or deteriorated bales	Immediately, as needed

EXISTING CONDITION NOTES:

1. THE CONTOURS AND IMAGERY SHOWN WERE PROVIDED BY PICTOMETRY, 2015. ADDITIONAL CONTOURS AND IMAGERY SUPPLEMENTED FROM PASDA AND USG
2. NORTH ARROW AND COORDINATES ARE BASED UPON THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD83) AND VERTICAL DATUM IS THE NORTH AMERICAN DATUM OF 1988 (NAVD88).
3. ELEVATIONS ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. WETLAND AND WATERBODY DELINEATIONS ARE BASED ON ENVIRONMENTAL SURVEY DATA PROVIDED BY PS&S AND LIMITED TO THE AREAS WITHIN OR IN CLOSE PROXIMITY TO THE ACCESS ROADS CORRIDORS, PROPOSED FACILITIES, AND PIPELINES.
5. APPROXIMATE PROPERTY LINES ARE BASED ON GIS TAX MAP DATA AND/OR FIELD LOCATED PROPERTY EVIDENCE AND ARE DEPICTED FOR GENERAL INFORMATION ONLY.
6. LAND OWNER IDENTIFICATION IS BASED ON INFORMATION PROVIDED BY PENNEAST AND IS FOR GENERAL INFORMATION ONLY.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY PENNEAST AND ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.

AGRICULTURAL / RESIDENTIAL RESTORATION NOTES:

1. GRAZING DEFERMENT PLANS WILL BE COORDINATED WITH LANDOWNERS TO MINIMIZE GRAZING DISTURBANCE OF REVEGETATED AREAS TO THE EXTENT PRACTICABLE.
2. THE MIXING OF TOPSOIL WITH SUBSOIL SHALL BE PREVENTED BY STRIPPING TOPSOIL FROM THE WORK AREA WITHIN DESIGNATED AREAS AND IN COORDINATION WITH THE APPLICABLE ACCESS AGREEMENTS.
3. SPECIAL RESTORATION CONDITIONS MAY BE COORDINATED WITH THE LANDOWNERS FOR AGRICULTURAL FIELDS, WHICH SHALL TAKE PRECEDENCE TO THE PROPOSED STABILIZATION PROCEDURES, ONLY IF THE SPECIAL CONDITIONS MEET THE MINIMUM REQUIREMENTS OF NJDEP AND FERC.
4. ALL FARMS ARE REQUIRED TO DEVELOP AND IMPLEMENT A WRITTEN PLAN TO REDUCE EROSION WHEN PLOWING AND TILLING (INCLUDES NO-TILL CROPPING).
5. AGRICULTURAL AREAS WITHIN 100-FT OF A STREAM MUST MAINTAIN A MINIMUM OF 25% PLANT COVER OR CROP RESIDUE
6. ADDITIONAL BMP'S MAY BE NEEDED TO MINIMIZE ACCELERATED EROSION AND SEDIMENTATION FOR AGRICULTURAL FIELDS WITH LESS THAN 25% PLANT COVER OR CROP RESIDUE COVER AND WITHIN 100-FT OF A RIVER OR PERENNIAL OR INTERMITTENT STREAM.

THERMAL IMPACT ANALYSIS:

IN ORDER TO AVOID THERMAL IMPACTS, THE LIMIT OF DISTURBANCE WITHIN THE PIPELINE RIGHT-OF-WAY HAS BEEN MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. ADDITIONALLY, ALL DISTURBED AREA WILL BE RESTORED TO AN EXISTING, VEGETATIVE CONDITION FOLLOWING CONSTRUCTION.

THE FOLLOWING PROVISIONS RELATED TO THERMAL IMPACTS ARE INCLUDED IN THE E&S PLAN:

- THE MINIMUM PERMANENT CHANGES IN LAND COVER, NECESSARY TO CONSTRUCT THE REQUIRED FACILITIES ARE BEING PROPOSED.
- THE REMOVAL OF VEGETATION, ESPECIALLY TREE COVER, WILL BE LIMITED TO ONLY THAT NECESSARY FOR CONSTRUCTION.
- THE IMPACTS TO EXISTING RIPARIAN CORRIDORS WILL BE LIMITED TO ONLY THAT NECESSARY FOR CONSTRUCTION.
- THE AMOUNT OF IMPERVIOUS SURFACES WILL BE LIMITED TO ONLY THAT NECESSARY TO SUPPORT THE CONSTRUCTION OF THE PIPELINE AND/OR OPERATION OF THE PIPELINE.
- ALL DISTURBED AREAS WILL BE RESTORED TO AN EXISTING, VEGETATIVE CONDITION FOLLOWING CONSTRUCTION.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE 08/01/2019 DATE

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	REVISIONS	DATE	DRAWN	CK	APPR
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PREPARED FOR
PennEast PIPELINE

PREPARED BY
MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT
SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E & S GENERAL NOTES
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AS SHOWN	000-01-01-003B	A

SEEDING & VEGETATIVE NOTES

GENERAL

1. ALL DISTURBED AREAS THAT ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED TO BE PERMANENTLY SEEDED WITHIN 30 DAYS MUST BE TEMPORARILY STABILIZED AS PER SPECIFICATIONS BELOW.

2. ALL EXPOSED AREAS WHICH ARE TO BE PERMANENTLY VEGETATED, ARE TO BE SEEDED AND MULCHED WITHIN 10 DAYS OF FINAL GRADING.

3. **STRAW MULCH** (HAY MULCH MAY BE SUBSTITUTED IF APPROVED BY THE DISTRICT) IS TO BE APPLIED TO ALL SEEDINGS AT A RATE OF 1-1/2 TO 2 TONS PER ACRE (APPROX. 100 TO 130 BALES PER ACRE).

4. **MULCH ANCHORING IS REQUIRED** AFTER MULCHING TO MINIMIZE LOSS BY WIND OR WATER. THIS IS TO BE DONE USING ONE OF THE METHODS (CRIMPING, LIQUID MULCH BINDERS, NETTINGS, ETC.) IN THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY".

5. EXISTING WEEDY AND POORLY-VEGETATED AREAS WITH LESS THAN 80 PERCENT PERENNIAL GRASS COVER MUST RECEIVE PERMANENT STABILIZATION (AS SPECIFIED ON BACK).

6. ALL BAGS NEED TO BE SAVED FOR LIME, FERTILIZER, SEED, AND LIQUID MULCH BINDER (IF MULCH ANCHORING METHOD). SUCH PROOFS NEED TO BE SUBMITTED TO THE DISTRICT INSPECTOR FOR VERIFICATION OF MATERIALS AND QUANTITIES USED FOR ALL SEEDINGS.

