

STAGING OF MAJOR CONSTRUCTION ACTIVITIES

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

- AT LEAST 7 SEVEN DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE LIMITS OF DISTURBANCE (LOD), STREAMS, WETLANDS AND PONDS SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.).
- NO TREE CUTTING, TREE CLEARING, TREE INUNDATION (FLOODING), OR PRESCRIBED BURNING MAY BE CONDUCTED BETWEEN OCTOBER 1 TO MARCH 31.
- UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPs 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.
- INITIAL EROSION AND SEDIMENTATION CONTROL MEASURES AND BMPs MUST BE CONSTRUCTED, STABILIZED, AND OPERATIONAL BEFORE ANY EARTH DISTURBANCE WHICH IS TRIBUTARY TO THOSE MEASURES BEGINS.
- A GEOTECHNICAL ENGINEER SHALL BE ON-SITE DURING EARTH MOVING ACTIVITIES RELATIVE TO PLACEMENT OF RETAINING WALLS AND STRUCTURAL FILL.

PHASE I

- CLEAR AND GRUB, REMOVE TOPSOIL, PERFORM NECESSARY INITIAL GRADING IN ONLY THE AREAS NEEDED FOR ROCK CONSTRUCTION ENTRANCE #1. AND EXIST ROCK CONSTRUCTION ENTRANCE #1. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE PROJECT SITE ONTO LINGLESTOWN ROAD WITHOUT USING THIS ENTRANCE.
- INSTALL ORANGE CONSTRUCTION FENCE AROUND SPECIAL PROTECTED AREAS INCLUDING WETLANDS AND TREES TO BE PRESERVED. NO CONSTRUCTION ACTIVITIES ARE PERMITTED WITHIN WETLAND AREAS TO REMAIN OR WITHIN THE DRIP LINE OF THE TREE ALONG THE NORTHERN PROPERTY LINE SPECIFIED TO BE PRESERVED.

- INSTALL ALL PERIMETER FILTER SOCKS AND ROCKSOCK FILTER SYSTEMS #1-6 IN ACCORDANCE WITH E&S PLAN.

- INSTALL THE CONTRACTOR STAGING AREA #1 WITH SUBBASE MATERIAL AS SHOWN ON THE PLANS, THE CONTRACTOR SHALL INITIALLY UTILIZE THIS AREA FOR EQUIPMENT/MATERIAL STORAGE, OFFICES, GENERAL PARKING, ETC. UNTIL FURTHER AREAS OF THE SITE ARE STABILIZED WITH STONE.

12. CRITICAL STAGE: INSTALL LEVEL SPREADER #6 AND THE OUTFALL STORM SYSTEM OS-8A TO OS-8 FROM DOWNSTREAM TO UPSTREAM. THE CONTRACTOR SHALL CONTACT THE CONSERVATION DISTRICT AND TOWNSHIP ENGINEER AT LEAST 24 HOURS PRIOR TO THE START OF THE CONSTRUCTION OF BMP #8 TO FACILITATE CONSTRUCTION OBSERVATION.

A. CONSTRUCT PERMANENT BMP #8 IN ACCORDANCE WITH THE DESIGN DETAILS PRESENTED ON THE PLAN. ANY EXCESS MATERIAL FROM BASIN EXCAVATION SHALL BE USED IN THE CONSTRUCTION OF THE MAIN ACCESS ROAD AND WITH POSITIVE DRAINAGE TOWARDS THE INSTALLED E&S BMPs. MINIMIZE COMPACTION OF THE INFILTRATION BED TO THE GREATEST EXTENT POSSIBLE. INSTALL THE SKIMMER, STONE LANDING BERMS, IMPERVIOUS CORE, AND EMERGENCY SPILLWAY TO THE PERMANENT DESIGN ELEVATIONS. CLAY CORE MATERIAL SHALL BE AVAILABLE FOR PLACEMENT AS SOON AS EXCAVATION PERMITS.

B. INSTALL EMERGENCY SPILLWAY LINER AS SHOWN ON THE PLAN AND DETAILS. IMMEDIATELY STABILIZE THE FACILITIES INTERNAL AND EXTERNAL SLOPES WITH THE PRESCRIBED SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE.

C. AS ADDITIONAL CONVEYANCE SYSTEMS TRIBUTARY TO BMP #8 ARE CONSTRUCTED, IMMEDIATELY INSTALL INLET PROTECTION AS SHOWN ON THE PLAN TO PREVENT SEDIMENT FROM ENTERING THE FACILITY.

- INSTALL THE MAIN ACCESS ROAD ACCORDING TO PHASE I CONSTRUCTION. PLANS INCLUDING RETAINING WALLS 1 & 2 AND DRAINAGE STRUCTURES. USE WOOD MATTING IN WETLAND AREAS AS NECESSARY WHILE CONSTRUCTING RETAINING WALL 1, 2, AND CULVERT 100. RESERVE 400 CY OF WETLAND MATERIAL TO BE USED TO RESTORE THE AREA UNDERNEATH THE ARCHWAY. AREAS ADJACENT TO THE RETAINING WALL 1 & 2, AND THE RESTORATION AREA BETWEEN LAND D AND CULVERT 100 CALLED OUT ON THE PLANS. INSTALL LEVEL SPREADER #6 AND STORM SYSTEMS 8 AND 10 FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AS INLETS ARE BROUGHT TO FINAL GRADE. PERMANENTLY STABILIZE ALL AREAS THAT ARE BROUGHT TO FINAL GRADE. AFTER THIS STAGE, VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE PROJECT SITE ONTO LINGLESTOWN ROAD WITHOUT USING ROCK CONSTRUCTION ENTRANCE #1 OR #2.

- REMOVE EXISTING ROADWAY WEST OF CULVERT 100 AND PERFORM GRADING BETWEEN WETLAND D AND CULVERT 100 AS SHOWN ON PLAN. PLACE 6" OF RESERVED WETLAND SOILS AND SEED WITH WETLAND SEED MIX IN RESTORATION AREA.

- CONDUCT SITE DEMOLITION ACTIVITIES AND REMOVE ALL WASTE FROM THE SITE IN ACCORDANCE WITH THE DEP REGULATIONS. VEHICULAR ACCESS FOR DEMOLITION ACTIVITIES (PARKING, BUILDINGS, TRUCKS, ETC.) SHALL BE PROVIDED FROM ESTABLISHED ROCK CONSTRUCTION ENTRANCES. BASED ON A REVIEW OF THE PROPERTY, A SMALL AREA, LESS THAN 200 SQUARE FEET OF WOOD AND CONCRETE DEBRIS WAS OBSERVED ADJACENT TO WETLAND J. FREE LIQUIDS, STANDING, OR DISTRESSED VEGETATION WERE NOT OBSERVED. THIS WASTE IS TO BE DISPOSED OF IN A PERMITTED LANDFILL. THIS AREA IS LABELED AS "WETLAND J REFUSE AREA" ON EX 2.0.

16. CRITICAL STAGE: CLEAR AND GRUB, REMOVE TOPSOIL, PERFORM NECESSARY INITIAL GRADING ONLY WITHIN THE AREAS DESIGNATED FOR TEMPORARY SEDIMENT BASINS (A, B, C, & D), RETAINING WALL #11, LEVEL SPREADERS (#1, 2, 3, 4, 5, 6, 7 & 9), AND AREAS NEEDED FOR PIPE INSTALLATION OF FROM EACH FACILITY TO THE LEVEL SPREADERS. STORE TOPSOIL DURING EXCAVATION OF THESE BMPs IN THE DESIGNATED AREA ON THE E&S PLAN.

A. CONSTRUCT LEVEL SPREADERS #1, 2, 3, 4, 5, 6, 7 & 9 IN ACCORDANCE WITH THE DESIGN DETAILS PRESENTED ON THE PLAN. DUE TO NOT BEING DISTURBED IN ANY FUTURE PHASES, IMMEDIATELY STABILIZE THESE AREAS WITH THE PRESCRIBED PERMANENT SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE. CONSTRUCT STORM OUTFALL SYSTEMS (OS-1A TO OS-1B, OS-2 TO OS-2B, OS-3 TO OS-3B, OS-4 TO OS-4B, OS-5 TO OS-5B TO OS-5C AND OS-6 TO OS-6B) AT THE DOWNSTREAM END AND PROCEEDING UPSTREAM. CONSTRUCT ANTI-SEEP COLLARS AND CONCRETE CRADLES AS PER THE DETAILS PRESENTED ON THE PLAN.

B. CONSTRUCT TEMPORARY SEDIMENT BASINS A, B, C, D AND RETAINING WALL #11, IN ACCORDANCE WITH THE DESIGN DETAILS PRESENTED ON THE PLAN. USE WOOD MATTING AS NEEDED TO PROTECT STREAM 2 AT THE RIPRAP OUTFALL OF OS-7E. ANY EXCESS MATERIAL FROM BASIN EXCAVATION SHALL BE PLACED UPSTREAM OF THE BASIN WHILE ENSURING POSITIVE DRAINAGE TOWARDS THE INSTALLED E&S BMPs. INSTALL THE PERMANENT EMBANKMENT BERMS, IMPERVIOUS CORES, AND EMERGENCY SPILLWAYS TO THE PERMANENT DESIGN ELEVATIONS. CLAY CORE MATERIAL SHALL BE AVAILABLE FOR PLACEMENT AS SOON AS EXCAVATION PERMITS.

C. INSTALL EMERGENCY SPILLWAY LINERS, SKIMMER CONFIGURATIONS WITH STONE LANDING BERMS, BAFFLES, AND CLEANOUT MARKERS AS SHOWN ON THE PLAN AND DETAILS. IMMEDIATELY STABILIZE THE FACILITIES INTERNAL AND EXTERNAL SLOPES WITH THE PRESCRIBED SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE. ATTACH A GALVANIZED STEEL PLATE WITH A WATER TIGHT CONNECTION TO EACH PERMANENT OUTFALL STRUCTURE TO BLOCK ALL PERMANENT ORIFICES. ATTACH THE SKIMMERS TO THE TEMPORARY 6" CIRCULAR ORIFICES AS PER THE DETAILS PRESENTED ON THE PLAN.

- CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR AN INSPECTION AND VERIFICATION THAT ALL INITIAL E&S BMPs CONSTRUCTED IN PHASE I ARE FUNCTIONAL AND OPERATING PER THE DESIGN DRAWINGS PRIOR TO PROCEEDING TO PHASE II.

PHASE II

- CLEAR AND GRUB AREAS AFFECTED BY PHASE II GRADING. STRIP TOPSOIL AND STOCKPILE IN THE DESIGNATED TEMPORARY AREAS AS SHOWN ON THE PLAN. PLACE FILTER SOCK AROUND THE STOCKPILE. APPLY TEMPORARY SEEDING TO THE STOCKPILES. ALL EXCESS TOPSOIL NOT REQUIRED TO BE REINSTALLED TO DISTURBED AREAS OR LANDSCAPE BERMS AFTER CONSTRUCTION IS COMPLETED SHALL BE REMOVED FROM THE SITE. THE REPORTING SITE SHALL HAVE AN APPROVED EROSION & SEDIMENTATION CONTROL PLAN PRIOR TO RECEIVING ANY TOPSOIL.

- INSTALL ROCK FILTER #3 AND TEMPORARY DIVERSION FILTER SOCK #5 TO DIVERT RUNOFF AWAY FROM AREA OF RETAINING WALL #3. NO GRADING MAY OCCUR ON THE NORTHERN SIDE OF THE NORTHEASTERN RAVINNE UNTIL THE NORTHERN RAVINNE IS BROUGHT TO GRADE AND RUNOFF IS DIVERTED TO SEDIMENT BASIN D. PLACE FILTER SOCK #3 IN THE NORTHEASTERN RAVINNE, VERTICALLY ADJUST DIVERSION FILTER SOCK #5, AND CONSTRUCT RETAINING WALL #3. FILL SHALL BE PLACED AT THE LOWER END OF THE RAVINNE PROCEEDING UPSTREAM WHILE MAINTAINING ADEQUATE DRAINAGE TO DIVERSION SOCK #3 AT ALL TIMES. EFFORT SHALL BE GIVEN TO DIVERT AS MUCH RUNOFF AS PRACTICAL TO THE NORTH SIDE OF RETAINING WALL #3 AND INTO THE AREA IRRIGATED BY #4 RIPRAP AND ROCKSOCK FILTER SYSTEM #1. ROCKSOCK FILTERS #27-47 MAY BE REMOVED, BEGINNING AT THE MOST DOWNSTREAM FILTER AND PROCEEDING UPSTREAM, AS ADDITIONAL FILTS OF FILL ARE PLACED IN THE NORTHEASTERN RAVINNE.

- INSTALL LEVEL SPREADER 9 AND ASSOCIATED GRADE AND RETAINING WALL #12.

- PROCEED WITH BULK SITE EXCAVATION AND ROUGH GRADING ACTIVITIES ON THE SITE AND BRING THE SITE AREAS TO SUBGRADE ELEVATIONS WHILE MAINTAINING ANY TEMPORARY DIVERSION FILTER SOCK AND TEMPORARY SEDIMENT BASIN ELEVATIONS. REFER TO THE FILL PLACEMENT DETAIL PRESENTED ON THE PLAN. THE REMAINING STORM SEWER CONVEYANCE SYSTEMS (OS-4 TO EW OS-4, OS-4 TO CLEANOUT 40, 12-0 TO 12-1A, 11-1 TO 11-4, BMP 1 TO 1-1, 4-0 TO 4-7, OS-4B TO OS-4, 5-6 TO 5-14, 31-2 TO 31-7, 8-4 TO 8-7, 9-3 TO 9-3A, 9-2 TO 9-6, OS-3C TO OS-3, 32-1 TO 32-4, 5-0 TO 5-15A, 5-1 TO 5-2, OS-5A TO OS-5, OS-5A TO OS-6, OS-7 TO OS-7B, AND OS-7 TO OS-7C) MAY BE INSTALLED AS AREAS REACH SUBGRADE. VERTICALLY ADJUST ANY TEMPORARY DIVERSION FILTER SOCK AND GRADING ACTIVITIES UPGRADE OF THE RESPECTIVE CHANNELS HAVE REACHED SUBGRADE ELEVATIONS. ADD ADDITIONAL ROCK LINING AS THE CHANNEL LENGTH ON THE FILL SLOPE INCREASES. REGULARLY MONITOR AND MAINTAIN ALL SEDIMENT BASIN ELEVATIONS AND OUTLET STRUCTURE CONFIGURATIONS TO ENSURE THAT THE BASINS ARE FULLY FUNCTIONAL. ALSO, APPLY EROSION CONTROL MATTING TO THE INDICATED AREAS ON THE PLAN, AS AREAS OF THE SITE REACH SUBGRADE ELEVATION. APPROPRIATE STABILIZATION SHALL BE APPLIED TO FILL SLOPES, LAWN AREAS, LANDSCAPE BERMS, ETC. TO MINIMIZE ACCELERATED EROSION.

A. WHEN THE FILL SLOPES ALONG THE PERIMETER OF THE SITE BEGIN TO CURVE, CONSTRUCT TOP OF SLOPE BERMS AS SHOWN ON THE PLANS, WITHIN THE TOP OF SLOPE BERMS TO DIVERT RUNOFF TO INSTALLED E&S BMPs.

B. PLACE FILL IN THE RAVINES TRIBUTARY TO TEMPORARY SEDIMENT BASIN C & D AS TO CONVERT THE FACILITIES FROM THEIR PHASE I FOOTPRINT TO PHASE II FOOTPRINT, RESPECTIVELY (NO CHANGES TO SPILLWAYS, SKIMMERS, OR OUTLET STRUCTURES ARE REQUIRED). PLACE S&D FILL WHILE MAINTAINING ADEQUATE DRAINAGE TOWARDS EACH FACILITY AT ALL TIMES.

C. WHEN ENOUGH FILL HAS BEEN PLACED, CONSTRUCT CONTRACTOR STAGING AREA #2.

STAGES #19-23 MAY BE PERFORMED SIMULTANEOUSLY AS DIFFERENT AREAS OF THE SITE ARE BROUGHT TO SUBGRADE ELEVATIONS AND VARIOUS CONVEYANCE SYSTEMS, TOP OF SLOPE BERMS, AND OTHER BMPs ARE CONSTRUCTED.

22. CRITICAL STAGE: CONSTRUCT PERMANENT BMPs #5, 6, & 7. SOIL COMPACTION WITHIN THE INFILTRATION BEDS OF BMPs #5 & 7 SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE.

A. CONSTRUCT PERMANENT BMPs #5, 6, & 7 IN ACCORDANCE WITH THE DESIGN DETAILS PRESENTED ON THE PLAN. ANY EXCESS MATERIAL FROM BASIN EXCAVATION SHALL BE PLACED IN AREAS TRIBUTARY TO ANOTHER BASIN. SEDIMENT BASIN WHILE ENSURING POSITIVE DRAINAGE TOWARDS THE INSTALLED E&S BMPs. INSTALL THE PERMANENT EMBANKMENT BERMS, IMPERVIOUS CORES, AND EMERGENCY SPILLWAYS TO THE PERMANENT DESIGN ELEVATIONS. CLAY CORE MATERIAL SHALL BE AVAILABLE FOR PLACEMENT AS SOON AS EXCAVATION PERMITS. OVER EXCAVATE FACILITIES 6 & 7 BY A MINIMUM OF 6" TO A DEPTH OF 555.50 AND 521.50 RESPECTIVELY OR TO A GREATER DEPTH AS DICTATED BY OVERSEEING ENGINEER DURING CONSTRUCTION IN ORDER TO PREVENT CLOGGING OF THE UNDERLYING SOIL. PROVIDE SOIL AMENDMENTS AS NECESSARY.

B. INSTALL EMERGENCY SPILLWAY LINERS AS SHOWN ON THE PLAN AND DETAILS. IMMEDIATELY STABILIZE THE FACILITIES INTERNAL AND EXTERNAL SLOPES WITH THE PRESCRIBED SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE.

C. INSTALL OUTLET CONVEYANCE SYSTEMS BEGINNING AT THE DOWNSTREAM STRUCTURE AND PROCEEDING

UPSTREAM. INSTALL THE PERMANENT OUTLET STRUCTURES PER THE DETAILS PRESENTED ON THE PLAN. AS ADDITIONAL CONVEYANCE SYSTEMS TRIBUTARY TO BMP #5, 6, & 7 ARE CONSTRUCTED, IMMEDIATELY INSTALL INLET PROTECTION AS SHOWN ON THE PLAN TO PREVENT SEDIMENT FROM ENTERING THE FACILITY CONSERVATION DISTRICT.

D. SHOULD ANY SEDIMENT ENTER THE FACILITY BEFORE PERMANENT STABILIZATION OF THE TRIBUTARY AREAS TO BMPs #5, 6 & 7 REMOVING THE EXCESS SOIL OR PROVIDE SOIL AMENDMENTS TO RESTORE THE DESIGN INFILTRATION RATE OF THE MEDIA.

22. CRITICAL STAGE: CONSTRUCT PERMANENT BMP #3 AND AS PER THE DETAILS PRESENTED ON THE PLAN. INSTALL THE OUTLET CONVEYANCE SYSTEM BEGINNING AT THE DOWNSTREAM STRUCTURE AND PROCEEDING UPSTREAM. AS ADDITIONAL CONVEYANCE SYSTEMS TRIBUTARY TO BMP #3 ARE CONSTRUCTED, IMMEDIATELY INSTALL INLET PROTECTION AS SHOWN ON PLAN TO PREVENT SEDIMENT FROM ENTERING THE FACILITY.

23. CRITICAL STAGE: CONSTRUCT PERMANENT BMP #4 AND AS PER THE DETAILS PRESENTED ON THE PLAN. AS ADDITIONAL CONVEYANCE SYSTEMS TRIBUTARY TO BMP #4 ARE CONSTRUCTED, IMMEDIATELY INSTALL INLET PROTECTION AS SHOWN ON PLAN TO PREVENT SEDIMENT FROM ENTERING THE FACILITY. SOIL COMPACTION WITHIN THE INFILTRATION BEDS OF BMP #4 SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE.

24. CRITICAL STAGE: CONSTRUCT PERMANENT BMP #9 AND AS PER THE DETAILS PRESENTED ON THE PLAN. INSTALL THE OUTLET CONVEYANCE SYSTEM BEGINNING AT THE DOWNSTREAM STRUCTURE AND PROCEEDING UPSTREAM. AS ADDITIONAL CONVEYANCE SYSTEMS TRIBUTARY TO BMP #9 ARE CONSTRUCTED, IMMEDIATELY INSTALL INLET PROTECTION AS SHOWN ON PLAN TO PREVENT SEDIMENT FROM ENTERING THE FACILITY.

