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GENERAL NOTES

1. THE CONTRACTOR SHALL REFER TO ADDITIONAL PLANS WITHIN THIS SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SUBMISSION OF A BID SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE. IF DISCREPANCIES BETWEEN FIELD CONDITIONS AND DESIGN PLANS ARE DISCOVERED, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IMMEDIATELY.
3. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
4. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
5. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.
6. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNER'S REPRESENTATIVE FROM ALL CLAIMS OR DAMAGES ARISING FROM THE DEMOLITION AND CONSTRUCTION WORK, INCLUDING INJURY TO PERSONS AND DAMAGE TO PROPERTY OR EXISTING FACILITIES.
7. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE CODES, OBTAIN ALL APPLICABLE PERMITS, AND BONDS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
8. ALL WORK AND MATERIALS SHALL COMPLY WITH SPECIFICATIONS PROVIDED; ALL LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS AND CODES; AND OSHA STANDARDS. IF A CONFLICT IS DETERMINED TO EXIST, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND OWNER.
9. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
10. THE CONTRACTOR SHALL DESIGNATE A TRAINED COMPETENT PERSON FOR ALL EXCAVATION WORK WHO SHALL BE ON SITE OR ON CALL 24 HOURS PER DAY 7 DAYS PER WEEK IN CASE OF EMERGENCY. THE CONTRACTOR SHALL PROVIDE CONTACT INFORMATION FOR THIS PERSON PRIOR TO COMMENCING WORK.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PENNDOT AND PROJECT SPECIFIC SPECIFICATIONS.
12. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM WITH THE SITE SPECIFIC MATERIALS MANAGEMENT PLAN, COA, AND ENVIRONMENTAL COVENANT. IT IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR TO RETAIN A QUALIFIED ENVIRONMENTAL PROFESSIONAL TO OBSERVER AND ACCESS COMPLIANCE WITH THE SITE SPECIFIC MATERIALS MANAGEMENT PLAN, COA, ENVIRONMENTAL COVENANT AND CONTRACT DOCUMENTS.
13. DAMAGE TO EXISTING PAVEMENT TO REMAIN RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING SITE FEATURES OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY THE OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES THE OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER OR ANY INCIDENTAL COSTS.
15. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES, ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, SPECIAL CONDITIONS, AND COPIES OF ALL REQUIRED PERMITS.
16. THE CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING CONSTRUCTION ACTIVITIES. IF DISTURBED, THE CONTRACTOR SHALL HAVE AFFECTED ITEMS RE-MARK BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
17. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN, AND, OR ALONG ROADWAYS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF PENNSYLVANIA PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
19. NO LANDSCAPING WILL OCCUR ON THE SITE DUE TO CLASSIFICATION AS A SUPERFUND SITE.
20. NO LIGHT POLES TO BE LOCATED WITHIN THE FIRSTENERGY EASEMENT.
21. NO CONSTRUCTION EQUIPMENT WILL BE STORED WITHIN FIRSTENERGY EASEMENT DURING OR AFTER CONSTRUCTION ACTIVITIES.
22. THERE WILL BE NO CHANGES TO THE GRADE ELEVATIONS OF THE RIGHT OF WAY UPON COMPLETED OF THE PROJECT.
23. NO SOIL PILES OR OTHER MATERIAL SHALL BE PLACED OR STORED UNDER THE TRANSMISSION-LINE CONDUCTORS AT ANY TIME.