7. AN ADDITIONAL FEE OF **$125.00** PER INSPECTION WILL BE ASSESSED ON THOSE SITES WHERE ADDITIONAL INSPECTIONS ARE NECESSITATED AS A RESULT OF NON-COMPLIANCE WITH THE APPROVED PLAN. THIS INCLUDES ADDITIONAL INSPECTIONS PERFORMED AFTER THE FAILURE OF AN INITIAL REPORT OF COMPLIANCE INSPECTION. THE ENTIRE PROJECT SITE IS INSPECTED AT THE TIME OF A REQUEST FOR REPORT OF COMPLIANCE.

SEED-BED PREPARATION FOR ALL SEEDINGS

SUB-SOIL PREPERATION: IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SURFACE SHOULD BE SCARIFIED TO A DEPTH OF 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION (E.G. AREAS OF HEAVY CONSTRUCTION TRAFFIC). THIS PRACTICE IS TO BE APPLIED TO ALL COMPACTED AREAS WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

TOPSOILING: AREAS TO BE SEEDED SHOULD HAVE A MINIMUM OF 5" OF FRIABLE, LOAMY, TOPSOIL FREE OF OBJECTIONABLE WEEDS, STONES AND DEBRIS.

FINAL GRADING: GRADING IS TO BE SMOOTH OF RUTS AND FREE OF OBJECTIONABLE STONES, DEPRESSIONS, VEHICLE TRACKS, AND ROUGH EDGES. THERE IS TO BE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND DWELLINGS. REFUSE FROM SEEDBED PREPARATION (ROOTS, STICKS, STONES, CONSTRUCTION DEBRIS) MUST BE DISPOSED OF PROPERLY.

LIMING/FERTILIZING: APPLY LIMESTONE AND FERTILIZER TO SOIL TEST RECOMMENDATIONS OR AS FOLLOWS:

A. LIME IS TO BE APPLIED AT THE RATE OF **2 TONS (4,000 LBS)**. PER ACRE. LIME MAY BE ANY PRODUCT TYPE AS LONG AS THE CCE CALCIUM CARBONATE EQUIVALENCY = 2 TONS PER/ ACRE. PELLETIZED AND LIQUID PRODUCTS MAY BE PREFERRED BECAUSE OF THEIR LACK OF DUST AND EASE OF HANDLING BUT MUST MEET THE FORE-MENTIONED CRITERIA.

B. STARTER FERTILIZER, SPECIFIED AS **10-20-10**, IS TO BE APPLIED AT **500 LBS. PER ACRE**

C. LIME AND FERTILIZER ARE TO BE WORKED INTO THE SOIL TO A DEPTH OF 4 INCHES.

TEMPORARY STABILIZATION WITH MULCH ONLY

STRAW MULCH (HAY MULCH MAY BE SUBSTITUTED IF APPROVED BY THE DISTRICT) IS TO BE SPREAD UNIFORMLY AT THE RATE OF 2 TO 2-1/2 TONS PER ACRE (TOTAL GROUND SURFACE COVERAGE). THIS PRACTICE IS LIMITED TO PERIODS WHEN VEGETATIVE COVER CANNOT BE ESTABLISHED DUE TO THE SEASON OR OTHER CONDITIONS. MULCH MUST BE ANCHORED IN ACCORDANCE WITH NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. MULCH ALONE CAN ONLY BE USED FOR SHORT PERIODS AND WILL REQUIRE MAINTENANCE AND RENEWAL. OTHER MULCH MATERIALS MAY BE UTILIZED IF APPROVED BY THE DISTRICT

TEMPORARY SEEDING

TEMPORARY SEEDING IS TO BE USED ON ALL DISTURBED AREAS WHERE PERMANENT STABILIZATION WILL NOT BE ACCOMPLISHED FOR A PERIOD OF UP TO 6 MONTHS.

PRODUCT	RATE	RECOMMENDED OPTIMUM SEEDING DATES
PERENNIAL RYEGRASS	100 LBS. PER ACRE	3/15-5/15 & 8/15-10/1
SPRING OATS	86 LBS. PER ACRE	3/15-6/1 & 8/1-10/1
WINTER CEREAL RYE	112 LBS. PER ACRE	8/1-11/15
WINTER BARLEY	96 LBS. PER ACRE	8/15-10/1
PEARL MILLET	20 LBS. PER ACRE	5/15-8/15
GERMAN OR HUNGARIAN MILLET	30 LBS. PER ACRE	5/15-8/15

STABILIZATION WITH SOD

STABILIZATION WITH SOD IS PERMITTED IN AREAS WHERE MAINTENANCE AND IRRIGATION ARE ADEQUATE TO INSURE PROPER ESTABLISHMENT AND LONGEVITY. SEEDBED PREPARATION IS TO BE CONSISTENT WITH ANY OTHER STABILIZATION REQUIREMENTS. (LIME AND FERTILIZER BAGS ARE TO BE RETAINED FOR DISTRICT INSPECTION.) ON SLOPES GREATER THAN 3 TO 1, SOD MUST BE PROPERLY ANCHORED TO THE SLOPE IN ACCORDANCE WITH THE NJ STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.

PERMANENT SEEDING

A. SEED IS TO BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4" - 1/2".
B. LAWN SEEDINGS ARE TO BE A MIXTURE OF BLUEGRASSES, TURF-TYPE FESCUES, AND TURF-TYPE PERENNIAL RYEGRASSES TO INSURE LONGEVITY, TOLERANCE, AND DURABILITY. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE OF MORE THAN 12 MONTHS OLD UNLESS RETESTED.
C. PROFESSIONAL SEED MIXTURES ARE RECOMMENDED RATHER THAN MIXING SEEDS YOURSELF.
D. SEED MIXTURE (AS SPECIFIED BELOW) IS TO BE **APPLIED AT A MINIMUM RATE OF 200 LBS. PER ACRE OF PERENNIAL SEED.**
E. OPTIMUM SEEDING PERIOD FOR HUNTERDON COUNTY IS FROM MARCH 1 TO MAY 15 AND AUGUST 15 TO OCTOBER 1. OUTSIDE OF THOSE PERIODS, THE SEEDING RATES ARE TO BE **INCREASED BY 50%** (I.E.: 300 LBS. PER ACRE OF PERENNIAL SEED INSTEAD OF THE REQUIRED 200 LBS. PER ACRE DURING OPTIMUM PERIODS).
F. SEEDINGS SHOULD RECEIVE AN APPLICATION OF FERTILIZER SUCH AS 10-10-10 OR EQUIVALENT AT 400 LBS. PER ACRE APPROXIMATELY 6 MONTHS AFTER FIRST APPLICATION.