- WHILE THE STORM SEWER CONVEYANCE SYSTEMS ARE BEING CONSTRUCTED, INLET TOPS SHALL REMAIN PROPPED UP WITH BRICKS. ALLOW RUNOFF TO ENTER THE STORM SEWER CONVEYANCE SYSTEMS TRIBUTARY TO THE SEDIMENT BASINS PRIOR TO CURB INSTALLATION AND PAVING OCCURRING. PROVIDE MASTIC OR EQUIVALENT IN ALL INLETS LOCATED WITHIN GRASSED AREAS TO PREVENT SOIL FROM WASHING INTO THE STORM SEWER THROUGH UNSEALED JOINTS IN THE INLET BOX AND TOP. ALL STORM SEWER PIPING SHALL BE PERIODICALLY FLUSHED TO PREVENT EXCESSIVE SEDIMENT AND DEBRIS ACCUMULATIONS FROM BUILDING UP WITHIN PIPES AND STRUCTURES. ANY WATER PUMPED FROM STORM SEWER TRENCHES SHALL BE DIRECTED TO A SEDIMENT REMOVAL FACILITY SUCH AS A FILTER BAG OR APPROVED EQUAL.

- ONCE THE BUILDING PAD IS BROUGHT TO SUBGRADE ELEVATIONS, BUILDING CONSTRUCTION MAY NOW COMMENCE AT ANY TIME.

27. CRITICAL STAGE: ONCE THE SITE IS BROUGHT TO THE PHASE II GRADE ELEVATIONS, DIVERT WATER AROUND TEMPORARY SEDIMENT BASIN C & D INTO PERMANENT BMPs #3 & #5 RESPECTIVELY. IMMEDIATELY INSTALL INLET PROTECTION ON ALL TRIBUTARY INLETS AS SHOWN IN THE PLAN.

CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR AN INSPECTION AND VERIFICATION THAT ALL WORK ASSOCIATED WITH PHASE II HAS BEEN COMPLETED PER THE DESIGN DRAWINGS PRIOR TO PROCEEDING TO PHASE III.

PHASE III

- COMPLETELY DEWATER TEMPORARY SEDIMENT BASIN C & D. ANY WATER PUMPED FROM THE FACILITIES SHALL BE DIRECTED TO A SEDIMENT REMOVAL FACILITY SUCH AS A FILTER BAG OR APPROVED EQUAL. CLEANOUT ANY SEDIMENT FROM THE FACILITIES. REMOVE ALL UTILITY SERVICE LINES AND OTHER RELATED TEMPORARY OUTLET STRUCTURES. COMPLETELY SEAL THE OUTLET PIPE CONNECTION IN THE DOWNSTREAM STRUCTURE AND FILL THE OUTLET PIPES WITH FLOWABLE FILL. ABANDON THE OUTLET PIPES IN PLACE AND BEGIN PLACING FILL TO ELIMINATE THE TEMPORARY SEDIMENT BASINS.

- ONCE THE SITE IS BROUGHT TO SUBGRADE ELEVATIONS, CONSTRUCT SANITARY SEWER MAIN LINES, MANHOLES, AND BUILDING SEWER LATERALS AS ADDITIONAL DOWNSTREAM SYSTEMS (S-2 TO S-6, S-4 TO S-4C, S-4 TO S-4B, 34-0 TO 34-3, 31-0 TO 31-2, 33-0 TO 33-4, 33-1 TO 33-5, 31-7 TO 31-8, 9-0 TO 9-2, 9-1 TO 9-1A, 31-7 TO 31-8, AND 12-1 TO 12-2) ARE CONSTRUCTED, IMMEDIATELY INSTALL INLET PROTECTION AS SHOWN ON THE PLAN TO PREVENT SEDIMENT FROM ENTERING THE FACILITY. ALSO, INSTALL ALL OTHER UTILITY SERVICE LINES AND OTHER RELATED UNDERGROUND WORK AT THIS TIME. ANY WATER PUMPED FROM UTILITY TRENCHES SHALL BE DIRECTED TO A SEDIMENT REMOVAL FACILITY SUCH AS A FILTER BAG OR APPROVED EQUAL. WHEN PERFORMING ANY OFFSITE UTILITY WORK, ONLY TRENCHING WORK THAT CAN BE COMPLETED AND PERMANENTLY STABILIZED EACH WORKING DAY SHALL BE PERFORMED IN ORDER TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREA. DEBRIS, TRASHING, AND FLOCCULATED MATERIAL UPSLOPE OF THE TRENCH. PERMANENT STABILIZATION INCLUDES SEEDING, MULCHING, AND MATTING.

- CONSTRUCT SITE CURBING AND PLACE SUBBASE MATERIAL TO STABILIZE THE SITE DRIVEWAYS, TRUCK COURTS, TRUCK STORAGE AREAS AND PARKING AREAS AS SOON AS PRACTICABLE. THIS WILL ELIMINATE THE ROCK CONSTRUCTION ENTRANCE AND THE NEED TO PROP UP INLET TOPS WITH BRICKS. THIS WILL ALSO ELIMINATE THE NEED FOR TOP OF SLOPE BERMS.

- CONTINUE WITH GENERAL BUILDING CONSTRUCTION AND CONSTRUCTION OF OTHER LOCALIZED SITE ITEMS SUCH AS SITE LIGHTING, SIDEWALK SYSTEMS, FENCING, UTILITY CONNECTIONS, ETC.

- INSTALL BITUMINOUS BINDER COURSE ON THE SITE DRIVEWAYS, TRUCK COURTS, TRUCK STORAGE AREAS AND PARKING AREAS. ONCE MAJOR EXTERIOR BUILDING CONSTRUCTION AND ALL UTILITY CONSTRUCTION ARE SUBSTANTIALLY COMPLETED.

- CONDUCT FINE GRADING ACTIVITIES AND PLACE TOPSOIL ON ALL REMAINING AREAS. APPLY PERMANENT SEEDING, SOIL SUPPLEMENTS, MULCHING AND MATTING WHERE APPLICABLE IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PRESENTED ON THE PLAN. INSTALL FINAL LANDSCAPING AND PLANTINGS PER PROJECT REQUIREMENTS AND PROCEDURES PRESENTED ON THE APPROVED PCSM PLAN.

- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.

- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY E&S BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT PCSM BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PRESENTED ON THE PLAN. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS SHOULD BE DONE ONLY DURING THE GERMINATING SEASON.

37. CRITICAL STAGE: WHEN THE ENTIRE WATERSHED AREA TRIBUTARY TO TEMPORARY SEDIMENT BASIN A & B ARE COMPLETELY STABILIZED, CONVERT TEMPORARY SEDIMENT BASIN A & B INTO PERMANENT BMP #1 & #2 PER THE DETAILS PROVIDED ON THE PCSM PLAN. THE CONTRACTOR SHALL CONTACT THE CONSERVATION DISTRICT AND TOWNSHIP ENGINEER AT LEAST 24 HOURS PRIOR TO THE START OF ANY BASIN CONVERSION TO FACILITATE CONSTRUCTION OBSERVATION. OVER EXCAVATE SEDIMENT BASIN A & B BY A MINIMUM OF 6" TO AN ELEVATION OF 570.50 AND 569.5, RESPECTIVELY OR TO A GREATER DEPTH AS DICTATED BY OVERSEEING ENGINEER DURING CONSTRUCTION IN ORDER TO PREVENT CLOGGING OF THE UNDERLYING SOIL. PROVIDE SOIL AMENDMENTS AS NECESSARY.

A. REMOVE THE SKIMMER AND STONE LANDING BERM, BAFFLES, AND CLEANOUT MARKER FROM TEMPORARY SEDIMENT BASIN A & B. PLACE THE TOP INLET GRATE ONTO THE PERMANENT OUTLET STRUCTURE. REMOVE ALL SEDIMENT FROM THE FACILITIES AND EITHER INCORPORATE INTO THE SITE OR DISPOSE OF IN ACCORDANCE WITH DEP REGULATIONS. REMOVE THE TEMPORARY STEEL PLATES FROM THE PERMANENT ORIFICES. ATTACH PERMANENT GALVANIZED STEEL PLATES WITH A WATERTIGHT CONNECTION TO THE TEMPORARY CIRCULAR ORIFICE.

B. EXCAVATE AREAS FOR PERMANENT BMP #1 & #2 TO FINAL ELEVATION PER THE DETAILS PROVIDED ON THE PCSM PLAN. SOIL COMPACTION WITHIN THE INFILTRATION BEDS OF BMP #1 & #2 SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE. INSTALL THE FINAL TOPSOIL MIXTURE AND APPLY PERMANENT SEEDING PER THE PROJECT SPECIFICATIONS FOR BMP #2. IMMEDIATELY STABILIZE THE BMP #2 INTERNAL AND EXTERNAL SLOPES WITH THE PRESCRIBED SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE.

C. INSPECT LEVEL SPREADERS #1, #2, & #3 AND REMOVE ANY EXCESS SEDIMENT ACCUMULATED DURING CONSTRUCTION AND WASH STONE FREE OF DEBRIS.

- REMOVE ALL SECONDARY EROSION AND SEDIMENTATION CONTROL MEASURES ONCE THE SITE IS STABILIZED (70 PERCENT UNIFORM STABILIZATION) SUCH AS DIVERSION SWALES/BERMS, FILTER SOCK, INLET PROTECTION, AND THE LIKE. PERMANENTLY RE-SEED, MULCH AND MAT WHERE APPLICABLE. ANY REMAINING AREAS WHICH REMAIN DISTURBED OR HAVE NOT BEEN ESTABLISHED FROM PREVIOUS SEEDING APPLICATIONS IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PRESENTED ON THE PLAN.

- INSTALL SITE SIGNAGE, FINAL WEARING COURSE, PAVEMENT MARKINGS, AND OTHER INCIDENTAL CONSTRUCTION ITEMS AS NECESSARY.

- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMPs, INSTALLATION OF ALL PERMANENT PCSM BMPs, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION.

- WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPs IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOTIF IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.

MAINTENANCE OF E&S CONTROL DEVICES

THE SOIL EROSION AND SEDIMENTATION CONTROLS UTILIZED IN THE DEVELOPMENT OF THIS PLAN SHALL BE ROUTINELY MAINTAINED IN ORDER TO KEEP THEM FUNCTIONING PROPERLY UNTIL SITE STABILIZATION OCCURS. THE CONTRACTOR SHALL PERFORM CERTAIN PERIODIC DUTIES IN ORDER TO ASSURE PROPER CONTROL. MAINTENANCE OF THE VARIOUS EROSION AND SEDIMENTATION CONTROLS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING GENERAL MAINTENANCE PROCEDURES OBTAINED BELOW.

MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION MEASURES AFTER EACH SIGNIFICANT RUNOFF EVENT AND ON A WEEKLY BASIS BY A QUALIFIED PERSON TRAINED AND EXPERIENCED IN EROSION AND SEDIMENTATION CONTROL AND WHO HAS SITE SUPERVISION RESPONSIBILITIES, TO ASCERTAIN THAT THE EROSION CONTROL MEASURES ARE OPERATIONAL AND EFFECTIVE IN PREVENTING SEDIMENT FROM LEAVING THE SITE. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE: A SUMMARY OF SITE CONDITIONS, BMPs AND COMPLIANCE, AND THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INCLUDING THE COMPLIANCE ACTIONS, DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG SHALL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE CONSERVATION DISTRICT UPON REQUEST.

MISCELLANEOUS ADJUSTMENTS AND CORRECTIONS SHALL BE MADE TO ANY EROSION CONTROL STRUCTURE AS DEEMED NECESSARY BY THE ENGINEER, TOWNSHIP OFFICIAL, OR COUNTY CONSERVATION DISTRICT REPRESENTATIVE IN ORDER TO CORRECT UNFORESEEN PROBLEMS CAUSED BY A STORM PRIOR TO STABILIZATION.

FILTER SOCK

- THE FILTER SOCK SHALL BE INSPECTED AFTER EVERY PRECIPITATION EVENT. ANY NECESSARY REPAIRS MUST BE MADE IMMEDIATELY.
- ACCUMULATED SEDIMENT SHALL BE REMOVED AS REQUIRED TO KEEP THE DEVICES FUNCTIONAL. IN ALL CASES, REMOVE DEPOSITS WHERE ACCUMULATIONS REACH 1/2 ABOVE THE GROUND HEIGHT OF THE DEVICE.
- ALL UNDERCUTTING OR EROSION OF THE TOE ANCHOR OR BASE SHALL BE REPAIRED IMMEDIATELY WITH COMPACTED BACKFILL MATERIAL.
- ADHERE TO ANY MANUFACTURER'S RECOMMENDATIONS FOR REPLACING FILTER SOCK.
- ANY DEBRIS ACCUMULATED AT SILT SOCK BARRIERS SHALL BE REMOVED AND PROPERLY DISPOSED IN A RESPONSIBLE MANNER. BARRIERS SHALL BE CHECKED AND REALIGNED OR RESET AS REQUIRED. ANY DEBRIS OR SOLID WASTE MATERIAL ACCUMULATED FROM CONSTRUCTION ACTIVITIES SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN APPROVED LANDFILL. CONSTRUCTION WASTE SHALL NOT BE BURIED ON THE SUBJECT SITE.

ROCK CONSTRUCTION ENTRANCE

- THE STRUCTURES THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS, WILL BE REMOVED AND RETURNED TO THE SITE. WASHING OF THE ROADWAY IS NOT PERMITTED.
- ROCK CONSTRUCTION ENTRANCES SHALL BE CLEANED AND REDRESSED WHEN VOIDS BECOME CHOKED WITH MUD AND SEDIMENT.
- GEOTEXTILE FABRIC SHALL BE INSTALLED UNDER ALL ROCK CONSTRUCTION ENTRANCES TO KEEP SOIL FROM PUMPING UP AND PENETRATING INTO THE STRUCTURE.

SEDIMENT BASIN

- A "CLEAN-OUT" ELEVATION WILL BE CLEARLY INDICATED ON THE PLAN DRAWINGS. THIS ELEVATION WILL BE IDENTIFIED BY APPROPRIATE STRUCTURE OR DEVICE WITHIN THE SEDIMENT BASIN TO INDICATE WHEN SEDIMENT REMOVAL/ DISPOSAL OPERATIONS ARE NECESSARY.
- DIVERSION SWALES TRIBUTARY TO THE SEDIMENT BASIN SHALL BE REGULARLY CLEANED AND RE-SHAPED TO MAINTAIN THE DESIRED DIMENSION AND CAPACITY.
- SEDIMENT WILL NOT BE ALLOWED TO ENTER THE WATERS OF THE COMMONWEALTH DURING EITHER SEDIMENT REMOVAL OR DISPOSAL OPERATIONS.
- SEDIMENT BASINS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.
- ROCK OUTLETS SHALL BE MAINTAINED IN THE POSITION AND TO THE DIMENSION AS SHOWN ON THE DETAIL. ANY SLIDING OR DISPLACEMENT OF ROCKS SHALL BE IMMEDIATELY CORRECTED. THE FILTER SOCK SHALL BE MAINTAINED IN ITS DESIGNATED POSITION AND ANY EXCESS SEDIMENT FROM THE SURFACE OF THE ROCK EMBANKMENT SHALL BE REMOVED AND THE ROCK REDRESSED.
- THE SEDIMENT BASIN SHALL BE MONITORED AND SEDIMENT SHALL BE REMOVED FROM THE BASIN AND PROPERLY DISPOSED OF WHEN IT REACHES THE SPECIFIED CLEAN-OUT ELEVATION.
- ALL EMBANKMENT CONSTRUCTION SHALL REMAIN WEATHER-TIGHT AND FREE FROM EROSION OR PIPING OF SOILS.
- CLEAN-OUT MARKERS SHALL BE LOCATED AT HALFWAY POINTS WHERE RUNOFF ENTERS OR LEAVES THE CONTROL FACILITY.

PUMPED WATER FILTER BAG

- FILTER BAGS SHALL BE INSPECTED DAILY. IMMEDIATELY DISPOSE OF BAGS WHICH ARE SPLIT OR TORN.
- DO NOT USE BAGS WHICH ARE GREATER THAN 1/2 FULL. WHEN BAGS REACH THAT CAPACITY, THEY SHALL BE REPLACED AND THE SEDIMENT SHALL BE PROPERLY DISPOSED.
- REGULARLY INSPECT THE OPERATION OF FILTER BAGS TO ENSURE THAT THEY ARE LOCATED ON RELATIVELY FLAT, WELL VEGGATED AREAS AND THAT THE OUTFLOW IS BEING DISCHARGED TO A STABLE, EROSION RESISTANT AREA.

TOP OF SLOPE BERM

- TEMPORARY BERMS SHALL BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.
- BERMS SHALL OUTLET TO SLOPE PIPES, CHANNELS, OR OTHER APPROVED MEANS OF CONVEYING RUNOFF TO A SEDIMENT TRAP, SEDIMENT BASIN, OR COLLECTOR CHANNEL.
- CHANNEL BEHIND BERM SHALL HAVE POSITIVE GRADE TO OUTLET AN APPROPRIATE PROTECTIVE LINING.
- BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.

TEMPORARY DIVERSION CHANNEL

- ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
- CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITH 48 HOURS OR DISCOVERY.
- NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOVING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

ROCK FILTER

- IF BERM BECOMES CLOGGED, IMMEDIATELY REPLACE WITH NEW STONE OR REMOVE, WASH, AND REPLACE STONE. FILTER CLEANING OR REPLACEMENT STONE SHALL BE DONE ON A DAY WHEN THERE IS NO PRECIPITATION. A SUPPLY OF STONE SHALL BE MAINTAINED ON THE SITE FOR REPLACEMENT.
- REMOVE SEDIMENT WHEN IT ACCUMULATES A DEPTH OF 6" AGAINST THE BERM BASE. PLACE SEDIMENT ON THE TOPSOIL STOCKPILE.
- ROCK FILTER SHOULD BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
- CLOGGED FILTER STONE (AASHTO #57) SHOULD BE REPLACED.
- NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION.

SEEDING SPECIFICATIONS

VEGETATIVE STABILIZATION

ALL DISTURBED AREAS THAT HAVE NOT OTHERWISE BEEN STABILIZED AND HAVE SIGNIFICANT POTENTIAL FOR EROSION SHOULD BE STABILIZED WITH VEGETATION. THIS INCLUDES GRADED AREAS WHERE IT IS ANTICIPATED THAT FUTURE EARTHMOVING WILL TAKE PLACE WITHIN THE COMING YEAR. AREAS THAT WILL BE SUBJECT TO EARTHMOVING WITHIN MONTHS MAY BE STABILIZED WITH TEMPORARY SEED MIXTURES. PREDOMINANTLY ANNUAL GRASSES. ALL OTHERS SHOULD BE STABILIZED WITH PERMANENT SEED MIXTURES. PREDOMINANTLY PERENNIAL GRASSES. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. HOWEVER, THE AREA WILL NOT BE CONSIDERED STABILIZED UNTIL A MINIMUM UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED.

AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN. IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATIVE COVER, BE SEEDING WITHOUT BEING SEEDING AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE.

SOIL LIMITATIONS AND RESOLUTIONS

IN GENERAL, THERE ARE NO KNOWN UNUSUAL SITE CHARACTERISTICS THAT ARE UNLIKE THOSE FOUND ELSEWHERE IN THE REGION WHERE SIMILAR SOILS ARE PRESENT...

ANY ROCK ENCOUNTERED WILL BE RIPPED OR BLASTED AS NECESSARY, AND USED FOR COMPACTED FILL IN OTHER AREAS OR REMOVED FROM THE SITE.

IN INFILTRATION FACILITY BED AREAS WHERE BEDROCK IS ENCOUNTERED OR LOCATED WITHIN TWO (2) FEET OF THE BOTTOM ELEVATION OF THE FACILITY, THE BED SHALL BE OVER-EXCAVATED AT LEAST TWO (2) FEET AND PROVIDED WITH A BMP SOIL MIXTURE CAPABLE OF ACHIEVING AN INFILTRATION RATE BETWEEN 2-10 INCHES PER HOUR...

SLOPE WILL NOT BE AN ADVERSE FACTOR TO CONSTRUCTION. SLOPES WILL BE RE-SHAPED PER THE PROPOSED GRADING PLAN AND TYPICALLY WILL BE 3:1 OR FLATTER. ANY ACCELERATED RUNOFF OR EROSION FROM SLOPES WILL BE HANDLED BY EROSION CONTROL MATTING AND SILT SOCK ON THE SITE.

DRAINAGE WITHIN THE PROJECT AREA WILL BE ACCOMMODATED BY PROPOSED GRADING, STORM PIPING AND SWALES.

THE GROUND SURFACE WILL BE RESHAPED, COMPACTED AND STABILIZED CONSISTENT WITH THE PROPOSED GRADING PLAN CONTAINED HEREIN.