NOTIFICATION REQUIREMENTS

1. A PRE-CONSTRUCTION MEETING WITH THE MERCER COUNTY CONSERVATION DISTRICT AND PADEP IS REQUIRED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. A MINIMUM OF 7 DAYS' NOTICE SHALL BE PROVIDED TO THE COA/DEP PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. IF THE COA/DEP IS UNABLE TO ATTEND THE SCHEDULED PRE-CONSTRUCTION MEETING, THEN THE PERMITTEE MUST STILL HOLD THE MEETING WITHOUT THE COA/DEP.
2. UPON THE INSTALLATION OF PERIMETER SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) AND AT LEAST THREE (3) DAYS PRIOR TO PROCEEDING WITH BULK EARTHWORK ACTIVITIES, THE PERMITTEE SHALL PROVIDE NOTIFICATION TO THE COA/DEP BY PHONE OR ELECTRONIC MAIL.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER A MINIMUM OF THREE (3) DAYS IN ADVANCE OF INSTALLING PROPOSED STORMWATER CONTROL MEASURES (SCMs). INSTALLATION OF CRITICAL STAGES OF SCM CONSTRUCTION MUST BE OVERSEEN BY A LICENSED PROFESSIONAL. THE LICENSED PROFESSIONAL MUST COMPLETE DEP'S SCM CONSTRUCTION CERTIFICATION FORM. THE PERMITTEE MUST SUBMIT THE COMPLETED FORM TO THE COA/DEP WITHIN 30 DAYS OF COMPLETION OF THE SCM CONSTRUCTION.
4. THE PERMITTEE MUST NOTIFY THE COA/DEP OF ANY PLANNED CHANGE TO EARTH DISTURBANCE ACTIVITIES, BMPs, SCMs, OR ANY OTHER CHANGE THAT MAY AFFECT IPDES PERMIT COVERAGE PRIOR TO IMPLEMENTING THE CHANGE. THE COA/DEP WILL NOTIFY THE PERMITTEE WHETHER SUBMISSION OF AN NOI TO AMEND PERMIT COVERAGE IS REQUIRED. THE PERMITTEE MAY NOT PROCEED TO IMPLEMENT THE PROPOSED CHANGE UNTIL THE PERMITTEE RECEIVES WRITTEN APPROVAL FOR THE AMENDMENT FROM THE COA/DEP.
5. THE PERMITTEE MUST PROVIDE IMMEDIATE NOTIFICATION TO DEP FOR ANY INCIDENT CAUSING OR THREATENING POLLUTION (NO LATER THAN FOUR (4) HOURS AFTER BECOMING AWARE OF THE INCIDENT). IN ADDITION, ANY NON-COMPLIANCE WITH THE THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT MUST BE REPORTED WITHIN 24 HOURS, AND A WRITTEN REPORT MUST BE PROVIDED WITHIN FIVE (5) DAYS.

SITE LAYOUT NOTES

1. CONTRACTOR SHALL REFER TO THE SUBSTATION PLANS FOR THE EXACT LOCATION OF UTILITY ENTRANCES AND SUBSTATION DIMENSIONS.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF SIDEWALK UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR THE INSTALLATION OF TRAFFIC SIGNAGE AND PAVEMENT MARKINGS AS SHOWN ON THE CONSTRUCTION PLANS.
4. ALL NON-LANDSCAPED ISLANDS SHALL BE PAINTED WITH STRIPES 4" WIDE, AT 45° AND 2 FEET O.C.
5. ALL STRIPING SHALL BE 4" WIDE UNLESS NOTED OTHERWISE.
6. ALL DIMENSIONS SHOWN ON THIS PLAN SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLAN AND FIELD CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS AT THE PROJECT SITE.
7. SEE DETAIL SHEETS FOR ADDITIONAL CONSTRUCTION INFORMATION.
8. CONTRACTOR SHALL NEATLY SAW-CUT ALL JOINTS WHERE THE PROPOSED CONSTRUCTION MEET EXISTING PAVEMENT AND CONCRETE.

CONSTRUCTION WASTE RECYCLING/DISPOSAL

1. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
2. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED.
3. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING IMPORT AND EXPORT MATERIAL IN ACCORDANCE WITH THE PADEP'S MANAGEMENT OF FILL POLICY (MOST RECENT EDITION) THE MATERIALS MANAGEMENT PLAN, COA, AND ENVIRONMENTAL COVENANT. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF ANALYTICAL TESTING TO CHARACTERIZE MATERIALS IN ACCORDANCE WITH THE CLEAN FILL POLICY, AND RESPONSIBLE FOR THE COSTS ASSOCIATED WITH DISPOSING OF EXPORT MATERIAL IN ACCORDANCE WITH THE POLICY.
4. CEC NOTES THAT HISTORIC FILLS (FILLS WITH RESIDUALS PLACED PRIOR TO 1988 AS DEFINED IN THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PADEP) CLEAN FILL POLICY) ARE SUBJECT TO ADDITIONAL TESTING, HANDLING, AND MANAGEMENT REQUIREMENTS PER THE PADEP'S CLEAN FILL POLICY THE MATERIALS MANAGEMENT PLAN, COA, AND ENVIRONMENTAL COVENANT. IF THEY NEED TO BE HAULED OFF-SITE, CEC CONCLUDES THE EXISTING FILL ON-SITE WOULD NEED TO BE TESTED TO DETERMINE BEST MANAGEMENT PRACTICES AS OUTLINED IN THE MATERIALS MANAGEMENT PLAN. REFER TO THE CLEAN FILL POLICY FOR MORE INFORMATION.
5. THE PADEP DEFINES ENVIRONMENTAL DUE DILIGENCE AS FOLLOWS REGARDING CLEAN FILL: INVESTIGATIVE TECHNIQUES INCLUDING BUT NOT LIMITED TO VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCORES, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. DURING CONSTRUCTION, PADEP/CDD MUST BE CONTACTED WITHIN 24 HOURS IF SOIL SAMPLES ARE FOUND TO EXCEED CH. 250 MSC STANDARDS.
6. SEDIMENT, TRASH, OR ANY NON-NATIVE MATERIAL OBSERVED WITHIN CHANNELS, PIPES AND/OR CATCH BASINS SHOULD BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE ACCORDANCE WITH THE PADEP APPROVED CLEAN UP PLAN THE MATERIALS MANAGEMENT PLAN, COA, AND ENVIRONMENTAL COVENANT.