SEEDING MIXTURE FOR GENERAL SEEDING - (EXAMPLE: LAWNS)

40% TURF-TYPE TALL FESCUE		60% KENTUCKY BLUEGRASS
10% CREEPING RED FESCUE	**OR**	20% TURF-TYPE PERENNIAL RYEGRASS
10% CHEWINGS FESCUE		20% CHEWINGS FESCUE
10% KENTUCKY BLUEGRASS		
30% TURF-TYPE PERENNIAL RYEGRASS		

SEEDING MIXTURE FOR HIGH TRAFFIC & CRITICAL AREAS

(EXAMPLES: ATHLETIC FIELDS, WATERWAYS, DIVERSIONS, ETC.)

80% TURF-TYPE TALL FESCUE
10% KENTUCKY BLUEGRASS
10% TURF-TYPE PERENNIAL RYEGRASS

OTHER SEED MIXTURES, SUCH AS BLENDED VARIETIES OF PERENNIAL TURF-TYPE RYEGRASSES, TURF-TYPE TALL FESCUES, OR BLUEGRASSES MAY ALSO BE ACCEPTABLE IF APPROVED BY THE DISTRICT.

REFER TO THE PENNEAST PIPELINE PROJECT "NJDEP - RESTORATION PERMIT PLANS" DATED 08/01/2019 FOR ADDITIONAL INFORMATION ON RESTORING WETLAND TRANSITION AREAS, RIPARIAN ZONES, WETLANDS AND WATERBODIES.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

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PREPARED FOR PennEast PIPELINE

PREPARED BY MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
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PROJECT CONSTRUCTION SEQUENCING

GENERAL CONDITIONS:

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE JURISDICTIONAL COUNTY CONSERVATION DISTRICT.

2. CONSTRUCTION WILL TAKE PLACE IN SEVERAL SPREADS. WITHIN EACH SPREAD, PIPELINE CONSTRUCTION CREWS WILL BE IN CLOSE PROXIMITY TO EACH OTHER AND WILL BE ABLE TO EFFICIENTLY COMMUNICATE DURING THE ENTIRE CONSTRUCTION PHASE OF THE PROJECT. THE MINIMAL LENGTH OF EACH CONSTRUCTION SPREAD WILL NOT REQUIRE CONSTRUCTION CREWS TO BE SEPARATED BY SIGNIFICANT DISTANCES DURING PIPELINE CONSTRUCTION.

3. WORK EFFORT WILL BE SUBDIVIDED INTO CATEGORIES AND PERFORMED BY SPECIALIZED CREWS (E.G, SITE PREPARATION/CLEARING, TRENCHING, PIPE CONSTRUCTION, ETC). EACH CREW WILL PROGRESS IN A LOGICAL MANNER, GENERALLY FROM THE BEGINNING TO END OF THE PIPELINE. THE TIME PERIOD BETWEEN TRENCH EXCAVATION AND FINAL STABILIZATION SHALL BE MINIMIZED TO THE EXTENT PRACTICABLE. NO ONE SEGMENT OF AREA OF THE PIPELINE ALIGNMENT SHALL GO WITHOUT STABILIZATION (TEMPORARY OR PERMANENT) FOR A PERIOD GREATER THAN 30 DAYS.

4. SOIL DISTURBANCE (E.G., GRUBBING, AND TOPSOIL STRIPPING) SHALL BE MINIMIZED PRIOR TO INSTALLING EROSION AND SEDIMENT CONTROLS IN THE VICINITY OF THE DISTURBANCE IN ACCORDANCE WITH THIS EROSION & SEDIMENT CONTROL PLAN (E&SCP). SIGNIFICANT DEVIATION FROM THE FOLLOWING SEQUENCE OF CONSTRUCTION MUST BE APPROVED IN WRITING (E.G. VIA E-MAIL) BY THE COUNTY CONSERVATION DISTRICT.

5. MINIMIZE TOTAL AREA OF DISTURBANCE. MAINTAIN TEMPORARY SOIL STOCKPILES WITHIN EXISTING SOIL EROSION AND SEDIMENT CONTROLS. SHOULD EXCAVATION ENTER STREAMS, FOLLOW SPECIFIC DETAILS FOR THESE AREAS SHOWN ON THE DRAWINGS AND INCLUDE THE STEPS DETAILED IN THE SPECIFIC SECTIONS BELOW. PULLBACK AREAS FOR HDDS WILL BE CLEARED AND PREPARED AS NEEDED TO SUPPORT STAGING, WELDING AND TESTING OF THE HDD PIPE SECTIONS. AREAS NOT UTILIZED FOR CONSTRUCTION ACTIVITIES SHOULD BE AVOIDED TO MINIMIZE IMPACTS

6. TEMPORARY WATERBARS SHALL BE INSTALLED AT THE END OF EACH WORKDAY AS DETERMINED BY PENNEAST ENVIRONMENTAL INSPECTORS.

7. STAGING AREAS, ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON-HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET BACK FROM THE TOP OF THE STREAM BANK, WATER BODY, OR WETLAND AND OUTSIDE OF THE 100 YEAR FLOODWAY. HAZARDOUS OR POLLUTIVE MATERIAL STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 100 FEET BACK FROM THE TOP OF THE STREAM BANK, WATER BODY, OR WETLAND AND OUTSIDE OF THE 100-YEAR FLOODWAY.

8. FOR OPEN-CUT AREAS, THE LENGTH OF TIME REQUIRED TO EXCAVATE THE TRENCH, INSTALL THE PIPELINES, AND BACKFILL THE TRENCH WILL NOT EXCEED 30 CALENDAR DAYS FOR MOST INSTALLATIONS. LONGER TIME PERIODS MAY BE APPROVED ON A CASE-BY-CASE BASIS.

CONSTRUCTION PREPARATION ACTIVITIES:

1. 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&SCP PREPARER, AND A REPRESENTATIVE FROM THE APPLICABLE COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

2. UPON INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMP'S AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.

3. AT LEAST 3 DAYS PRIOR TO START ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE NEW JERSEY ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-272-1000 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THE SEQUENCE MUST BE APPROVED BY THE APPLICABLE COUNTY CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.

5. ESTABLISH CONSTRUCTION SUPPORT FACILITIES.

6. IDENTIFY UTILITIES AND OTHER CRITICAL SITE FEATURES TO BE PROTECTED

7. FLAG AND/OR STAKE WETLANDS AND OTHER SENSITIVE AREAS TO BE PROTECTED.

8. FLAG AND/OR STAKE PROPOSED CONSTRUCTION LIMITS OF DISTURBANCE.

9. ORANGE CONSTRUCTION FENCE WILL BE PROVIDED AND INSTALLED AT WETLAND AREAS ADJACENT TO THE LOD AND NOT PLANNED TO BE IMPACTED TO IDENTIFY AND DETER CONSTRUCTION EQUIPMENT, VEHICLES AND PERSONNEL FROM ENTERING WETLAND.