CORROSIVE SOILS, WHEN IDENTIFIED, SHALL NOT BE PLACED IN THE VICINITY OF UNDERGROUND UTILITY LINES, TO THE EXTENT POSSIBLE.

SOIL STRENGTH SHALL BE ENSURED THROUGH PROPER COMPACTION TECHNIQUES. STRUCTURAL FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING THICKNESS AND COMPACTED WITH A ROLLER HAVING A MINIMUM STATIC WEIGHT OF 10 TONS...

SHOULD EXCAVATION ACTIVITIES OCCUR DURING WINTER MONTHS WHEN FROST ACTION MAY OCCUR, THE CONTRACTOR SHALL REMOVE THE FROST-IMPACTED SOILS PRIOR TO PLACEMENT OF FILL MATERIAL.

IN CUT AREAS, OVER-EXCAVATION SHALL BE PERFORMED TO ENSURE THAT PROPER SOIL ADHESION IS ACHIEVED IN AREAS OF SHALLOW BEDROCK. SHALLOW BEDROCK IS LIKELY TO BE ENCOUNTERED FROM 0' TO 3' DEPTH DURING CONSTRUCTION IN THE AREAS OF IT-3 THROUGH IT-9.

AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL NEED TO HAVE APPROPRIATE EAS CONTROLS.

ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIP/PAQUE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

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

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

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

Table with columns for SOIL, CUTBANK, CONCRETE, DROPPED, EASILY ERODIBLE, FLOODING, HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, POOR SOURCE OF TOPSOIL, FROST ACTION, SHRINK/SWELL, POTENTIAL SINKHOLES, PONDING, WETNESS.

CUTBANKS CAVE: CONTRACTOR SHALL USE THE FOLLOWING CONSTRUCTION TECHNIQUES DESIGNED TO REDUCE OR ELIMINATE THE POTENTIAL FOR CUTBANK CAVING...

- 1. SLOPING THE GROUND TO REDUCE THE HEIGHT OF THE CUTBANK.
2. BENCHING THE GROUND TO REDUCE THE HEIGHT OF THE CUTBANK.
3. SHORING THE CUTBANK WITH SUPPORTS (PLANKING OR HYDRAULIC JACKS).
4. SHIELDING THE CUTBANK (TRENCH BOX).

CORROSIVE: ALL UNDERGROUND PIPES, CONDUITS, AND STORAGE TANKS SHALL BE PROTECTIVE COATING OR SHALL BE MANUFACTURED FROM CORROSION RESISTANT MATERIALS TO PREVENT CORROSION DUE TO EXPOSURE TO CORROSIVE SOILS.

EASILY ERODIBLE: EROSION CONTROL MEASURES SHALL BE MONITORED AND ROUTINELY IN ACCORDANCE WITH PROVIDED SCHEDULE AND PROCEDURE UNTIL THE SITE IS COMPLETELY STABILIZED.

FLOODING: CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES, EXCEPT FOR THE BUILDING PAD AND BOTTOM SURFACES OF PCSM BMPs...

DEPTH OF SATURATED ZONE: CONTRACTOR SHALL PROVIDE NECESSARY PUMPS AND PIPES TO DRAIN ANY GROUNDWATER ENCOUNTERED DURING EXCAVATION. SATURATED SOILS SHALL BE DIRMED PRIOR TO USE AS FILL.

HYDRIC INCLUSIONS: CONTRACTOR SHALL UTILIZE CONSTRUCTION TECHNIQUES DESIGNED TO HANDLE ANY SATURATED SOILS DURING EXCAVATION.

LOW STRENGTH: PRECAUTIONS SHOULD BE TAKEN TO PREVENT SOIL FAILURE DUE TO IMPROPER CONSTRUCTION TECHNIQUES SUCH AS OVER-STEEPENING AND OVERLOADING OF SLOPES...

SLOW PERCOLATION: CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES...

PIPING: PRECAUTIONS SHOULD BE TAKEN, AS NECESSARY, TO PREVENT PIPING. CONSTRUCT ANTI-SEEP COLLARS AS DESIGNED FOR EACH PCSM BMP BASIN.

POOR SOURCE OF TOPSOIL: SOIL TESTS SHALL BE PERFORMED TO DETERMINE APPROPRIATE TOPSOIL FOR USE IN LAWN AREAS.

FROST ACTION: CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING CONSTRUCTION AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES...

SHRINK/SWELL: STRENGTHENED FOUNDATIONS MAY BE UTILIZED IF WARRANTED BY ACTUAL SITE INVESTIGATIONS.

POTENTIAL SINKHOLES: A SINKHOLE TREATMENT DETAIL IS PROVIDED ON THE PLAN. CONTRACTOR SHALL NOTIFY ENGINEER, TOWNSHIP AND CONSERVATION DISTRICT IMMEDIATELY IF SINKHOLES ARE ENCOUNTERED.

PONDING: CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING CONSTRUCTION AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES...

WETNESS: CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING CONSTRUCTION AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES...

EROSION & SEDIMENTATION CONTROL NOTES

STANDARD NOTES:

- 1. A COPY OF THE APPROVED DRAWINGS (STAMPED SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES...
2. BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN...
3. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE...
4. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES...
5. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES...
6. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE...
7. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP...
8. UNTIL THE SITE IS STABILIZED, ALL E&S BMPs MUST BE MAINTAINED PROPERLY...
9. SEDIMENT REMOVED FROM BMPs DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS...
10. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND...
11. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE...
12. ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY...
13. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS...
14. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF...
15. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL...
16. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE...
17. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL...

MATERIAL NOTES:

- 1. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS...
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED AND FULLY IMPLEMENTED EROSION AND SEDIMENT CONTROL PLAN...
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL...
4. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS...
5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS...
6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

PROTECTION OF INFILTRATION BMPs:

- 1. COMPACTION OF THE BMP AREA SHALL BE AVOIDED AND MINIMIZED DURING CONSTRUCTION.
2. E&S BMPs SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER CONSTRUCTION OF THE INFILTRATION BMPs...
3. TO THE MAXIMUM EXTENT PRACTICABLE, PCSM BMPs SHOULD BE CONSTRUCTED AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED ON ALL CONTRIBUTING DRAINAGE AREAS.

STABILIZATION NOTES:

- 1. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS...
2. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES...
3. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE OR ANY STAGE OR PHASE OF AN ACTIVITY...
4. STRAW MULCH MUST BE APPLIED AT RATES OF AT LEAST 3 TONS PER ACRE...
5. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE...
6. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER...
7. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA...
8. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER...
9. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION...

CHANNEL NOTES:

- 1. ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL, GROUND, FALLEN LEAVES & WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES...
2. ANY UNDERGROUND UTILITIES RUNNING ACROSS/TROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS-SECTION DETAIL...
3. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

NPDES PERMIT NOTES:

- 1. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER GENERAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI...
2. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER INDIVIDUAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI...
3. ALL EARTHMOVING CONTRACTORS MUST BE ADDED AS CO-PERMITTEES TO THE NPDES PERMIT.
4. SITE INSPECTIONS AND MONITORING REPORTS - THE PERMITTEE AND CO-PERMITTEE(S) SHALL COMPLY WITH ALL OF THE MONITORING AND REPORTING REQUIREMENTS...
5. THE DEP "VISUAL INSPECTION CHECKLIST" SHOULD BE COMPLETED FOR EACH INSPECTION...
6. AFTER ALL EARTHMOVING ACTIVITY HAS CEASED AND THE ENTIRE PERMITTED AREA IS PERMANENTLY STABILIZED...

THERMAL IMPACTS ANALYSIS

AS REQUIRED BY CHAPTER 102.8(F)(13), MEASURES HAVE BEEN TAKEN IN ORDER TO IDENTIFY POTENTIAL THERMAL IMPACTS FROM POST-CONSTRUCTION STORMWATER TO SURFACE WATERS OF THE COMMONWEALTH AND AVOID MINIMIZE OR MITIGATE POTENTIAL POLLUTION FROM THERMAL IMPACTS BY UTILIZING ON-SITE BMPs...

IN ADDITION TO MINIMIZING THERMALS IMPACTS RESULTING FROM THE PROJECT TO THE GREATEST EXTENT PRACTICABLE, SEVERAL ENHANCED STORMWATER MANAGEMENT FEATURES AND WATER QUALITY FEATURES HAVE BEEN PLANNED TO MITIGATE THERMAL IMPACTS FROM THE DEVELOPMENT...

DURING CONSTRUCTION, EARTH DISTURBANCE ACTIVITIES WILL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE AS A RESULT OF THE PROJECT'S SEQUENCE OF CONSTRUCTION WHICH WILL MINIMIZE THERMAL IMPACTS...

EROSION AND SEDIMENTATION CONTROL MEASURES

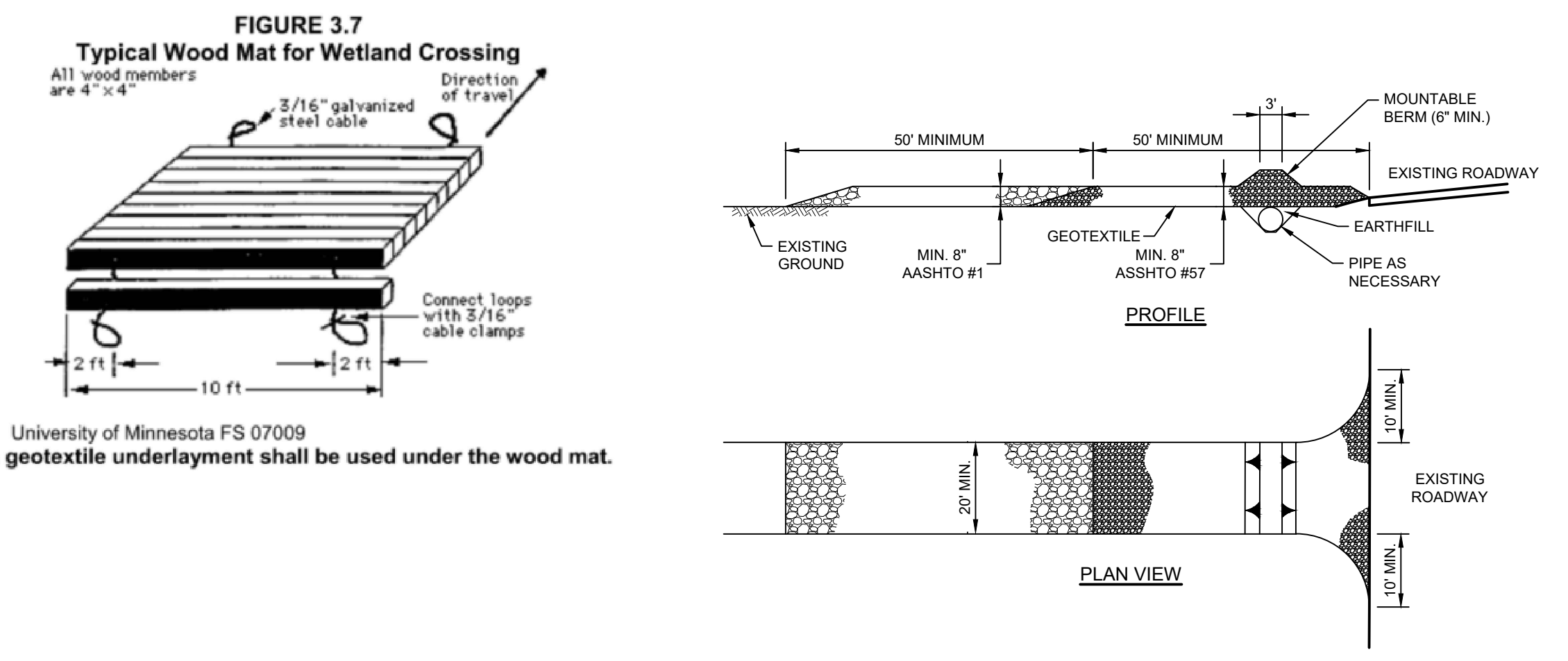
THE PROPOSED SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SELECTED FOR THIS PROJECT WILL PRIMARILY CONSIST OF THE CONSTRUCTION OF STABILIZED CONSTRUCTION ENTRANCES, FILTER SOCK, INLET PROTECTION, TEMPORARY SEDIMENT BASINS/TRAPS, EROSION CONTROL MATTING, PUMPED WATER FILTER BAGS, DIVERSION SWALES, PIPE OUTLET PROTECTION, TOP OF SLOPE BERMS, AND TEMPORARY SEEDING AND MULCHING.

TEMPORARY CONTROL MEASURES:

- 1. REVIEW AND AUTHORIZATION BY THE DAUPHIN COUNTY CONSERVATION DISTRICT SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF ANY EARTH DISTURBANCE ACTIVITIES.
2. TEMPORARY VEGETATION SHALL BE ESTABLISHED ON ALL SLOPES, ON STOCKPILED TOPSOIL AND ON ALL DISTURBED AREAS LEFT UNSTABILIZED FOR PERIODS LONGER THAN 4 DAYS...
3. DURING CONSTRUCTION, THE AMOUNT OF DISTURBED SOILS SHALL BE KEPT TO A MINIMUM AND, WHENEVER POSSIBLE, A SUITABLE VEGETATIVE BUFFER WILL BE MAINTAINED AROUND ALL CONSTRUCTION AREAS.
4. ALL EARTHMOVING ACTIVITIES SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA.
5. RESPONSIBILITY FOR IMPLEMENTING EROSION AND SEDIMENTATION CONTROL SHALL BE DESIGNATED TO A MINIMUM OF ONE INDIVIDUAL WHO WILL BE PRESENT AT THE PROJECT SITE DAILY.
6. ALL SOIL STOCKPILES ARE TO BE IMMEDIATELY SEEDED WITH A TEMPORARY GRASS COVER.
7. WHENEVER POSSIBLE, PLACE ALL EXCAVATED MATERIAL UPSLOPE FROM DISTURBED AREAS...
8. UPON GENERAL COMPLETION OF THE FINAL GRADING, TOPSOIL SHALL BE PLACED AND FINAL-GRADING PASSES SHALL BE MADE PERPENDICULAR TO THE DIRECTION OF RUNOFF.
9. RE-SEED AND REESTABLISH ANY BARREN AND DISTURBED AREAS NOT HAVING ESTABLISHED GROUND COVER.
10. FILTER SOCK SHALL BE PLACED AT CRITICAL EROSION AREAS, AS SHOWN ON THE PLAN, IN ORDER TO PREVENT SEDIMENT FROM ENTERING INTO ADJACENT PROPERTIES, ROADWAY AND WATERWAYS.
11. FILTER SOCK SHALL BE PLACED END TO END, SECURELY STAKED IN PLACE, AND MAINTAINED UNTIL THE AREA IS STABILIZED.
12. WHERE DUST OR WIND EROSION IS A PROBLEM, THE UNSTABLE SURFACE(S) SHALL BE SPRINKLED WITH WATER OR OTHER SUITABLE DUST SUPPRESSOR...
13. ANY WATER PUMPED FROM ANY EXCAVATION, FOR ANY REASON, SHALL BE DIRECTED THROUGH A SEDIMENT FILTER BAG (DIRT BAG) CONFORMING TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
14. THE CONTRACTOR SHALL EMPLOY MEASURES DURING CONSTRUCTION TO PREVENT ITS ENTRY OF FUELS OR LUBRICANTS, IF A SPILL OCCURS, IT SHALL BE CONTROLLED IMMEDIATELY TO PREVENT ANY ENTRY INTO NEARBY WATERWAYS.
15. WHEN THE ENGINEER, TOWNSHIP OFFICIAL, OR COUNTY CONSERVATION DISTRICT OFFICIAL DETERMINES THAT EROSION CONTROL MEASURES ARE NECESSARY...
16. ANY TEMPORARY EROSION CONTROL MEASURE APPLIED TO EXPOSED SOIL SURFACES SHALL REMAIN FUNCTIONAL UNTIL VEGETATED COVER IS SUFFICIENTLY ESTABLISHED.
17. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE SUBJECT TO APPLICABLE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION...
18. SHOULD ANY ADDITIONAL EROSION OR SEDIMENTATION OCCUR DURING CONSTRUCTION...
19. PERMANENT SEEDING AND MULCHING WILL BE INCORPORATED INTO THE CONSTRUCTION PHASES DURING THE APPROVED PLANTING SEASON.
20. ALL AREAS DISTURBED BY CONSTRUCTION, OTHER THAN THOSE RECEIVING CONCRETE OR BITUMINOUS PAVING OR OTHER TYPE OF IMPERVIOUS COVERING SHALL BE STABILIZED BY APPLYING A SEED MIXTURE TO ESTABLISH AN EROSION RESISTANT STAND OF VEGETATION...

PERMANENT CONTROL MEASURES:

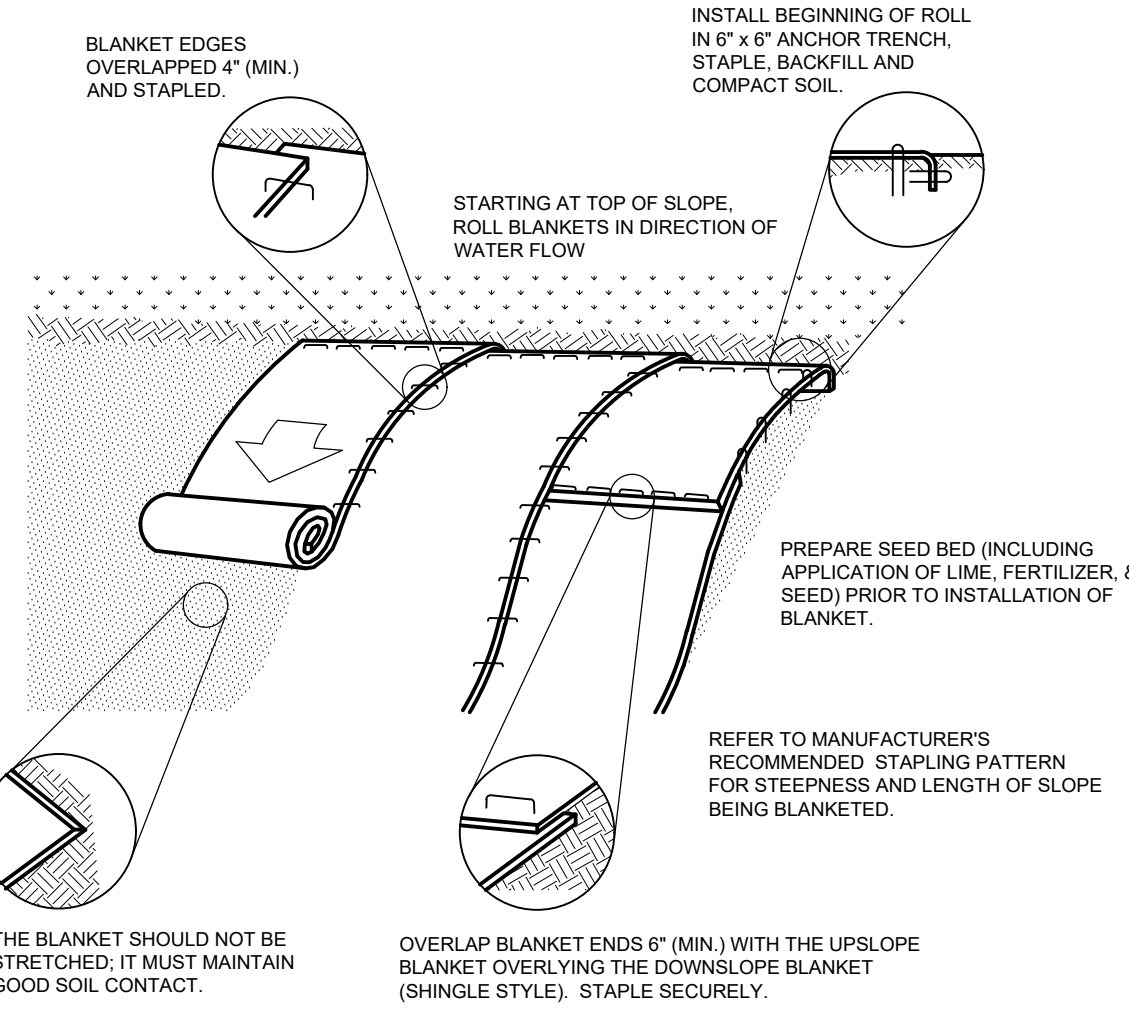
- 1. PERMANENT SOIL PROTECTION WILL BE COMPLETED AS EARLY AS PRACTICAL.
2. ALL EXISTING STORMWATER DEVICES ARE TO BE INSPECTED DAILY AND CLEANED OUT AS NECESSARY.
3. ALL SEDIMENT CONTROL DEVICES ARE TO REMAIN UNTIL ALL DISTURBED AREAS ARE FULLY STABILIZED.
4. TEMPORARY AND PERMANENT SEEDING SHALL ADHERE TO THE SPECIFICATIONS PROVIDED IN THIS REPORT.
5. EACH STAGE OF EARTHMOVING ACTIVITIES MUST BE COMPLETED PRIOR TO INITIATING SUBSEQUENT STAGES.
6. ALL EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED WEEKLY AND AFTER ALL MEASURABLE PRECIPITATION EVENTS.
7. THE PERMITTEE AND ANY CO-PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT THAT HAS A REASONABLE LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.
8. APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLANS AND NARRATIVE REPORTS MUST BE AVAILABLE AT THE SITE OF THE CONSTRUCTION ACTIVITY AT ALL TIMES.
9. IF FUEL OR OTHER DANGEROUS CHEMICALS ARE STORED ON SITE, THEN A PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN MUST BE DEVELOPED AND KEPT ON SITE.



University of Minnesota FS 07009 A geotextile underlayment shall be used under the wood mat.

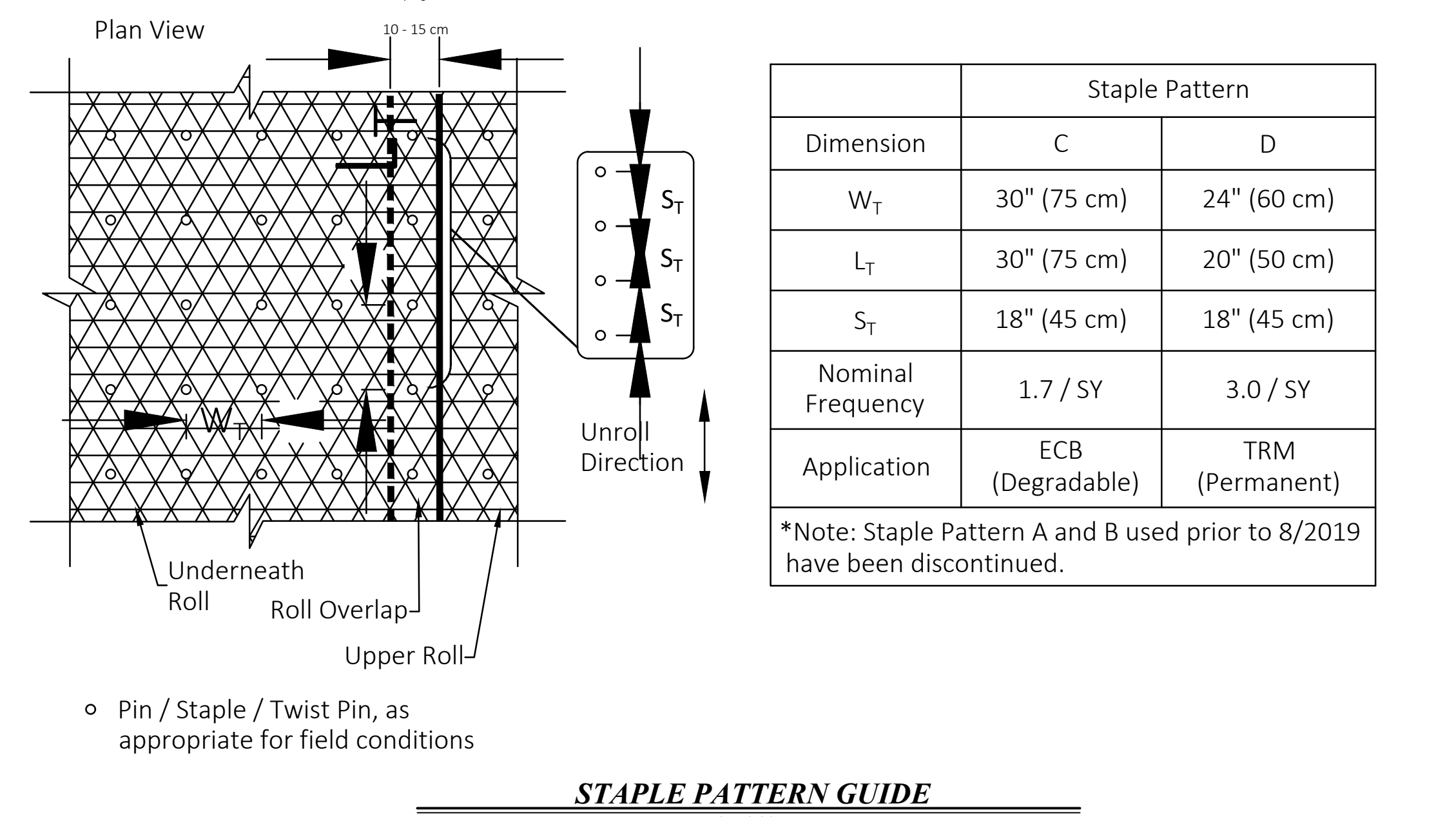
ROCK CONSTRUCTION ENTRANCE

- GENERAL NOTES:
1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE.
2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CURVED PIPE IS USED...
4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS...



- NOTES:
1. EROSION CONTROL MATTING SHALL BE NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL.
2. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS...
3. PROTECT ANCHOR TRENCH AT TOP OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
4. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS, AND GRASS.
5. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL...
6. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT...
8. OVERLAP BLANKET ENDS (6" MIN.) WITH THE UPRLOPE BLANKET OVERLYING THE DOWNSLOPE BLANKET (SHINGLE STYLE). STAPLE SECURELY.

EROSION CONTROL BLANKET INSTALLATION



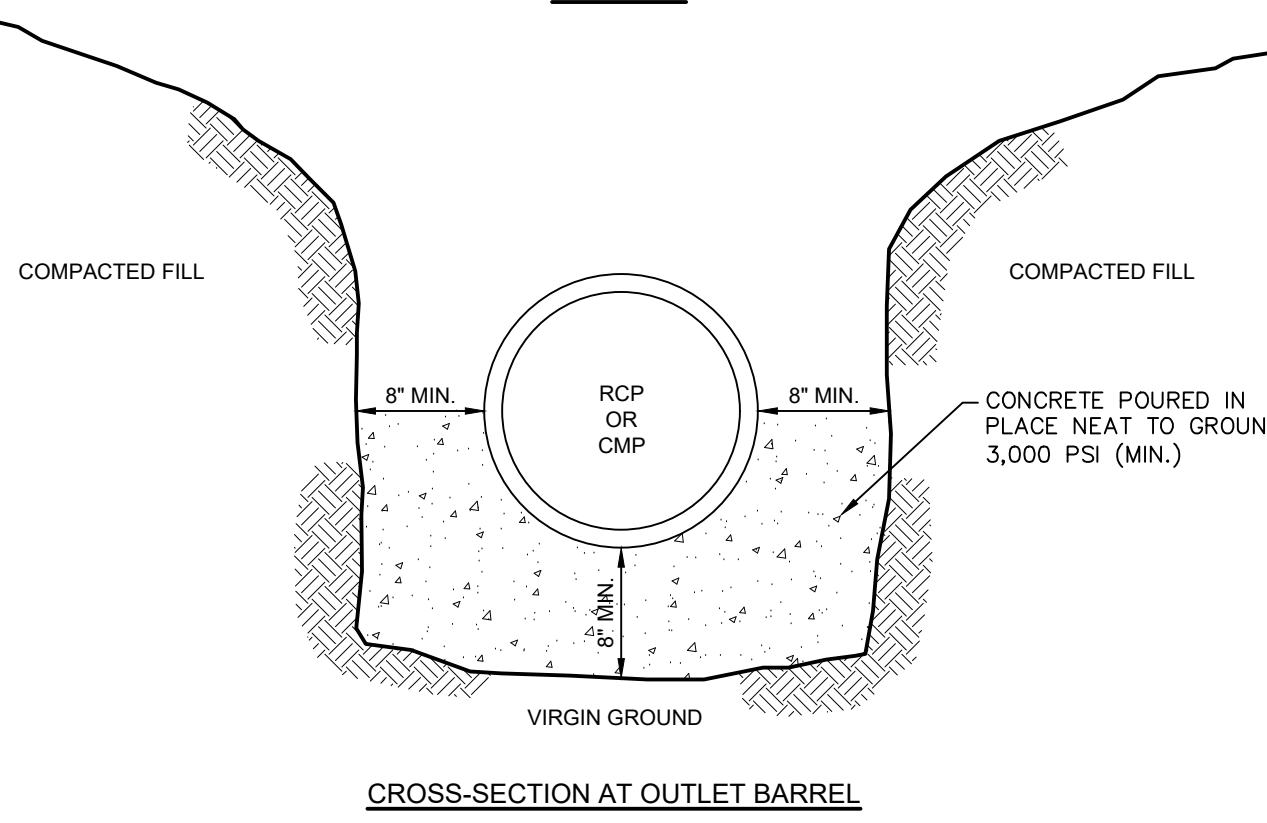
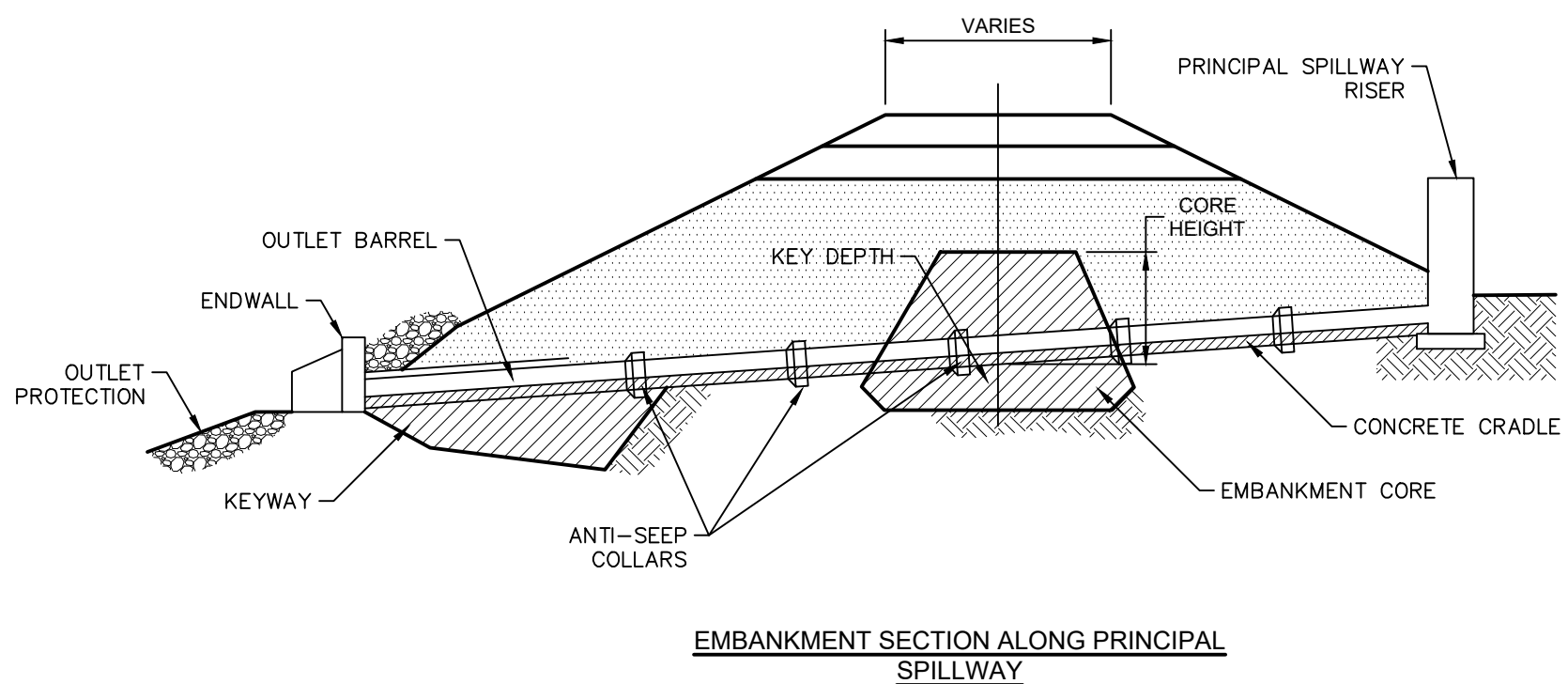
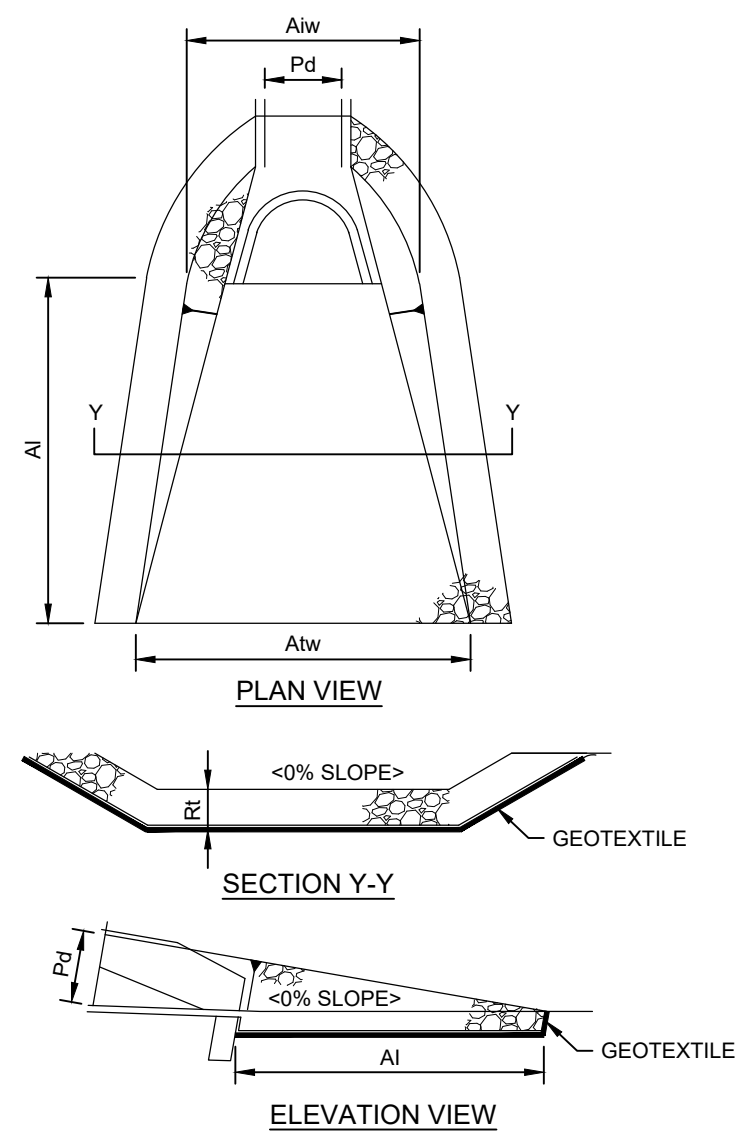
STAPLE PATTERN GUIDE NOT TO SCALE

Table with columns: PROJ. MGR., DESIGN, CADD, CHECKED, TNS, CWC, TLR.

Table with columns: REVISED PER DEP CHAPTER 102 AND CHAPTER 106 COMMENTS, REVISED PER CHAPTER 102 COMMENTS, REVISED PER CHAPTER 102 & 106 COMMENTS, REVISED PER ORIGINAL SUBMISSION #1 COMMENTS, REVISED PER TOWNSHIP COMMENTS, REVISED PER TOWNSHIP COMMENTS, REVISED PER TOWNSHIP COMMENTS, AS PER TOWNSHIP COMMENTS, REVISION.

EROSION & SEDIMENTATION CONTROL DETAILS FOR 7464 & 7600 LINGLESTOWN ROAD SITE FOR PROLOGIS WEST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

Snyder, Secary & Associates, LLC ENGINEERS * PLANNERS * DEVELOPMENT CONSULTANTS YORK OFFICE 227 W. MARKET STREET YORK, PA 17401 PH: 717.837.4881 FAX: 717.837.2829 www.snydersecary.com



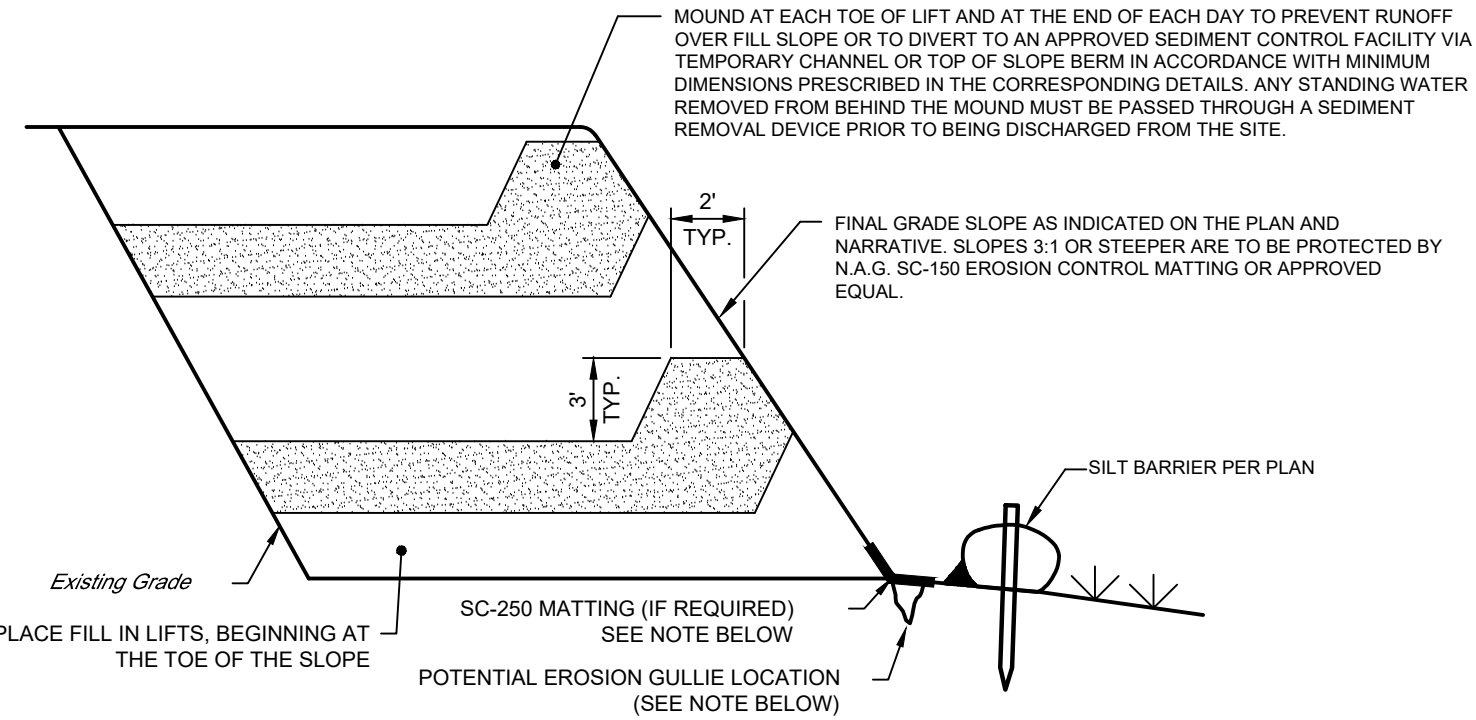
CONCRETE CRADLE FOR BASIN OR TRAP OUTLET BARREL
NOT TO SCALE

OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP			APRON	
		SIZE (R ₁)	THICK. R ₁ (IN)	LENGTH A ₁ (FT)	INITIAL WIDTH Aw (FT)	TERMINAL WIDTH Aw (FT)
EW 5-0	48	5	27	22	12	21
EW 6-0	18	5	27	15	5	11
EW 8-1B	6	3	9	0	2	2
OS-1B	42	5	27	40	11	27
OS-SF	42	4	18	15	11	17
OS-4S	10	4	18	0	3	3
OS-8A	18	4	18	15	5	11
OS-9C	18	3	9	8	5	13
OS-SI	6	5	27	0	2	2
EW-10	18	3	9	6	5	7

- 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.
 - PLACE 6" OF RESERVED STREAM BED MATERIAL ON TOP OF RIP-RAP OUTLET PROTECTION.

- NOTES:**
- CONCRETE CRADLE ARE TO BE USED IN CONJUNCTION WITH ANTI-SEEP COLLARS.
 - ANTI-SEEP COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.