10. INSTALL ROCK CONSTRUCTION ENTRANCES.

11. BRUSH HOG/MOW EXISTING VEGETATION TO FACILITATE INSTALLATION OF TEMPORARY EROSION AND SEDIMENT CONTROLS.

12. INSTALL VEHICULAR TEMPORARY STREAM CROSSING (E.G., BRIDGE OR MULTIPLE PIPE CROSSING).

13. INSTALL VEHICULAR TEMPORARY TIMBER MAT WETLAND CROSSING. GRUBBING SHALL NOT TAKE PLACE WITHIN WETLAND AREAS TO BE USED FOR TEMPORARY ACCESS ROADS.

SITE CLEARING (TREE CUTTING) & GRUBBING:

1. INITIATE CLEARING AND GRUBBING OF CONSTRUCTION WORK AREA (CWA) AND ACCESS ROADS AS NEEDED. LIMIT CLEARING AND GRUBBING TO CUTTING EXISTING VEGETATION RATHER THAN BULLDOZING THE VEGETATION.

1. ALL BRUSH AND TREES WILL BE FELLED INTO THE CWS TO MINIMIZE DAMAGE TO TREES AND STRUCTURES ADJACENT TO THE CWS. TREES THAT INADVERTENTLY FALL BEYOND THE EDGE OF THE CWS WILL BE IMMEDIATELY MOVED ONTO THE CWS AND DISTURBED AREAS WILL BE IMMEDIATELY STABILIZED.

2. INSTALL TEMPORARY ACCESS ROADS.

3. WOODY VEGETATION CLEARING OF THE CWA AND STAGING AREAS WILL TAKE PLACE IN A SINGLE PASS WITHIN EACH SPREAD. CONTRACTOR/PENNEAST TO DETERMINE WHETHER TIMBER WILL BE HAULED OFF SITE OR CHIPPED AND SPREAD EVENLY WITHIN THE CWA, REMOVED FROM SITE, STOCKPILED AT STAGING AREAS OR BLOWN OFF-SITE WITH LANDOWNER APPROVAL. WOOD CHIPS WILL NOT BE LEFT WITHIN AGRICULTURAL LANDS, WETLANDS, OR WITHIN 50 FEET OF WETLANDS. WOOD CHIPS WILL NOT BE STOCKPILED IN A MANNER THAT THEY MAY BE TRANSPORTED INTO A WETLAND.

4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THIS PLAN. EROSION AND SEDIMENT CONTROL INSTALLATION, SIMILAR TO OTHER ACTIVITIES, MAY BE CONDUCTED AS PIPELINE CONSTRUCTION ACTIVITIES PROGRESS, HOWEVER, SOIL DISTURBANCE SHALL BE MINIMIZED UNTIL THE APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROLS HAVE BEEN INSTALLED IN THE PROPOSED WORK AREA.

5. GRUB TREE STUMPS IN CLEARED CWA. GRIND STUMPS AND REMOVE FROM ROW AND HAUL OFF SITE OR STOCKPILE AT STAGING AREAS FOR USE AS MULCH STABILIZATION AFTER EARTH DISTURBING ACTIVITIES ARE COMPLETED.

6. IN WETLANDS, CUT VEGETATION JUST ABOVE GROUND LEVEL AND GRIND STUMPS TO GROUND LEVEL, LEAVING EXISTING ROOT SYSTEMS IN PLACE. IMMEDIATELY REMOVE ALL CUT TREES, CHIPS FROM GRINDING OPERATIONS AND BRANCHES FROM THE WETLANDS.

7. LIMIT PULLING OF TREE STUMPS AND GRADING ACTIVITIES TO DIRECTLY OVER TRENCH LINE. DO NOT GRADE OR REMOVE STUMPS OR ROOT SYSTEMS FROM THE REST OF THE CWA IN WETLANDS UNLESS THE CHIEF INSPECTOR AND EI DETERMINE THAT SAFETY-RELATED CONSTRUCTION CONSTRAINTS REQUIRE REMOVAL OF TREE STUMPS FROM UNDER THE WORKING SIDE OF THE CWA.

8. GRUBBING SHALL NOT TAKE PLACE WITHIN 10 FEET OF TOP OF STREAM BANKS UNTIL ALL MATERIALS REQUIRED TO COMPLETE THE CROSSING ARE ON SITE AND PIPE IS READY FOR INSTALLATION.

9. NOTIFY THE COUNTY CONSERVATION DISTRICT AFTER INSTALLATION OR STABILIZATION OR ALL PERIMETER SEDIMENT CONTROL BMPS (INCLUDING TOPSOIL PILES) WITHIN EACH WORK AREA AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH BULK EARTH DISTURBANCE ACTIVITIES.

10. TREE CLEARING ESTIMATED TO BE IN ALL "UF" CLASSIFICATION AREAS AS SHOWN ON THE LAND USE BAND AND ALL PFO WETLANDS.

11. EXISTING SURFACE DRAINAGE PATTERNS WILL NOT BE ALTERED BY THE PLACEMENT OF TIMBER OR BRUSH PILES AT THE EDGE OF THE CONSTRUCTION ROW.

SITE GRADING:

1. RE-STAKE THE CWA TO REPLACE ANY SIGNAGE OR FLAGGING THAT WAS REMOVED OR DAMAGED DURING CLEARING ACTIVITIES.

2. INSTALL ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM ACCESS ROADS.

3. CLEAR, GRADE AND IMPROVE ACCESS ROAD AS NEEDED AS THEIR USE BECOMES REQUIRED.

4. STOCKPILE TOPSOIL ALONG THE EDGE OF THE CWA AND TEMPORARILY STABILIZED.

5. ROUGH GRADE SITE, REMOVE AND STOCKPILE TOPSOIL AS APPROPRIATE. INSTALL SILT FENCE AROUND STOCKPILED TOPSOIL AS SHOWN ON E&S DRAWINGS.

6. THE MIXING OF TOPSOIL WITH SUBSOIL SHALL BE PREVENTED BY STRIPPING TOPSOIL FROM THE WORK AREA WITHIN DESIGNATED AREAS AND IN COORDINATION WITH THE APPLICABLE ACCESS AGREEMENTS.

7. SEGREGATE AT LEAST 12 INCHES OF TOPSOIL IN DEEP SOILS WITH MORE THAN 12 INCHES OF TOPSOIL. IN SOILS WITH LESS THAN 12 INCHES OF TOPSOIL, MAKE EVERY EFFORT TO SEGREGATE THE ENTIRE TOPSOIL LAYER.

8. INSTALL TEMPORARY WATERBARS AS SHOWN ON E&S DRAWINGS. WATERBARS SHALL BE ALIGNED SO THAT DISCHARGES DO NOT FLOW BACK ONTO THE RIGHT-OF-WAY OR INTO THE OPEN TRENCH. RUNOFF SHOULD BE DIRECTED TO THE DOWNSLOPE SIDE OF THE DISTURBED AREA.