RIPRAP APRON AT PIPE OUTLET WITH ENDWALL
NOT TO SCALE



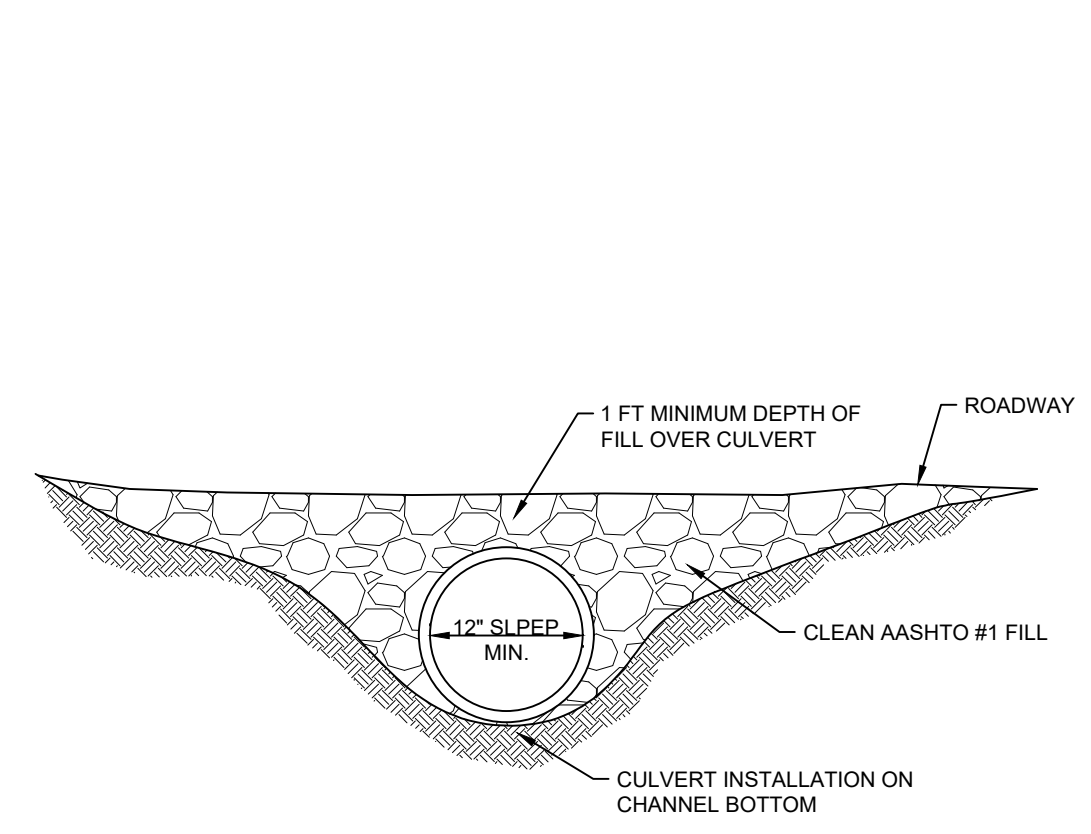
FILL PLACEMENT DETAIL
NOT TO SCALE

NOTE: CONTRACTOR SHALL MONITOR THE CUT/FILL INTERFACE UNTIL SITE IS FULLY STABILIZED. SHOULD ANY EROSION GULLIES BEGIN TO FORM, CONTRACTOR MUST REPAIR EROSION CHANNEL. INSTALL SC-255 EROSION CONTROL MATTING A MINIMUM OF 2' BEYOND THE REPAIRED CHANNEL, AND RESEED IN ACCORDANCE WITH THE SEEDING SPECIFICATIONS.

- NOTES:**
- ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATER-TIGHT.
 - COLLAR SIZE AND SPACING SHALL BE AS INDICATED BELOW.

Basin or Trap No.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	DISTANCE BETWEEN COLLARS (FT)	COLLAR SPACING (FT)
2	24	88	2	15	14
5	24	60	2	15	8
8	18	48	2	8	7
A	42	112	2	20	15
B	24	90	2	15	14
C	48	100	2	22	17
D	18	104	2	21	27

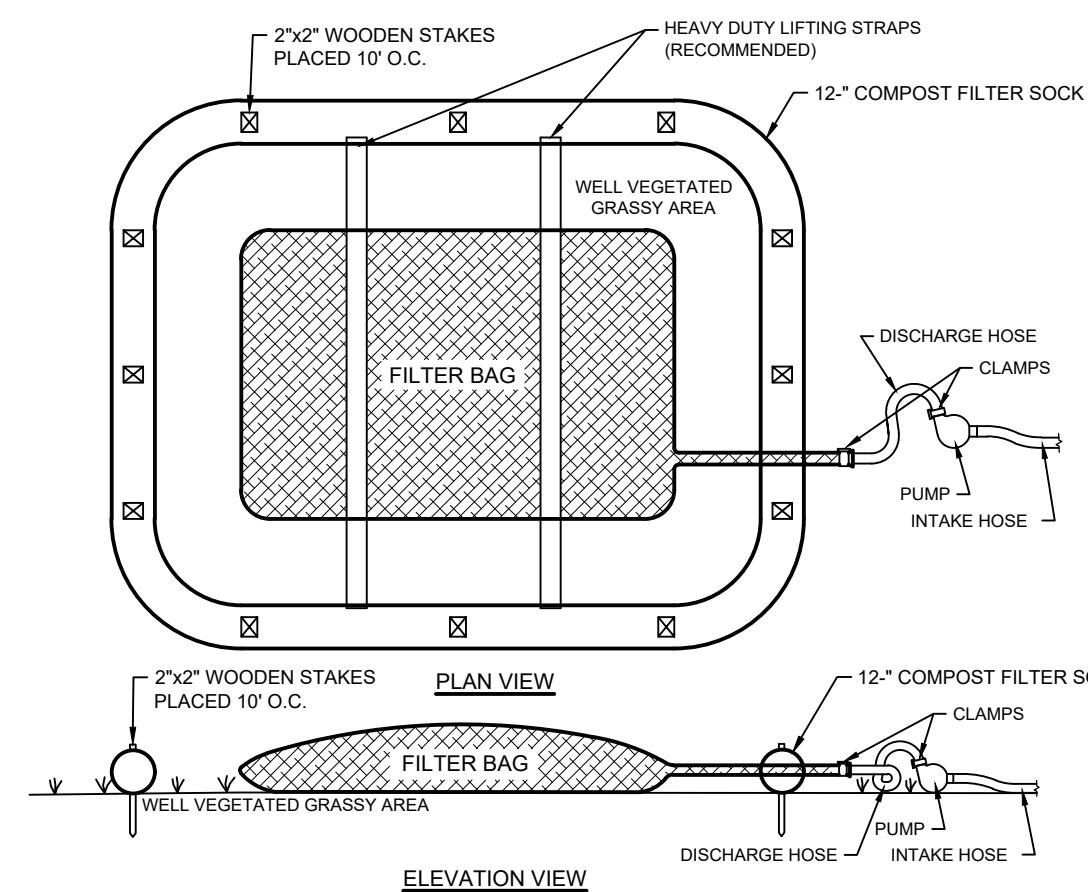
CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASIN
NOT TO SCALE



- NOTES:**
- PROVIDE 50' STABILIZED ACCESS TO CROSSING ON BOTH SIDES OF THE CHANNEL.
 - PIPE SHALL EXTEND BEYOND THE TOE OF THE ROADWAY.
 - TEMPORARY CROSSINGS MAY BE USED AT ANY CHANNEL CROSSING BASED ON CONSTRUCTION REQUIREMENTS.
 - 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 CHANNEL CROSSING
NOT TO SCALE

- MAINTENANCE**
- THE TEMPORARY CHANNEL CROSSING SHALL BE INSPECTED ON A DAILY BASIS.
 - IF DAMAGED, THE CROSSING SHALL BE REPAIRED WITHIN 24 HOURS OF THE INSPECTION AND BEFORE ANY SUBSEQUENT USE.
 - SEDIMENT DEPOSITS ON THE CROSSING OR ITS APPROACHES SHALL BE REMOVED WITHIN 24 HOURS OF THE INSPECTION.



GENERAL NOTES:

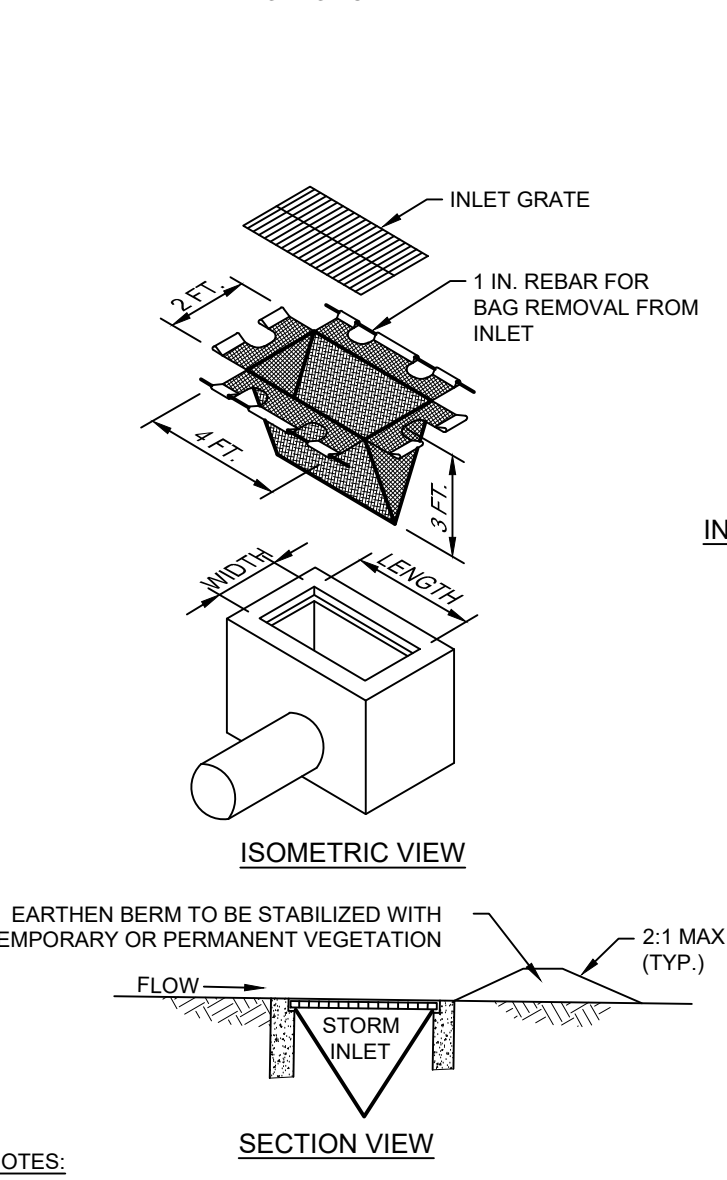
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NONWOVEN GEOTEXTILE MATERIAL, SEWN WITH HIGH STRENGTH DOUBLE STITCHED 2" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 10 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG WIDE WIDTH STRENGTH	ASTM D-4884	60 LBS
GRAB TENSILE	ASTM D-4632	200 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
ASB 1/2 RETAINED	ASTM D-4751	80 SIEVE

- NOTES:**
- 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 UNDERLAMENT 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 1% FOR SLOPES EXCEEDING 1%, CLEAN ROCK OR OTHER NON-ERODIBLE, AND NON-FLOTTING MATERIAL MAY BE PLACED UNDER THE BAGS 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 HO OR TO WATERWAYS, 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 PICE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
 - THE PUMPING RATE SHALL BE NO GREATER THAN 70% 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.
 - PROVIDE COMPOST 12-INCH FILTER SOCK RING AROUND THE FILTER BAG OR UTILIZE FILTER BAG IN CONJUNCTION WITH A SLUMP PIT.

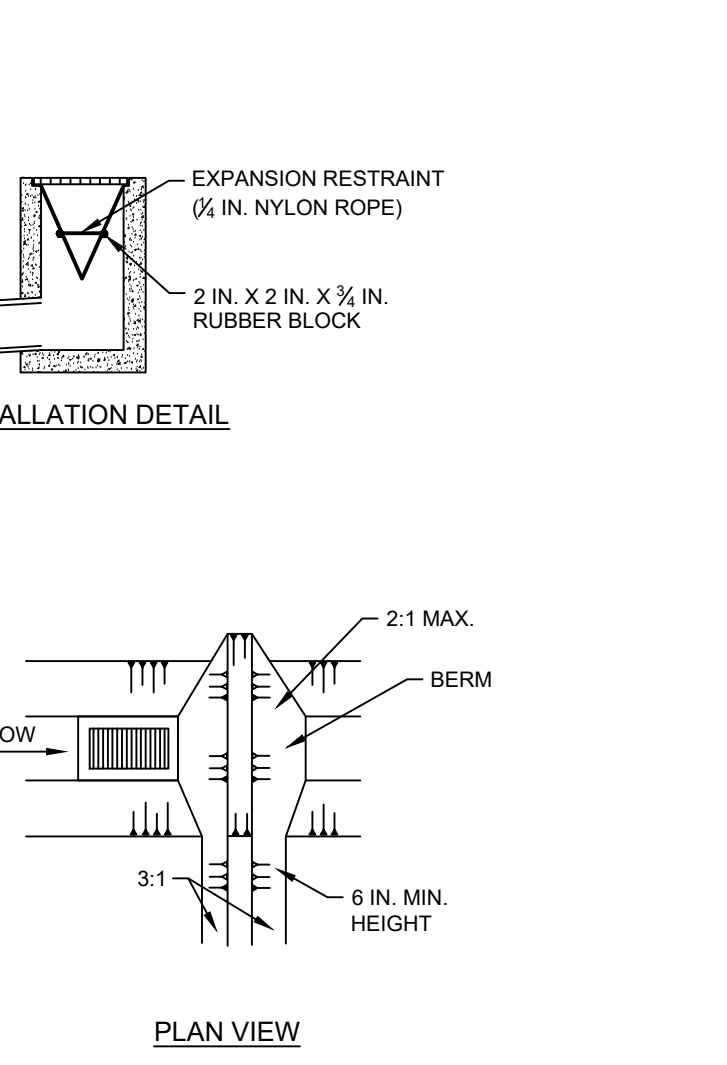
PUMPED WATER FILTER BAG
NOT TO SCALE

SINKHOLE TREATMENT INVERTED FILTER
NOT TO SCALE



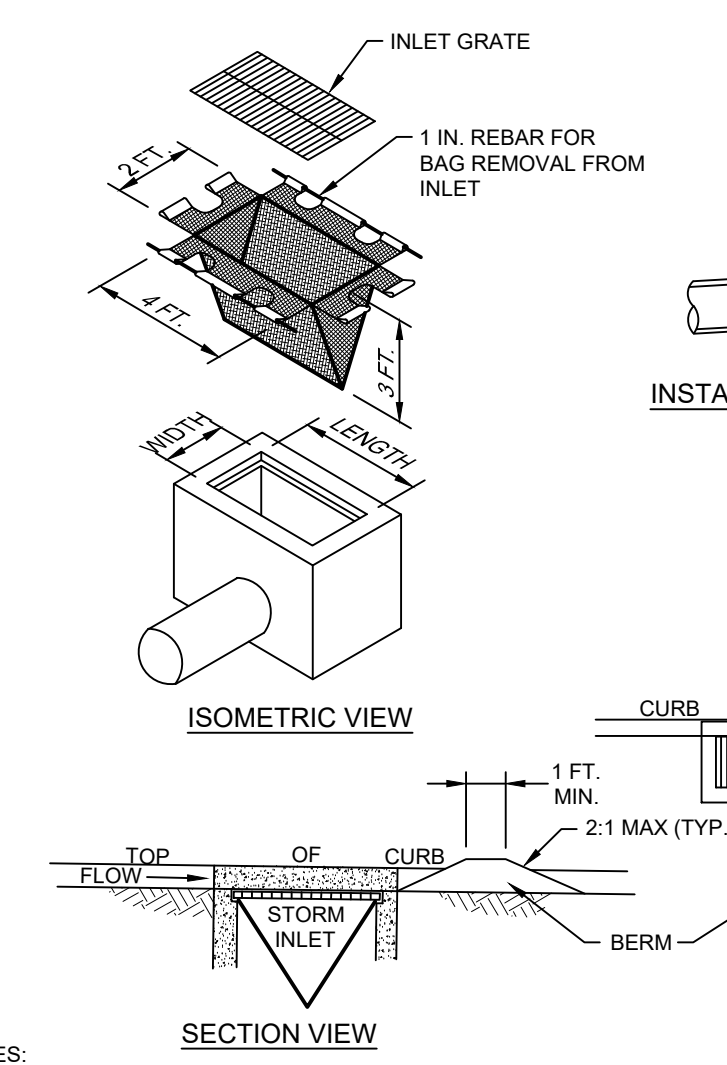
- NOTES:**
- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 - INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 - ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED 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



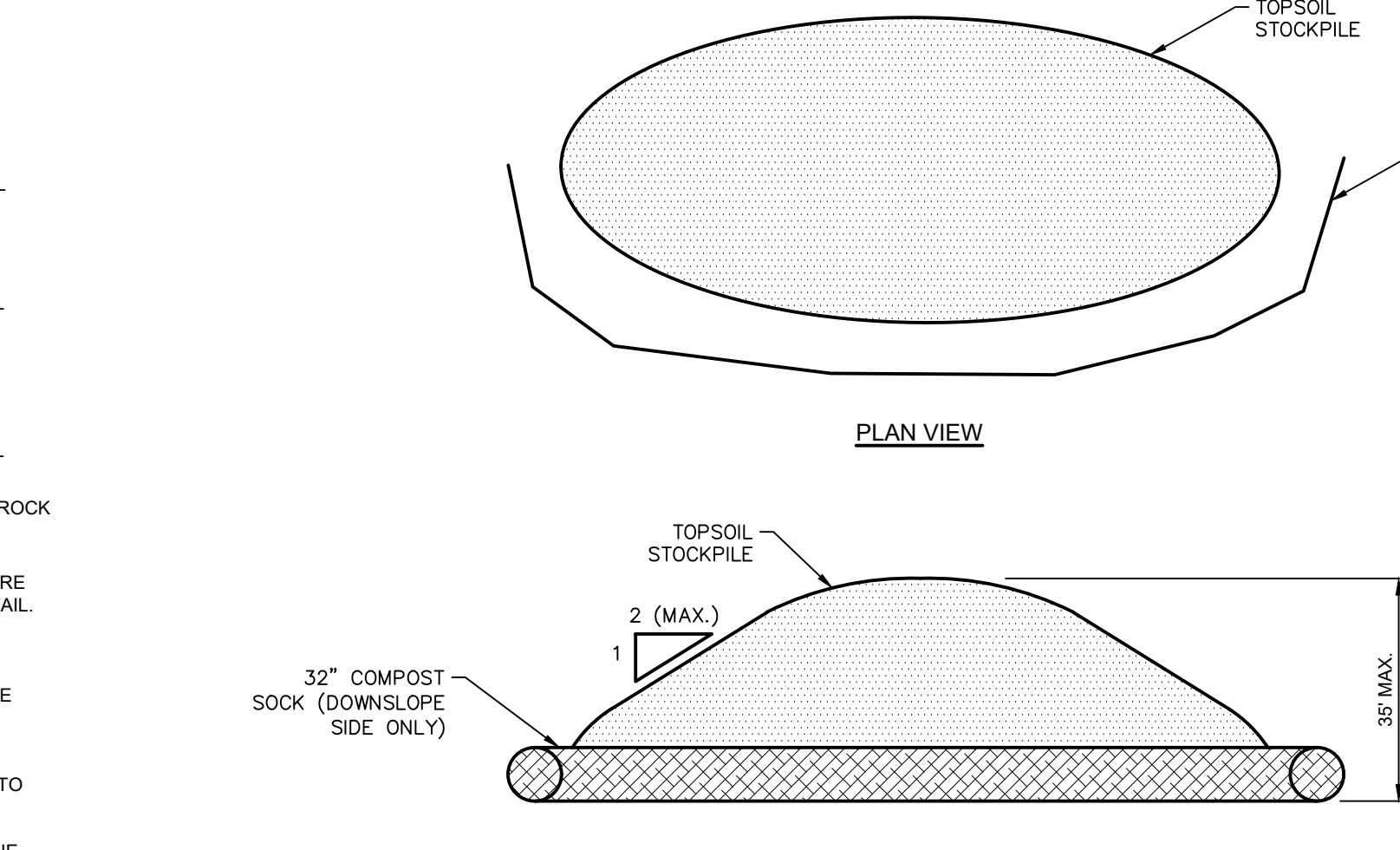
- NOTES:**
- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 - INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 - ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. 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 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 C INLET
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. 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 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.