9. INSTALL TEMPORARY FLOW DIVERSION, FLUME STRUCTURES AND TEMPORARY BRIDGES AT STREAM CROSSINGS AS STREAM CROSSINGS ARE ENCOUNTERED.

10. INSTALL APPROPRIATE TRENCH DEWATERING FILTER BAG AND SURROUNDING SEDIMENT BARRIERS (STRAW BALES, SILT FENCE AND/OR COMPOST FILTER SOCKS AS DETERMINED IN THE FIELD) IN PREPARATION OF DEWATERING ACTIVITIES. THIS SHALL BE COMPLETED PRIOR TO PERFORMING EXCAVATION ACROSS WATERBODIES.

11. INSTALL TIMBER MATS FOR EQUIPMENT ACCESS AS SHOWN ON E&SCP DRAWINGS AS WETLANDS / STREAMS ARE ENCOUNTERED.

12. UTILIZE WOOD CHIPS IN HEAVILY TRAFFICKED AREAS TO REDUCE THE POTENTIAL FOR RUTTING. WOOD CHIPS WILL NOT BE SPREAD IN WETLANDS OR STREAMS.

PIPELINE CONSTRUCTION:

UPLAND LOCATIONS:

1. ENSURE THE APPROPRIATE UPLAND EROSION AND SEDIMENT CONTROLS ARE IN PLACE.

2. GRADE CONSTRUCTION WORK AREA; EXCAVATE PIPELINE TRENCH. LIMIT TRENCH WIDTH TO WHAT IS NECESSARY TO INSTALL PIPE. FLAG DRAINAGE TILES DAMAGED DURING DITCHING ACTIVITIES FOR REPAIR.

3. SEGREGATE TOPSOIL IN AGRICULTURAL FIELDS AND MANICURED LAWNS FOR RESTORATION ACTIVITIES DURING FINAL CLEAN UP.

4. STRING PIPE AND PREPARE THE PIPE JOINTS FOR WELDING.

5. WELD PIPE JOINTS AND PERFORM NDT (NON-DESTRUCTIVE TESTING).

6. DISCHARGE ALL WATER FROM TRENCH USING FILTER BAGS.

7. INSTALL THE PIPELINE IN THE TRENCH.

8. INSTALL TRENCH PLUGS.

9. BACKFILL THE PIPELINE TRENCH. BACKFILL MATERIAL SHOULD BE MOUNDED OVER THE TRENCH TO ALLOW FOR SETTLING EXCEPT IN AGRICULTURAL FIELDS AND MANICURED LAWNS.

10. PERFORM PERMANENT STABILIZATION, INCLUDING:

A. GRADE AREAS AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS.

B. REPLACE TOPSOIL.

C. APPLY PERMANENT SEEDING, SOIL AMENDMENTS AND MULCH OR EROSION CONTROL BLANKET.

ROADWAY, DRIVEWAYS AND RAILROADS CROSSINGS:

1. STRING PIPE OUTSIDE OF ROAD/DRIVEWAY AND PREPARE THE PIPE JOINTS FOR WELDING AND NON-DESTRUCTIVE TESTING.

2. EXCAVATE PIPELINE TRENCH FOR THE OPEN TRENCH CROSSING OR EXCAVATE BORE PITS FOR CONVENTIONAL BORED CROSSING.

3. DISCHARGE ALL WATER FROM TRENCH USING FILTER BAGS OR COMPOST SOCK SEDIMENT TRAP.

4. MOVE THE PIPE SECTIONS TO THE TRENCH OR PERFORM CONVENTIONAL BORE.

5. INSTALL THE PIPELINE IN THE TRENCH.

6. INSTALL TRENCH PLUGS.

7. BACKFILL THE PIPELINE TRENCH.

STREAM, RIVER, WETLANDS OR OTHER WATERBODY UTILITY CROSSINGS THAT WILL BE OPEN CUT:

1. NO WORK SHALL COMMENCE THROUGH A STREAM, RIVER, WETLANDS, OR OTHER WATERBODY DURING INCLEMENT WEATHER.

2. A UTILITY LINE CROSSING OF A STREAM CHANNEL 10 FEET IN BOTTOM WIDTH OR LESS SHALL BE COMPLETED WITHIN 24 HOURS FROM START TO FINISH INCLUDING TRENCH BACKFILL, STABILIZATION OF STREAM BANKS AND STABILIZATION OF THE AREA 50 FEET BACK FROM THE TOP OF EACH STREAM BANK.

3. A UTILITY LINE CROSSING OF A STREAM CHANNEL BETWEEN 10 FEET AND 100 FEET IN BOTTOM WIDTH SHALL BE COMPLETED WITHIN 48 HOURS FROM START TO FINISH INCLUDING TRENCH BACKFILL, STABILIZATION OF STREAM BANKS AND STABILIZATION OF THE AREA 50 FEET BACK FROM THE TOP OF EACH STREAM BANK.

4. WETLAND CROSSINGS ARE TO BE COMPLETED ALONG WITH THE MAINLINE INSTALLATION AND WILL BE DEPENDENT UPON THE LENGTH OF THE CROSSING.

5. FACILITIES FOR REMOVING SEDIMENT FROM PUMPED WATER SHOULD BE AVAILABLE AT THE STREAM CROSSING SITE BEFORE TRENCHING COMMENCES AND MAINTAINED UNTIL TRENCH BACKFILLING IS COMPLETED. ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON-HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 50 FEET BACK FROM THE TOP OF ANY BANK.

6. INSTALL TEMPORARY EQUIPMENT CROSSINGS AT STREAMS AND TEMPORARY TIMBER MATS AT WETLAND CROSSINGS IN ACCORDANCE WITH NOTES AND DETAILS.

7. FOR DRY STREAM CROSSINGS INSTALL DAM AND PUMP, DRY FLUME, OR COFFERDAM IN ACCORDANCE WITH NOTES AND DETAILS.

8. DEWATERING WORK AREA. WATER FROM THE EXCAVATION SHALL BE PUMPED TO A SEDIMENT FILTER BAG. WHERE POSSIBLE, EXCAVATION SHALL BE FROM THE TOP OF THE STREAM BANK, WHERE TECHNICALLY FEASIBLE.

9. STABILIZE CHANNEL EXCAVATION AND STREAM BANKS PRIOR TO REDIRECTING STREAM FLOW.

WETLAND CROSSINGS:

1. LOCATE STAGING AREA AND ACCESS POINTS. STAGING AREAS SHOULD BE LOCATED AT LEAST 50 FEET FROM THE ENDGE OF THE WETLAND. INSTALL SEDIMENT BARRIERS DOWN SLOPE OF THESE AREAS.

2. INSTALL ROCK CONSTRUCTION ENTRANCE AS NEEDED. REFER TO THE ROCK CONSTRUCTION ENTRANCE DETAIL ON DRAWINGS FOR SUGGESTED DIMENSIONS.