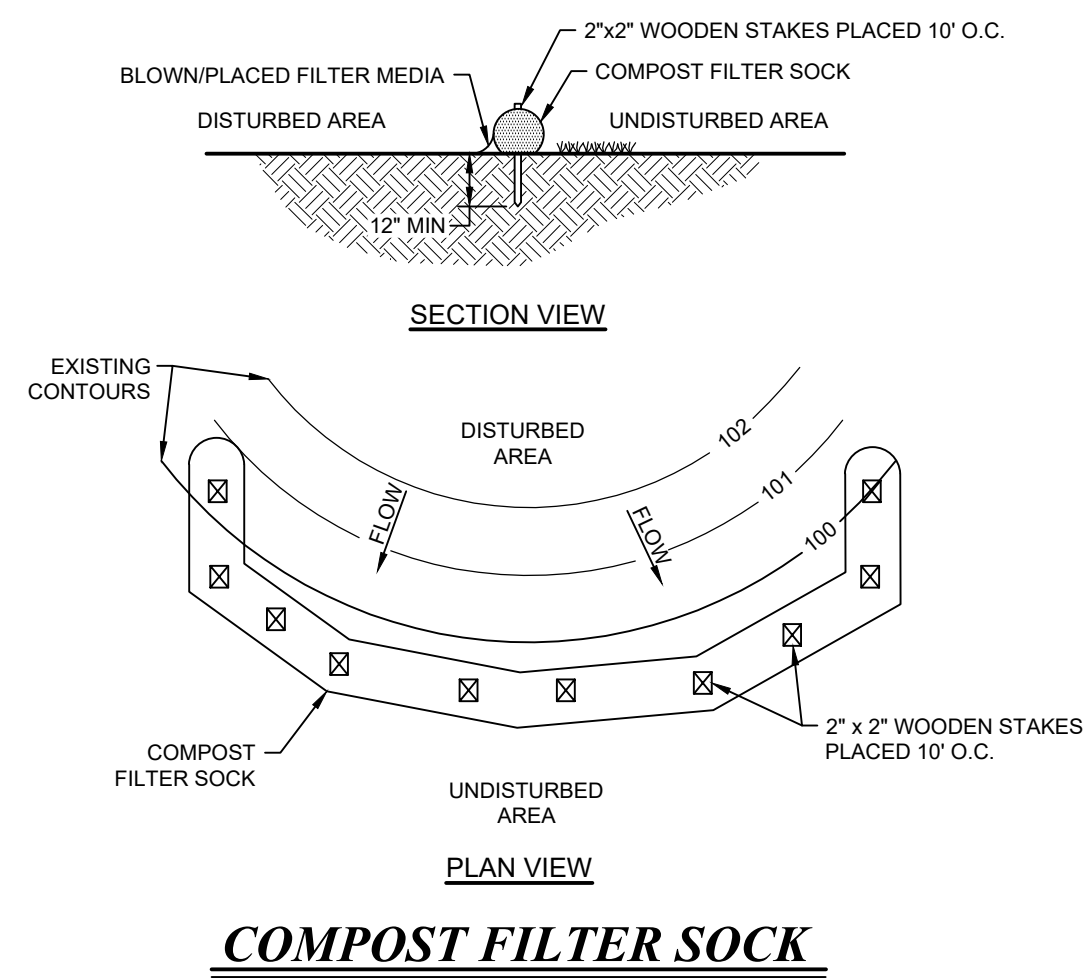
FILTER BAG INLET PROTECTION - TYPE C INLET
NOT TO SCALE



SEDIMENT BARRIER MUST BE PLACED AROUND THE PERIMETER OF ALL STOCKPILES. IMMEDIATELY APPLY TEMPORARY SEEDING & MULCH TO ALL STOCKPILES

TOP SOIL STOCKPILE
NOT TO SCALE

COMPOST FILTER SOCK
NOT TO SCALE



- GENERAL NOTES:**
- SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.
 - COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
 - TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
 - SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - BIODEGRADABLE 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.

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPF)	HEAVY DUTY MULTIFILAMENT POLYPROPYLENE (HDMFPF)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-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"	3/8"
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

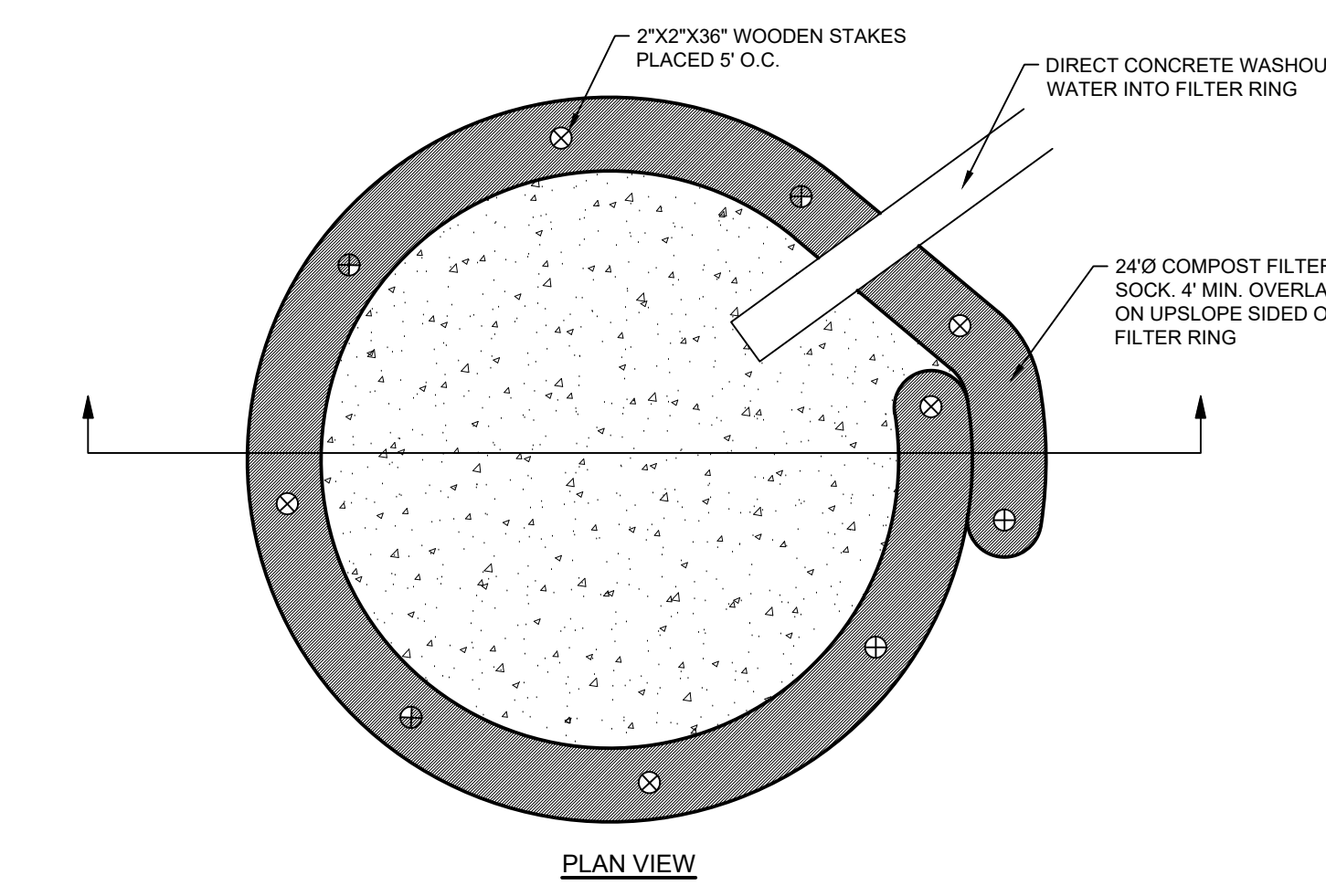
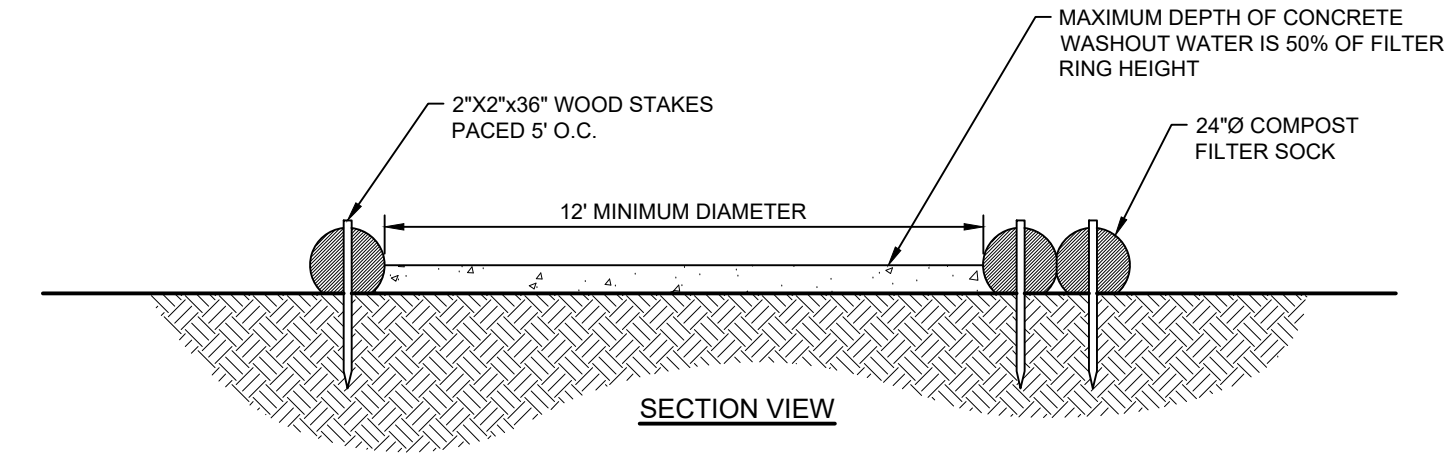
TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HOPE 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.

COMPOST STANDARDS

ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30% - 50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DSM (MMHOS/CM) MAXIMUM



COMPOST SOCK WASHOUT DETAIL
NOT TO SCALE

- NOTES:**
- INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
 - 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
 - A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
 - WASHOUT TO BE INSTALLED WITH A MINIMUM INTERIOR DIAMETER OF 12".

INLET PROTECTION

INLET NUMBER	INLET TYPE	INLET NUMBER	INLET TYPE
4-1	M	8-6	C
4-2	M	8-7	C
4-3	M	9-1	C
4-4	M	9-1A	C
4-5	M	9-3	C
4-6	M	9-3A	C
4-7	M	9-4	C
5-1	C	9-5	C
5-2	C	9-6	C
5-3	C	9-7	C
5-4A	C	10-3	C
5-4B	C	10-4	C
5-4C	C	11-2	M
5-5	C	11-3	M
5-6	C	11-4	M
5-7	C	12-0	C
5-7A	C	12-1	C
5-8	C	12-1A	C
5-15	C	12-2	C
5-15A	C	31-2	C
8-1	C	31-3	C
8-2	C	31-4	C
8-3	C	31-5	C
8-4	C	31-6	C
8-5	C	31-7	C
31-8	C	31-9	C
32-2	C	32-3	C
32-4	C	32-5	C

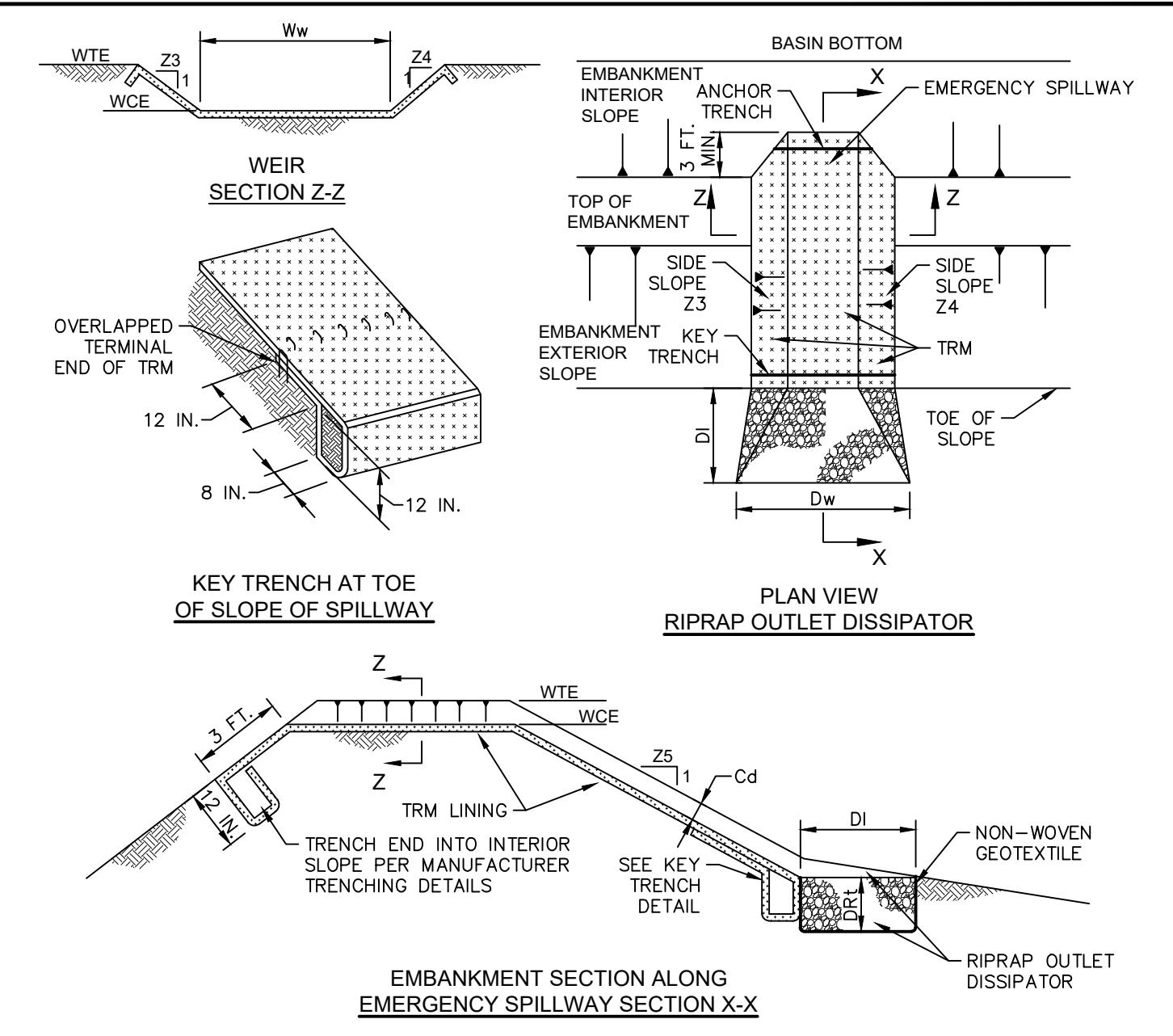
REVISED PER	CHAPTER	102	AND	CHAPTER	105	COMMENTS
7	05/19/24					
6	11/01/23					
5	09/22/23					
4	11/23/21					
3	11/23/21					
2	10/07/21					
1	08/02/21					

EROSION & SEDIMENTATION CONTROL DETAILS FOR 7464 & 7600 LINGLESTOWN ROAD SITE PROLOGIS WEST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

Snyder, Secary & Associates, LLC ENGINEERS • PLANNERS • DEVELOPMENT CONSULTANTS YORK OFFICE 227 W. MARKET STREET HARRISBURG, PA 17101 HARRISBURG, PA 17101 717.675.4881 www.snydersecary.com

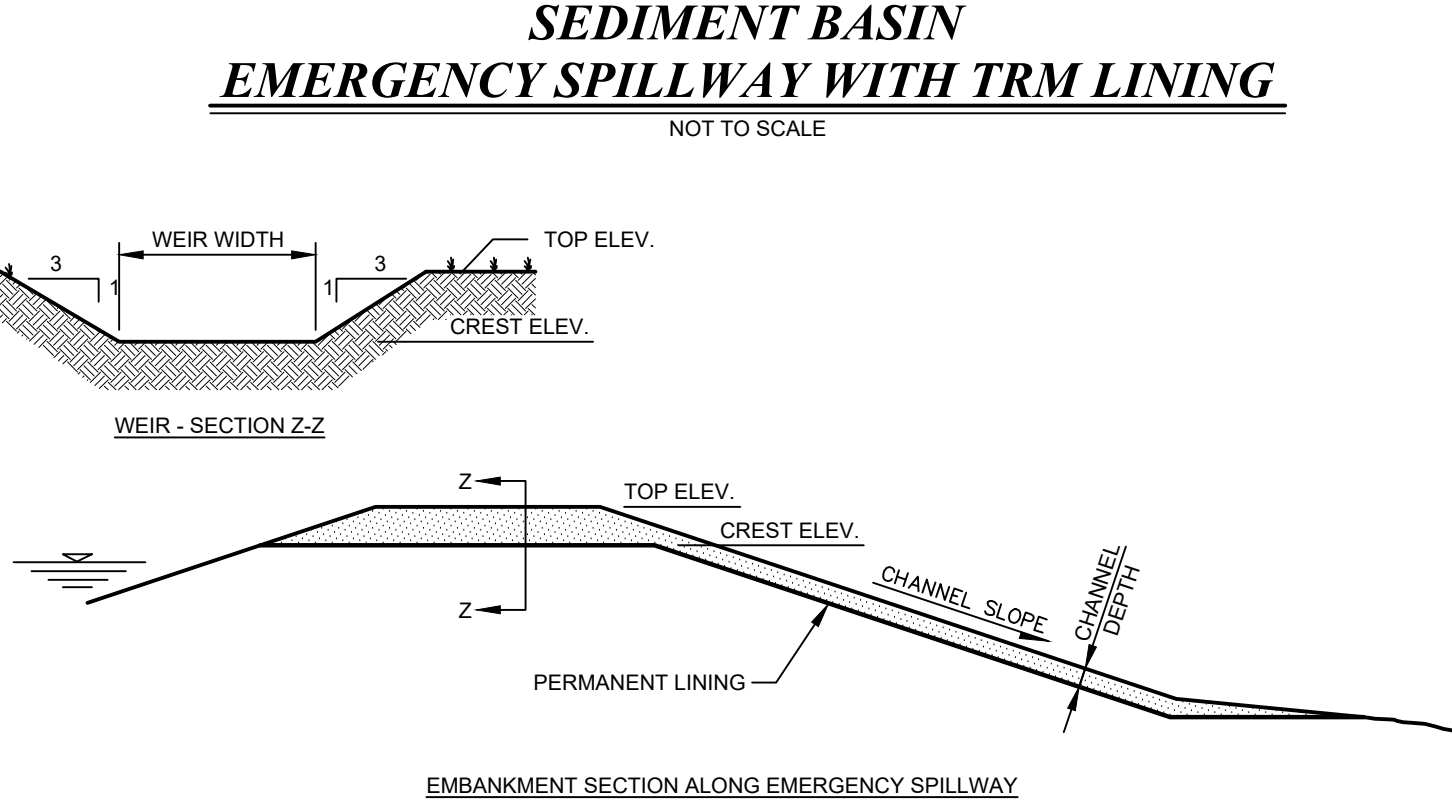
PROJECT NO. 19-0249-002 DATE: 6/3/2021 SCALE: N.T.S. SHEET 55 of 68 ES 15.3