3. INSTALL ORANGE FLAGGING AROUND PERIMETER OF WETLAND AND SEDIMENT BARRIERS ALONG THE PERIMETERS OF THE SITE AS SHOWN ON THE CONSTRUCTION DRAWINGS.

4. TIMBER MATS SHALL BE USED DURING THE CROSSINGS OF WETLANDS. ORIGINAL GRADES THROUGH WETLANDS MUST BE RESTORED AFTER TRENCHING AND BACKFILLING. ANY EXCESS FILL MATERIALS MUST BE REMOVED FROM THE WETLAND AND NOT SPREAD ON-SITE.

5. SOIL EXCAVATED FROM WETLAND AREAS SHALL BE CAREFULLY REMOVED WITH THE ROOTS INTACT. THIS SOIL SHOULD BE PLACED IN A SEPARATE STOCKPILE TO BE REUSED DURING THE WETLAND SURFACE RESTITUTION.

6. DEWATER WORK AREA; WATER FROM THE EXCAVATION SHALL BE PUMPED TO A FILTER BAG.

7. INSTALL PIPE.

8. INSTALL TRENCH PLUGS AT WETLAND BOUNDARIES AND AT 100-FT INTERVALS WITHIN THE WETLAND, WHERE APPLICABLE, TO PREVENT THE TRENCH FROM DRAINING THE WETLAND OR CHANGING IT'S HYDROLOGY.

9. BACKFILL PIPE TRENCH. BACKFILL THE TOP 12-INCHES OF THE EXCAVATED TRENCH WITH THE STOCKPILED WETLAND SOIL TO MATCH ORIGINAL SURFACE GRADES.

10. NO SOIL AMENDMENTS SUCH AS AGRICULTURAL LIME, FERTILIZER, ETC. WILL BE USED WITHIN WETLAND AREAS.

11. COMPACT BACKFILL AND GRADE THE SURFACE OF THE TRENCH AREA TO ALLOW FOR POSITIVE DRAINAGE TO SOIL EROSION AND SEDIMENT CONTROLS AND TO PREPARE DISTURBED AREA FOR PERMANENT TRENCH RESTORATIONS. ELEVATION OF WETLAND WILL BE SURVEYED. AFTER POST CONSTRUCTION SURVEY ELEVATION HAS BEEN CONFIRMED TO MATCH PRE-CONSTRUCTION CONDITIONS, THE WETLAND WILL BE SEEDED USING THE WETLAND SEED MIX.

12. MAINTAIN ALL EROSION SEDIMENTATION CONTROL DEVICES UNTIL SITE WORK IS COMPLETE AND A UNIFORM 70% VEGETATIVE COVER OVER THE DISTURBED AREA. RE-GRADE AND REVEGETATE AREAS DISTURBED DURING THE REMOVAL OF THE SOIL AND SEDIMENT CONTROLS.

FOR CONVENTIONAL BORE AND HDD CROSSINGS:

CONVENTIONAL BORES

1. CONVENTIONAL BORES WILL BE CONDUCTED ALONG WITH MAIN LINE INSTALLATION TO LIMIT THE TIME OF DISTURBANCE IN THOSE AREAS.

2. INSTALL SILT FENCE DOWNGRADIENT OF THE BORE AND RECEIVING PITS.

3. EXCAVATE PITS.

4. BORE BENEATH STREAMS WHERE INDICATED ON THE CONSTRUCTION DRAWINGS.

5. WATER FROM THE BORE PITS AND WORK AREAS SHALL BE PUMPED TO A PUMPED WATER FILTER BAG.

6. UPON COMPLETION, BACKFILL ALL PITS.

HDD

7. INSTALL SILT FENCE AT STAGING AND PULLBACK AREAS IN ACCORDANCE WITH E&S PLAN SHEETS. WHERE APPLICABLE TEMPORARY GRADING OF STAGING AREAS IS PROVIDED ON PLAN SHEETS.

8. BORE AND PULLBACK AREAS SHALL BE LOCATED A MINIMUM OF 50 FT BACK FROM EACH TOP OF STREAM BANK UNLESS AUTHORIZED BY NJDEP.

9. THE HDD BORE ALIGNMENT SHALL BE MONITORED FOR INADVERTENT RETURNS. AN INADVERTENT RETURN PLAN HAS BEEN DEVELOPED FOR THIS PROJECT. THIS PLAN IS TO BE REVIEWED ON SITE, AND IMPLEMENTED FOR EACH DRILL CONDUCTED.

10. UPON COMPLETION OF HDD BORE, RESTORE BORE AND PULLBACK AREAS TO PRE-CONSTRUCTION CONDITIONS IN ACCORDANCE WITH E&S PLANS AND DETAILS.

HYDROSTATIC TESTING:

1. THE EI SHALL NOTIFY THE AGENCIES OF THE INTENT TO USE SPECIFIC TEST WATER SOURCES AT LEAST 48 HOURS BEFORE TESTING ACTIVITIES.

2. PUMPS USED FOR HYDROSTATIC TESTING WITHIN 100 FEET OF ANY WATERBODY OR WETLAND SHALL BE OPERATED AND REFUELED IN ACCORDANCE WITH THE SPCC PLAN.

3. USE ONLY THE WATER SOURCES IDENTIFIED IN THE CLEARANCE PACKAGE/PERMIT BOOK.

4. LOCATE HYDROSTATIC TEST MANIFOLDS OUTSIDE WETLANDS AND RIPARIAN AREAS TO THE GREATEST EXTENT PRACTICAL.

5. FOR AN OVERLAND DISCHARGE OF TEST WATER, DEWATER INTO AN ENERGY DISSIPATION DEVICE CONSTRUCTED OF STRAW BALES AND ABSORBENT BOOMS.

6. DEWATER ONLY AT THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR LOCATIONS IDENTIFIED IN THE HYDROSTATIC TEST PACKAGE.

7. LOCATE ALL DEWATERING STRUCTURES IN A WELL-VEGETATED AND STABILIZED AREA, IF PRACTICAL, AND ATTEMPT TO MAINTAIN AT LEAST A 50-FOOT VEGETATED BUFFER FROM ADJACENT WATERBODY/WETLAND AREAS. IF AN ADEQUATE BUFFER IS NOT AVAILABLE, BMPS OR SIMILAR EROSION CONTROL MEASURE MUST BE INSTALLED.

8. REGULATE DISCHARGE RATE, USE ENERGY DISSIPATION DEVICE(S), AND INSTALL BMPS, AS NECESSARY, TO PREVENT EROSION, STREAMBED SCOUR TO AQUATIC RESOURCES, SUSPENSION OF SEDIMENTS, FLOODING OR EXCESSIVE STREAM FLOW.