PROJ. MGR. -	TNS
DESIGN -	CWC
CADD -	TLR
CHECKED -	TNS
CWC	
THR	
SDG	
JOB	
DATE	
AS PER TOWNSHIP COMMENTS	
REVISION	

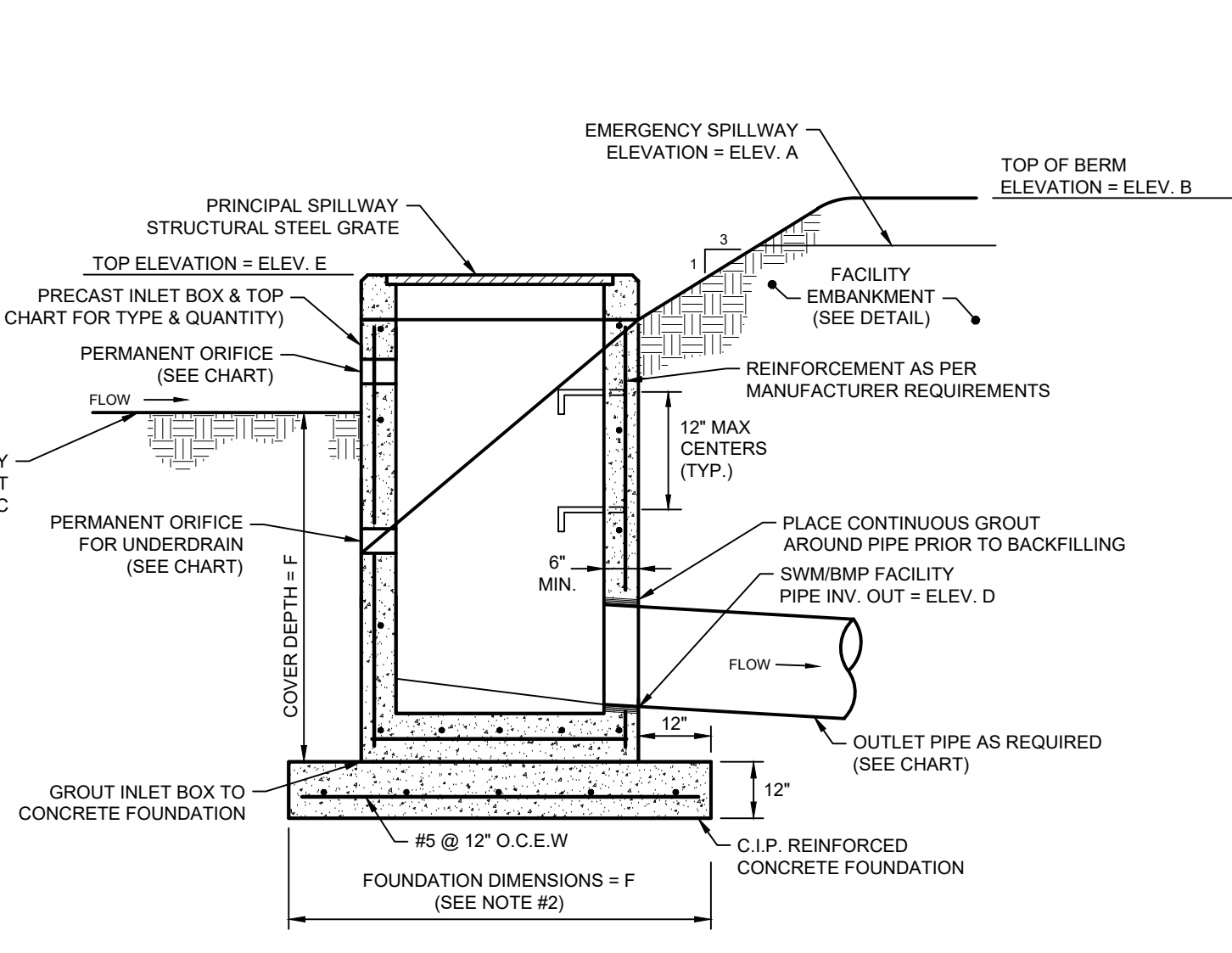


BASIN NO.	WEIR		LINING		CHANNEL		DISSIPATOR						
	Z3 (FT)	Z4 (FT)	TOP ELEV. (FT)	CREST ELEV. (FT)	WEIR WIDTH (FT)	Z5 (FT)	DEPTH Dd (FT)	LENGTH Ld (FT)	WIDTH Dw (FT)	TRM TYPE	STAPLE PATTERN		
2	3	3	570.00	568.00	40	SC-250	3:1 SLOPE	3	2.0	40	27	SC-250	3:1 SLOPE
5	3	3	564.00	562.50	180	SC-250	3:1 SLOPE	3	1.5	22	21	SC-250	3:1 SLOPE
6	3	3	562.00	560.00	60	SC-250	3:1 SLOPE	3	2.0	30	27	SC-250	3:1 SLOPE
7	3	3	558.00	556.00	30	SC-250	3:1 SLOPE	3	2.0	15	17	SC-250	3:1 SLOPE
8	3	3	529.00	527.00	10	SC-250	3:1 SLOPE	3	2.0	10	10	SC-250	3:1 SLOPE

- NOTES:
- HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
 - DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.
 - RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.
 - THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.



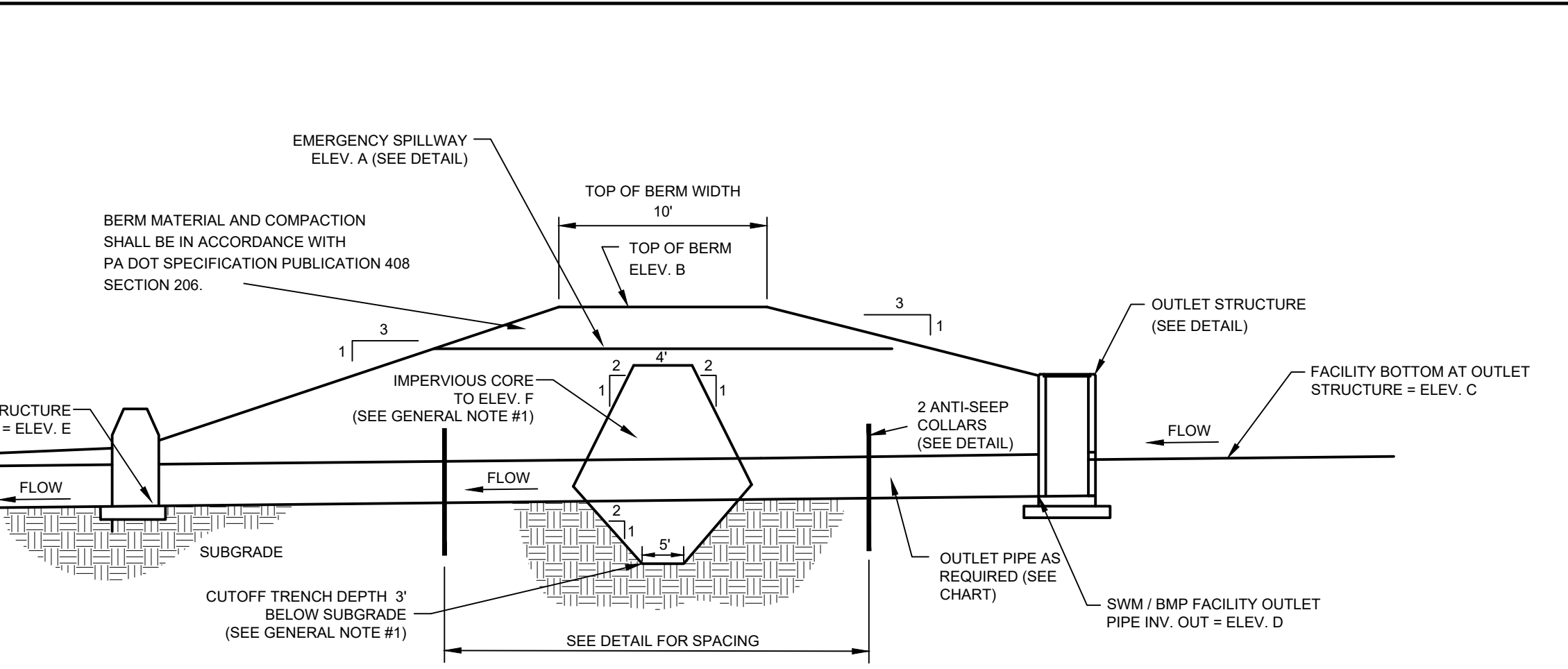
FACILITY #	Z3 (FT)	Z4 (FT)	WEIR		LINING		CHANNEL		DISSIPATOR		
			TOP ELEV. (FT)	CREST ELEV. (FT)	LINING	Z5 (FT)	DEPTH Dd (FT)	LENGTH Ld (FT)	WIDTH Dw (FT)	LINING	
2	3	3	570.00	568.00	40	N.A.G. SC-250	3:0	2.0	40	27	N.A.G. SC-250
5	3	3	564.00	562.50	180	N.A.G. SC-250	3:0	1.5	22	21	N.A.G. SC-250
8	3	3	529.00	527.00	10	N.A.G. SC-250	3:0	2.0	22	10	N.A.G. SC-250



- NOTES:
- PROVIDE FIELD PLACED CONCRETE FILL IN THE BOTTOM OF ALL OUTLET STRUCTURES. PROVIDE AN ADEQUATE FLOW CHANNEL FOR THE TRANSITION TO THE OUTLET PIPE. SHAPE BOX BOTTOM FOR POSITIVE DRAINAGE.
 - CONSTRUCT THE REINFORCED CONCRETE FOUNDATION TO A DIMENSION 24 INCHES LARGER THAN THE OUTSIDE DIMENSIONS OF THE OUTLET STRUCTURE.
 - WHEN CONVERTING THE FACILITY TO ITS PERMANENT CONDITION, REMOVE TEMPORARY STEEL PLATE & SKIMMER ATTACHMENT AND INSTALL THE REMAINING RISER SECTION OF THE OUTLET STRUCTURE TO THE PERMANENT RIPRAP SPILLWAY DESIGN ELEVATION. ALSO PLACE THE INLET TOP GRATES ON TOP OF THE STRUCTURES. INSTALL STEEL PLATE ON TEMPORARY 6" ORIFICE USED DURING E&S PHASE.

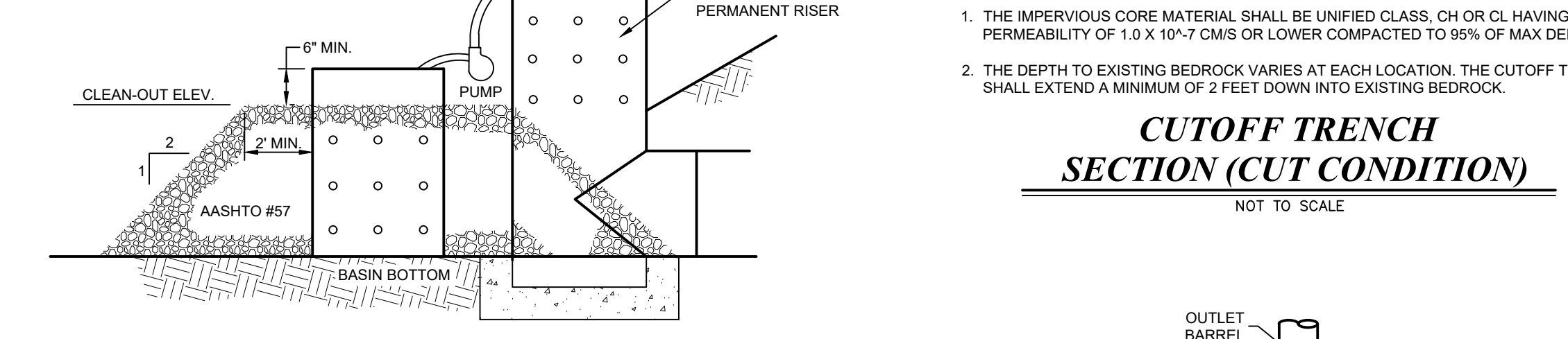
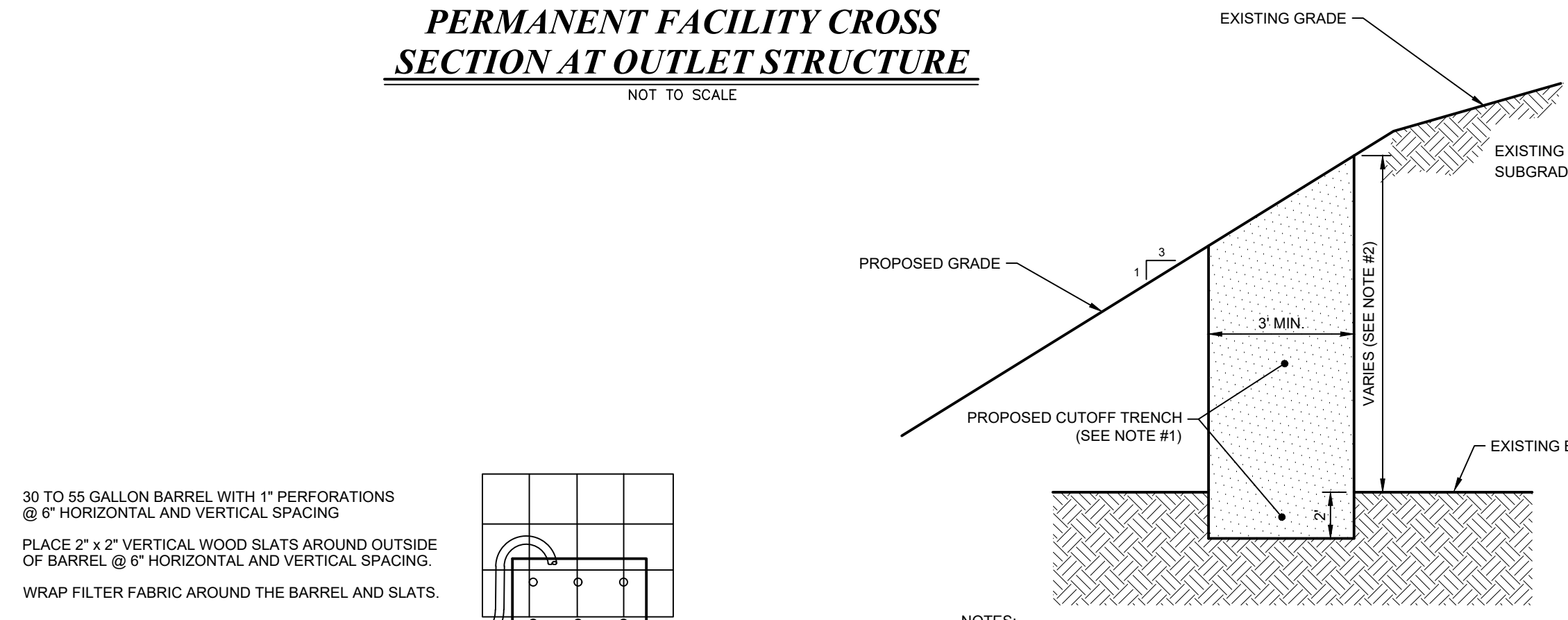
FACILITY #	A	B	C	D	E	F	PERMANENT ORIFICE(S)		PERMANENT STRUCTURE		OUTLET PIPE	
							Ø	SIZE (IN.)	TYPE	BOX W/ TYPE	M INLET TOP	Ø
2	568.00	570.00	562.00	560.00	567.00	566.80	3"	Ø 6.0"	TYPE M	BOX W/ TYPE M	Ø 24"	RCP
5	562.50	564.50	567.00	566.00	561.00	560.00	3"	N/A	TYPE M	BOX W/ TYPE M	Ø 24"	SLPEP
8	527.00	529.00	525.00	522.50	526.50	526.50	3"	Ø 6.0" @ INV. 525.00 Ø 12.0" @ INV. 526.25	TYPE M	BOX W/ TYPE M	Ø 18"	RCP

PERMANENT SWM / BMP FACILITY OUTLET STRUCTURE
NOT TO SCALE

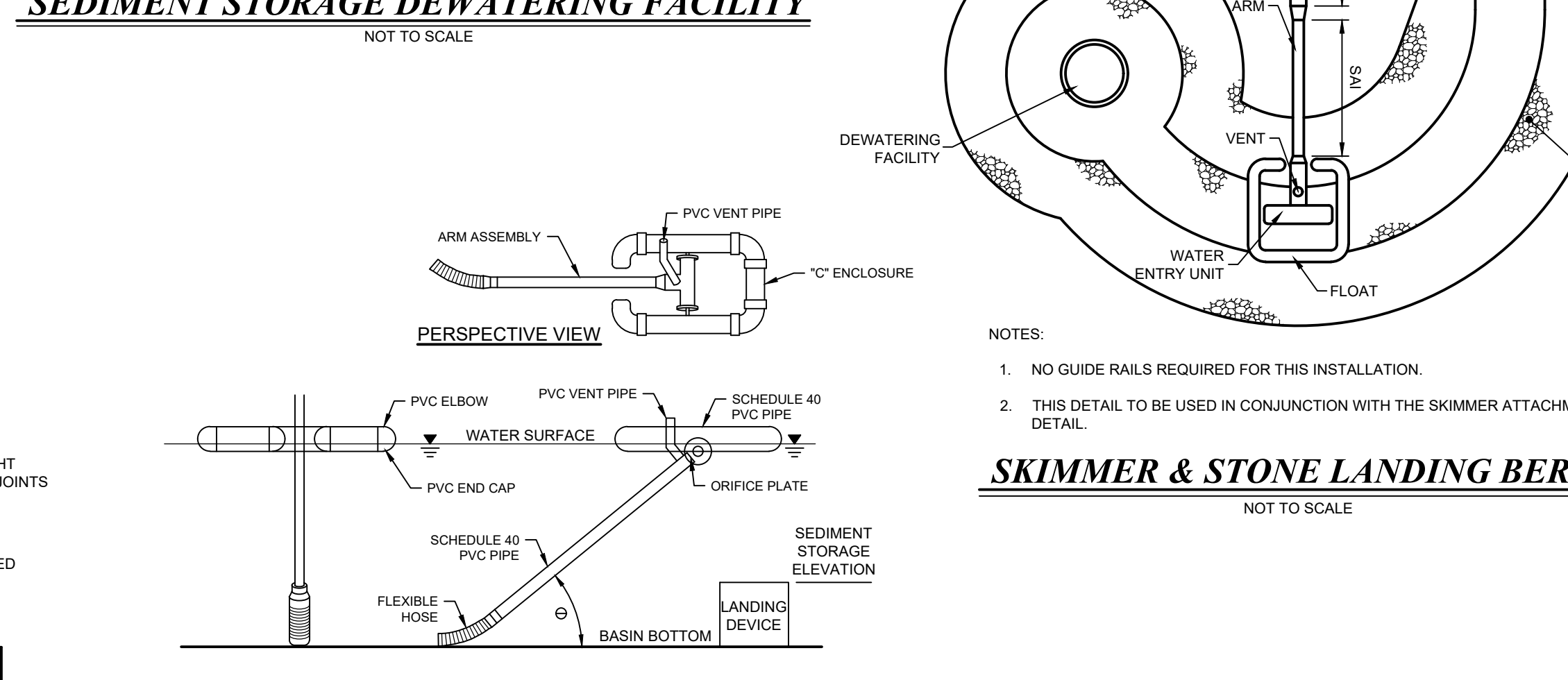


FACILITY #	A	B	C	D	E	F	OUTLET PIPE
2	568.00	570.00	562.00	560.00	567.00	566.80	24" RCP
5	562.50	564.50	567.00	566.00	561.00	560.00	24" RCP
8	527.00	529.00	525.00	522.50	521.50	518.50	18" RCP

- GENERAL NOTE:
- REFERENCE IS MADE TO THE SWMM/BMP FACILITY CROSS SECTION DETAIL IF GROUNDWATER OR BEDROCK ARE ENCOUNTERED DURING EXCAVATION WHICH REQUIRES EITHER AN ADDITIONAL CUTOFF TRENCH AND IMPERVIOUS CORE ON THE UPPER SIDE OF THE FACILITY OR OVER EXCAVATION WITHIN THE BOTTOM OF THE FACILITY.
 - THE CONTRACTOR SHALL CONTACT THE TOWNSHIP ENGINEER AT LEAST 24 HOURS PRIOR TO THE START OF ANY BASIN CONVERSION TO FACILITATE CONSTRUCTION OBSERVATION.

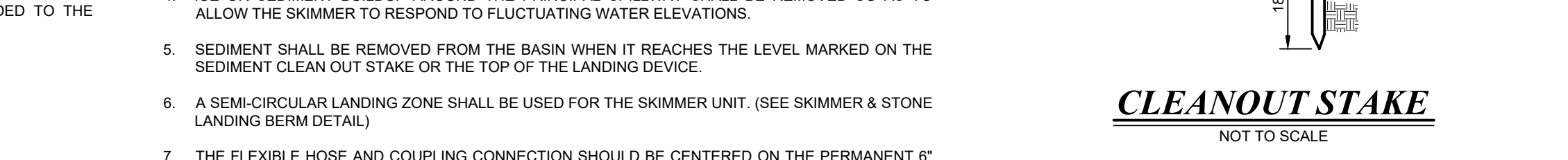


- NOTES:
- THE IMPERVIOUS CORE MATERIAL SHALL BE UNIFIED CLASS, CH OR CL HAVING A PERMEABILITY OF 1.0 X 10⁻⁷ CM/S OR LOWER COMPACTED TO 95% OF MAX. DENSITY.
 - THE DEPTH TO EXISTING BEDROCK VARIES AT EACH LOCATION. THE CUTOFF TRENCH SHALL EXTEND A MINIMUM OF 2 FEET DOWN INTO EXISTING BEDROCK.