9. THE EI SHALL SAMPLE AND TEST THE SOURCE WATER AND DISCHARGE WATER IN ACCORDANCE WITH THE PERMIT REQUIREMENTS.

10. HYDROSTATIC TEST WATER DISCHARGE LOCATIONS HAVE BEEN PERMITTED THROUGH THE DELAWARE RIVER BASIN COMMISSION (DRBC). THESE LOCATIONS WILL BE PROVIDED TO THE SOIL COUNTY CONSERVATION DISTRICTS ONCE THE PERMIT IS RECEIVED FROM THE DRBC.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE 08/01/2019 DATE

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR
PennEast PIPELINE

PREPARED BY
MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT

SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E&S GENERAL NOTES

HUNTERDON COUNTY

SCALE	DRAWING NO.	REVISION
AS SHOWN	000-01-01-003D	A

PROJECT CONSTRUCTION SEQUENCING (CONTINUED)

DEMOBILIZATION AND SITE CLEAN UP:

1. COMPLETE PERMANENT STABILIZATION OF ALL REMAINING AREAS OF DISTURBANCE, INCLUDING:
   A. GRADE AREAS AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS.
   B. REPLACE TOPSOIL
   C. APPLY PERMANENT SEEDING, SOIL AMENDMENT, AND MULCH OR EROSION CONTROL BLANKET.
2. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER OR OPERATOR SHALL CONTACT THE COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO THE REMOVAL/CONVERSION OF THE EROSION AND SEDIMENT CONTROL BMPS.
3. REMOVE TEMPORARY CONTROL MEASURES UPON APPROVAL OF THE COUNTY CONSERVATION DISTRICT AGENT.
4. ANY AREA THAT USED STONE AND/OR TIMBER MATS FOR TEMPORARY STABILIZATION AND/OR ACCESS WILL BE COMPLETELY REMOVED AND SOIL WILL BE DE-COMPACTED BY USING TRACKED EQUIPMENT MAKING MULTIPLE PASSES OVER AREAS. REESTABLISH PRECONSTRUCTION CONTOURS AND REPLACE TOPSOIL TO A MINIMUM OF 4-8 INCHES DEEP AND SEED AND MULCH AREAS. VEHICULAR TRAFFIC SHOULD BE RESTRICTED FROM AREAS TO PREVENT SOIL COMPACTION.
5. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMPS, INSTALLATIONS OF ALL PERMANENT PCSM BMPS, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION. TEMPORARY WORKSPACE WILL BE RESTORED AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS.
6. ANY MATERIALS NOT INCORPORATED AS TRENCH BACKFILL OR GENERAL GRADING (E.G. UNCONTAMINATED SOIL, ROCK, STONE, GRAVEL, BRICK AND BLOCK, CONCRETE AND USED ASPHALT; AND WASTE FROM LAND CLEARING, GRUBBING AND EXCAVATION, INCLUDING TREES, BRUSH, STUMPS AND VEGETATIVE MATERIAL) WILL BE REUSED, RECYCLED OR REMOVED FROM THE CONSTRUCTION WORK LIMITS.
7. CONTRACTOR DEMOBILIZATION.

POST-CONSTRUCTION:

1. CONTINUE TO CONDUCT INSPECTIONS UNTIL THE SITE HAS REACHED, PERMANENT STABILIZATION.
2. 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.
3. TEMPORARY E&S BMPS MAY BE REMOVED AFTER THE ENTIRE CONTRIBUTORY AREA TO EACH BMP REACHES PERMANENT STABILIZATION.
4. REMOVE ANY REMAINING TEMPORARY WATERBODY AND WETLAND EQUIPMENT CROSSINGS.
5. REMOVE ANY REMAINING STABILIZED CONSTRUCTION ENTRANCES.
6. PRIOR TO APPLICATION OF THE SEED IN ALL SUPPORT & STAGING AREAS, THE SEEDBED WILL BE PREPARED TO A DEPTH OF 3 TO 4 INCHES USING APPROPRIATE EQUIPMENT TO PROVIDE A FIRM, SMOOTH SEEDBED THAT IS FREE OF DEBRIS AND SCARIFIED TO ENSURE SEEDS LODGE AND GERMINATE. THE SEED MIXTURE WILL BE APPLIED UNIFORMLY PER STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, JANUARY 2014.
7. UPON COMPLETION OF ALL CONSTRUCTION ACTIVITIES, A NOTICE OF TERMINATION FORM WILL BE SUBMITTED TO TERMINATE THE AUTHORIZATION OF COVERAGE INDICATING ALL ACTIVITIES UNDER THIS PERMIT HAVE BEEN COMPLETED.

SOIL DE-COMPACTION NOTES

SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
3. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

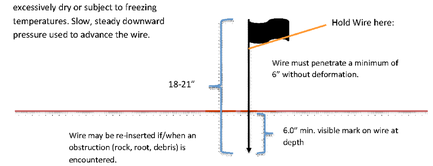
PROCEDURES FOR SOIL COMPACTION MITIGATION

1. PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

SIMPLIFIED TESTING METHODS

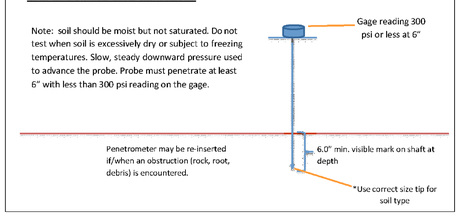
Probing Wire Test- 15.5 ga steel wire (survey flag)

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gage.



RECYCLING AND DISPOSAL METHODS

RECYCLING AND DISPOSAL METHODS

THE RESTORATION OF THE PIPELINE RIGHT-OF-WAY WILL REQUIRE THE REMOVAL OF THE TEMPORARY MATERIALS. THE TEMPORARY MATERIALS INCLUDE, BUT MAY NOT BE LIMITED TO, STONE SURFACES AND ASSOCIATED GEOTEXTILES. THE CONTRACTORS ARE REQUIRED TO DISPOSE OF THE MATERIALS AT SUITABLE DISPOSAL OR RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

CONTRACTORS ARE REQUIRED TO INVENTORY AND MANAGE THEIR CONSTRUCTION SITE MATERIALS. THE GOAL IS TO BE AWARE OF THE MATERIALS ON-SITE, ENSURE THEY ARE PROPERLY MAINTAINED, USED, AND DISPOSED OF, AND TO MAKE SURE THE MATERIALS ARE NOT EXPOSED TO STORMWATER.