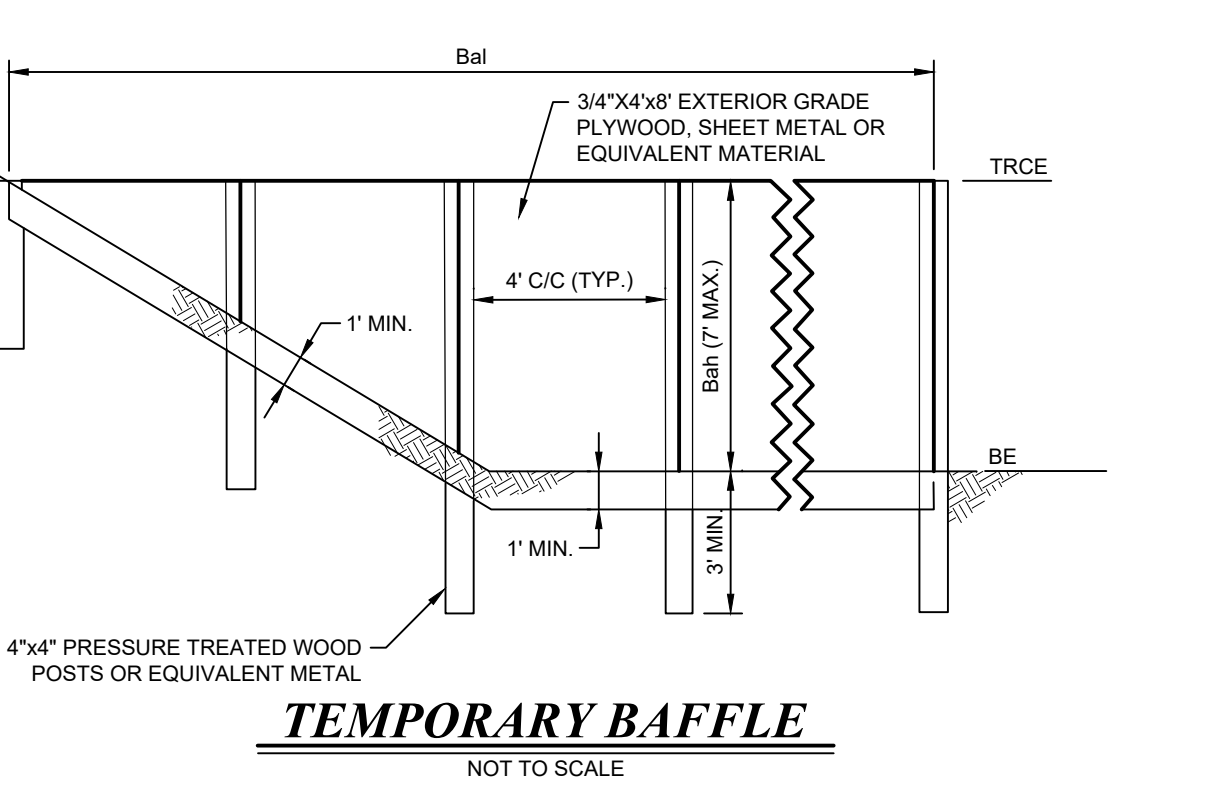


BASIN NO.	WATER SURFACE ELEV. (FT)	ORIFICE		SKIMMER		FLEXIBLE HOSE			
		DIA (IN.)	HEAD SOH (FT)	DIA SAG (IN.)	LENGTH SHL (FT)	DIA SHH (IN.)	LENGTH SHI (FT)	MATL.	
C	552.50	4.0	4.0	3.0	8.5	PVC	3.0	5.0	SLPEP
D	542.00	3.0	3.0	2.0	8.5	PVC	2.0	5.0	SLPEP

- NOTES:
- A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.
 - SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
 - ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.
 - SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN OUT STAKE OR THE TOP OF THE STONE BERM. SEE SKIMMER & STONE LANDING BERM DETAIL FOR CONFIGURATION OF STONE BERM.
 - APPROVAL OF THE USE OF SKIMMER(S) DOES NOT APPROVE USE OF ANY SKIMMER(S) IN VIOLATION OF ANY PATENT, PATENT RIGHTS, AND/OR PATENT LAWS.

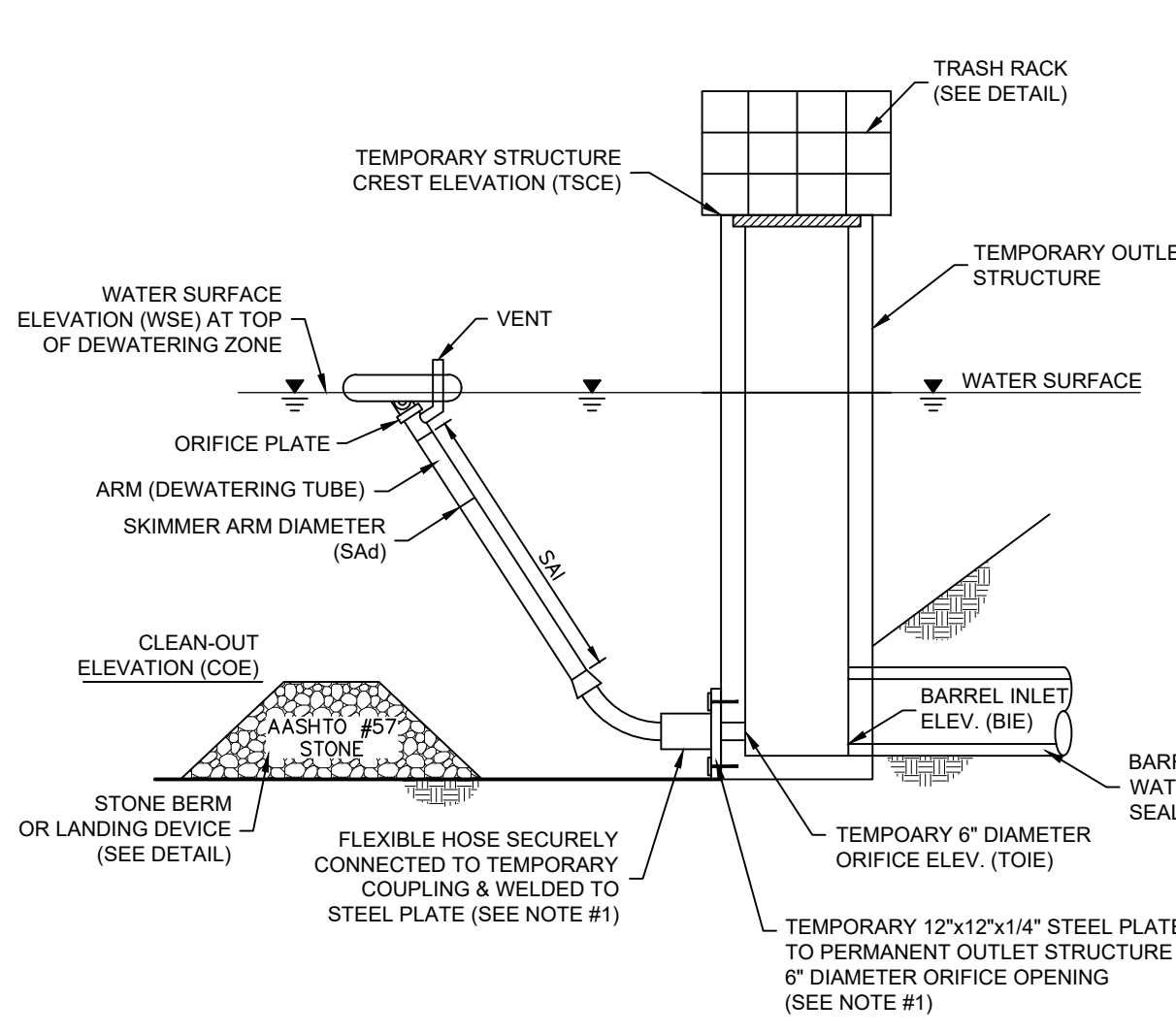


FAIRCLOTH SKIMMER
NOT TO SCALE



BASIN NO.	BAFFLE		TEMPORARY RISER		BOTTOM	
	LENGTH Bal (FT)	HEIGHT Hb (FT)	CREST ELEV. TRCE (FT)	BOTTOM ELEV. BE (FT)		
A1	120	5.0	576.00	571.00		
A2	140	5.0	576.00	571.00		
B	115	4.0	567.00	563.00		
C1	125	4.5	552.50	548.00		
C2	105	4.5	552.50	548.00		
C3	105	4.5	552.50	548.00		
C4	100	4.5	552.50	548.00		
C5	115	4.5	552.50	548.00		
C6	130	4.5	552.50	548.00		
D1	110	7.0	542.00	535.00		
D2	80	7.0	542.00	535.00		
D3	110	7.0	542.00	535.00		
D4	115	7.0	542.00	535.00		
D5	135	7.0	542.00	535.00		
D6	140	7.0	542.00	535.00		
D7	135	7.0	542.00	535.00		

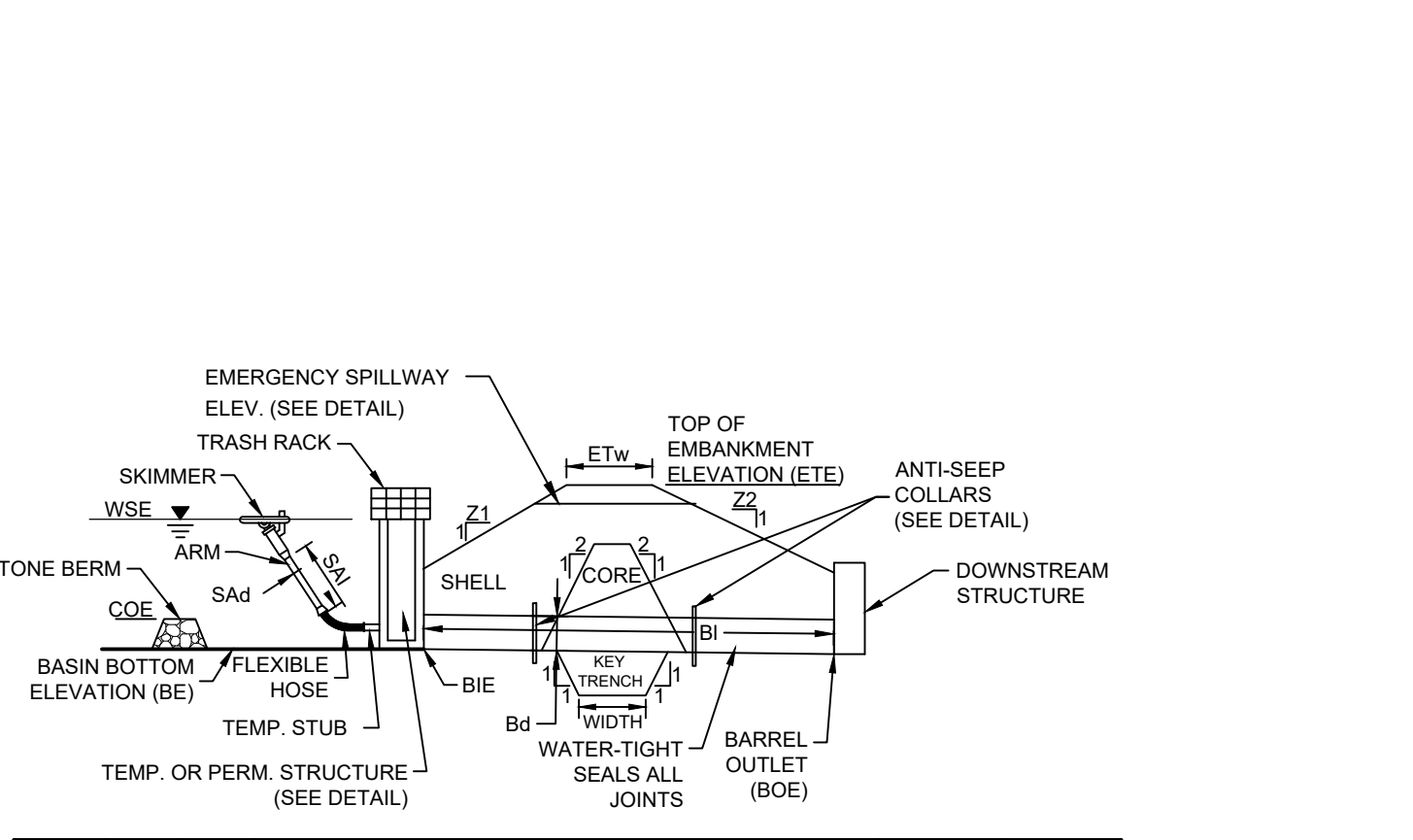
- GENERAL NOTES:
- AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION.
 - SEE THE PLAN FOR PROPER LOCATION AND ORIENTATION.
 - BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.
 - SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.
 - DAMAGE OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.
 - BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.



BASIN NO.	WATER SURFACE ELEV. (FT)	ORIFICE		SKIMMER		FLEXIBLE HOSE			
		DIA (IN.)	HEAD SOH (FT)	DIA SAG (IN.)	LENGTH SHL (FT)	DIA SHH (IN.)	LENGTH SHI (FT)	MATL.	
A	576.00	2.5	2.5	1.5	8.5	PVC	1.5	5.0	SLPEP
B	567.00	1.1	1.5	1.5	8.5	PVC	1.5	5.0	SLPEP

- NOTES:
- THE FLEXIBLE HOSE SHOULD BE CONNECTED TO THE TEMPORARY COUPLING AND THE COUPLING SHOULD BE WELDED TO THE TEMPORARY STEEL PLATE CENTERED ON THE TEMPORARY 6" DIAMETER ORIFICE OPENING.
 - A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.
 - SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
 - ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.
 - SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN OUT STAKE OR THE TOP OF THE STONE BERM. SEE SKIMMER & STONE LANDING BERM DETAIL FOR CONFIGURATION OF STONE BERM.

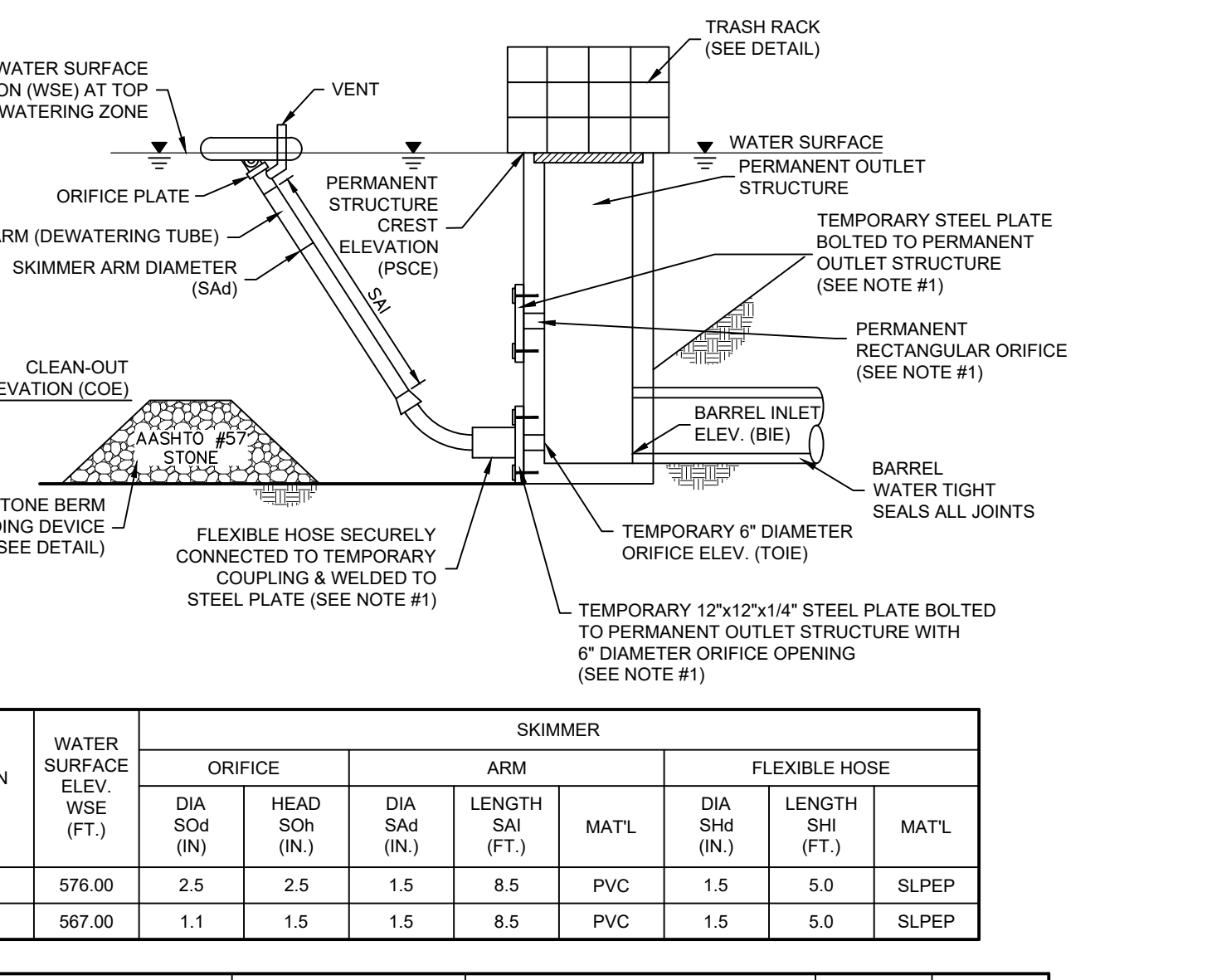
SKIMMER ATTACHMENT TO TEMPORARY OUTLET STRUCTURE
NOT TO SCALE



BASIN NO.	Z1 (FT)	Z2 (FT)	EMBANKMENT		CLEAN OUT		BOTTOM	
			TOP ELEV. ETE (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)	KEY TRENCH DEPTH (FT)
A	3	3	579.00	10.0	3	4	572.00	571.00
B	3	3	570.00	10.0	3	4	564.00	563.00
C	3	3	555.00	10.0	3	4	547.66	545.00
D	3	3	545.00	10.0	3	4	538.00	537.00

- SEDIMENT BASIN NOTES:
- THE SWMM/BMP FACILITIES FUNCTIONING AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS, INCLUDING ALL APPURTENANCES.
 - AREA UNDER BASIN EMBANKMENT SHALL BE CLEARED, GRUBBED, & STRIPPED OF TOPSOIL. IN ORDER TO FACILITATE MAINTENANCE & RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES & OBJECTIONABLE MATERIAL. FILL MATERIAL FOR THE BASIN EMBANKMENT SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE BASIN EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6" TO 8". THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.
 - UPON COMPLETION, THE BASIN EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. DO NOT PLANT TREES ON THE EMBANKMENT.
 - INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.
 - CHECK BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. MAKE NECESSARY REPAIRS IMMEDIATELY.
 - REMOVE ACCUMULATED SEDIMENT AND STABILIZE DISTURBED AREAS INSIDE THE BASIN BEFORE ANY SEDIMENT BASIN MAY BE CONVERTED TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN THE SEDIMENT STORAGE DRAINAGE FACILITY DETAIL MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL.
 - SEDIMENT BASINS SHALL BE KEPT FREE OF ALL TRASH, CONCRETE WASH WATER AND OTHER DEBRIS THAT POSE THE POTENTIAL FOR CLOGGING THE BASIN OUTLET STRUCTURES AND/OR POSE THE POTENTIAL FOR POLLUTION TO WATERS OF THE COMMONWEALTH.
 - SEDIMENT BASINS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.

SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAIL - SKIMMER
NOT TO SCALE



BASIN NO.	TEMPORARY COUPLING	TEMPORARY ORIFICE	PERM. OUTLET STRUCTURE		BARREL		CLEAN OUT ELEV. COE (FT)	
			INSIDE DIA (IN.)	MATL.	INSIDE DIA (IN.)	INSIDE ELEV. TSCE (FT)		INSIDE DIA (IN.)
A	2.0	STEEL	6.0	571.00	576.00	SEE DETAIL	569.50	572.00
B	1.5	STEEL	6.0	563.00	567.00	SEE DETAIL	560.00	557.50

- NOTES:
- ALL PERMANENT ORIFICES ON THE PERMANENT OUTLET STRUCTURE SHALL BE COVERED WITH A BOLTED WATER TIGHT TEMPORARY STEEL PLATE IN THE TEMPORARY CONDITION. THE FLEXIBLE HOSE SHOULD BE CONNECTED TO THE TEMPORARY COUPLING AND THE COUPLING SHOULD BE WELDED TO THE TEMPORARY STEEL PLATE CENTERED ON THE TEMPORARY 6" DIAMETER ORIFICE OPENING.
 - A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.
 - SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
 - ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.
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 - SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN OUT STAKE OR THE TOP OF THE STONE BERM. SEE SKIMMER & STONE LANDING BERM DETAIL FOR CONFIGURATION OF STONE BERM.

SKIMMER ATTACHMENT TO PERMANENT OUTLET STRUCTURE
NOT TO SCALE