MATERIALS COVERED

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON-SITE DURING CONSTRUCTION (NOTE: THIS LIST IS NOT AN ALL-INCLUSIVE LIST AND THE MATERIALS MANAGEMENT PLAN CAN BE MODIFIED TO ADDRESS ADDITIONAL MATERIALS USED ON-SITE):

- ACIDS
- DETERGENTS
- FERTILIZERS (NITROGEN/PHOSPHORUS)
- HYDROSEEDING MIXTURES
- PETROLEUM BASED PRODUCTS
- SANITARY WASTES
- SOIL STABILIZATION ADDITIVES
- SOLDER
- SOLVENTS
- OTHER (LIST HERE):_____

THESE MATERIALS MUST BE STORED AS APPROPRIATE AND SHALL NOT CONTACT STORM OR NON-STORMWATER DISCHARGES. CONTRACTOR SHALL PROVIDE A WEATHER PROOF CONTAINER TO STORE CHEMICALS OR ERODIBLE SUBSTANCES THAT MUST BE KEPT ON THE SITE. CONTRACTOR IS RESPONSIBLE FOR READING, MAINTAINING, AND MAKING EMPLOYEES AND SUBCONTRACTORS AWARE OF MATERIAL SAFETY DATA SHEETS (MSDSs).

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

1. GOOD HOUSEKEEPING PRACTICES

   THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON SITE DURING CONSTRUCTION:

   - STORE ONLY ENOUGH MATERIAL REQUIRED TO DO THE JOB.
   - STORE MATERIALS IN A NEAT, ORDERLY MANNER.
   - STORE CHEMICALS IN WATERTIGHT CONTAINERS OR IN A STORAGE SHED, UNDER A ROOF, COMPLETELY ENCLOSED, WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT SPILL OR LEAKAGE. DRIP PANS SHALL BE PROVIDED UNDER DISPENSERS.
   - SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
   - MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
   - INSPECTIONS WILL BE PERFORMED TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
   - COVER AND BERM LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, ETC.).
   - MINIMIZE EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION.
   - MINIMIZE THE POTENTIAL FOR OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS.

2. HAZARDOUS PRODUCTS

   THESE PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS. MSDSs FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE(S) WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. A MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN A FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

   - PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS WITH THE ORIGINAL LABELS IN LEGIBLE CONDITION.
   - ORIGINAL LABELS AND MSDSs WILL BE PRODUCED AND USED FOR EACH MATERIAL.
   - IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL/STATE/FEDERAL RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

3. HAZARDOUS WASTES

   ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF BY THE CONTRACTOR IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. SITE PERSONNEL WILL BE INSTRUCTED.

4. CONCRETE AND OTHER WASH WATERS

   PREVENT DISPOSAL OF RINSE, WASH WATERS, OR MATERIALS ON IMPERVIOUS OR PERVIOUS SURFACES, INTO STREAMS, WETLANDS, OR OTHER WATERBODIES.

   CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, BUT ONLY IN EITHER (1) SPECIFICALLY DESIGNATED DIKED AREAS WHICH HAVE BEEN PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASHOUT AND SOIL AND STORMWATER HAVING THE POTENTIAL TO BE DISCHARGED FROM THE SITE OR (2) IN LOCATIONS WHERE WASTE CONCRETE CAN BE POURED INTO FORMS TO MAKE RIPRAP OR OTHER USEFUL CONCRETE PRODUCTS.

   THE HARDENED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS WILL BE DISPOSED OF IN THE SAME MANNER AS OTHER NON-HAZARDOUS CONSTRUCTION WASTE MATERIALS OR MAY BE BROKEN UP AND USED ON THE SITE AS DEEMED APPROPRIATE BY THE CONTRACTOR AND GEOTECHNICAL ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

   ALL CONCRETE WASHOUT AREAS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE AREA CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. IF REQUIRED, ADDITIONAL BMPs MUST BE IMPLEMENTED TO PREVENT CONCRETE WASTES FROM CONTRIBUTING TO STORMWATER DISCHARGES. THE LOCATION OF THE CONCRETE WASHOUT AREA(S) MUST BE INDENTIFIED BY THE CONTRACTOR/JOB SITE SUPERINTENDENT, ON THE JOB SITE COPY OF THE EROSION AND SEDIMENT CONTROL PLAN(S) IN THIS ESCP.

5. SANITARY WASTES

   ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGES IS NEGLIGIBLE.

6. SOLID AND CONSTRUCTION WASTES

   ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL COMPLY WITH ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER/CONTAINER LIDS SHALL BE CLOSED AT THE END OF EVERY BUSINESS DAY AND DURING RAIN EVENTS. APPROPRIATE MEASURES SHALL BE TAKEN TO PREVENT DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE RECEIVING WATER.

7. CONSTRUCTION ACCESS

   A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED ROADS ADJACENT TO THE SITE ENTRANCE WILL BE INSPECTED DAILY AND SWEPT AS NECESSARY TO REMOVE ANY EXCESS OF MUD, DIRT, OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN AS NECESSARY.

8. PETROLEUM PRODUCTS

   ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINENANCE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. PETROLEUM STORAGE TANKS ON SITE WILL HAVE A DIKE OR BERM CONTAINMENT STRUCTURE CONSTRUCTED AROUND IT TO CONTAIN SPILLS WHICH MAY OCCUR (CONTAINMENT VOLUME TO BE 110% OF VOLUME STORED). THE DIKE OR BERMED AREA SHALL BE LINED WITH AN IMPERVIOUS MATERIAL SUCH AS A HEAVY-DUTY PLASTIC SHEET. DRIP PANS SHALL BE PROVIDED FOR ALL DISPENSERS. ANY ASPHALT SUBSTANCES USED ON THE SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

9. FERTILIZERS AND LANDSCAPE MATERIALS

   FERTILIZERS WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO MINIMIZE THE POTENTIAL FOR EXPOSURE TO STORMWATER. STORAGE WILL BE UNDER COVER. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO MINIMIZE THE POTENTIAL FOR SPILLS. THE BIN SHALL BE LABELED APPROPRIATELY.

   CONTAIN STOCKPILED MATERIALS, SUCH AS BUT NOT LIMITED TO, MULCHES, TOP SOIL, ROCKS AND GRAVEL, AND DECOMPOSED GRANITE, WHEN THEY ARE NOT ACTIVELY BEING USED.

   APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURER RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL. DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN TWO DAYS PRIOR TO A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.

10. PAINTS, PAINT SOLVENTS AND CLEANING SOLVENTS

    CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT AND SOLVENTS WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR LOCAL/STATE/FEDERAL REGULATIONS.

11. CONTAMINATED SOILS

    ANY CONTAMINATED SOILS (RESULTING FROM SPILLS OF MATERIALS WITH HAZARDOUS PROPERTIES) WHICH MAY RESULT FROM CONSTRUCTION ACTIVITIES WILL BE CONTAINED AND CLEANED UP IMMEDIATELY IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

12. OFF-SITE WASTE AND BORROW AREAS

    ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE — DATE 08/01/2019

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR PennEast PIPELINE

PREPARED BY MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT
SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E&S GENERAL NOTES
HUNTERDON COUNTY

SCALE	DRAWING NO.	REVISION
AS SHOWN	000-01-01-003E	A