GRADING NOTES

1. IT IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR TO RETAIN A QUALIFIED GEOTECHNICAL ENGINEER TO ASSESS SUBSURFACE CONDITIONS FOR THE PROPOSED SUBSTATION AND BUILDING AREAS AND VERIFY THE STABILITY OF PROPOSED AND EXISTING SLOPES. CEC ASSUMES NO LIABILITY FOR SLOPE STABILITY OR RELATED GEOTECHNICAL CONDITIONS.
2. THE CONTRACTOR MUST CONDUCT INDEPENDENT VERIFICATION AND CONDUCT ADDITIONAL TESTS WHERE IT IS DETERMINED NECESSARY FOR CONSTRUCTION OF THE IMPROVEMENTS AT NO ADDITIONAL COST TO THE OWNER.
3. ALL SLOPES SHALL BE 2:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE OFFSITE DISPOSAL OF ANY AND ALL EXCESS OR UNSUITABLE MATERIAL UNABLE TO BE PLACED ON SITE AND FOR IMPORTING ANY BORROW MATERIAL NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL PROVIDE A SUITABLE DISPOSAL SITE FOR EXCESS SOIL MATERIAL WHEN APPLICABLE. IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS, ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED.
5. ALL EXCAVATION IS CONSIDERED UNCLASSIFIED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, AND MATERIALS OF CONSTRUCTION TO COMPLETE THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE OFFSITE DISPOSAL OF ANY AND ALL EXCESS OR UNSUITABLE MATERIAL UNABLE TO BE PLACED ON SITE AND FOR IMPORTING ANY BORROW MATERIAL NECESSARY TO COMPLETE THE WORK.
6. IF DURING CONSTRUCTION GEOLOGIC HAZARDS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER, CIVIL ENGINEER, AND GEOTECHNICAL ENGINEER TO DETERMINE THE PROPER HANDLING OF THESE MATERIALS.
7. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT.
8. ADJUST GRADES WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE TOWARDS EXISTING OR PROPOSED STORM SEWER STRUCTURES AND/OR CHANNELS. NOTIFY ENGINEER.
9. ALL ELEVATIONS SHOWN ARE REFERENCED TO BENCHMARKS ON THE PROJECT SURVEY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR AT GROUNDBREAKING.
10. ALL SPOT ELEVATIONS ARE REFERENCED TO THE FINISHED GROUND SURFACE UNLESS OTHERWISE NOTED.

POST-CONSTRUCTION STORMWATER MANAGEMENT NOTES

1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING, AND FINAL ACCEPTANCE OF NEW STORMWATER MANAGEMENT FACILITIES. THE CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AUTHORITIES, AS APPROPRIATE.
3. ALL STORMWATER MANAGEMENT FACILITIES AND CONVEYANCE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
4. UNDERGROUND DETENTION/STORAGE SYSTEMS LOCATED WITHIN, BENEATH, OR IMMEDIATELY ADJACENT TO IDENTIFIED OR SUSPECTED CONTAMINATION ZONES SHALL BE LINED WITH SEAMAN CORPORATION XR-5® GEOMEMBRANE OR APPROVED EQUAL. SYSTEMS LOCATED OUTSIDE IDENTIFIED CONTAMINATION ZONES MAY BE LINED WITH SEAMAN CORPORATION XR-3® GEOMEMBRANE OR APPROVED EQUAL. SUBJECT TO CONTRACTOR VERIFICATION OF SITE CONDITIONS AND MANUFACTURER CONFIRMATION OF CHEMICAL COMPATIBILITY. CONTRACTOR REMAINS RESPONSIBLE FOR LINER SELECTION AND PERFORMANCE.
5. ALL STORM PIPE AND STRUCTURE CONNECTIONS SHALL REQUIRE A WATERTIGHT SEAL.
6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL FOR ALL UNDERGROUND DETENTION SYSTEMS, INLETS, MANHOLES, ENDWALLS, AND PIPES.

MONITORING WELL AND ENVIRONMENTAL NOTES

1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATING WITH THE EPA AND ALL APPLICABLE AGENCIES TO ABANDON OR MODIFY EXISTING MONITORING WELLS AS NOTED IN THE PLAN SHEETS AND INSTALL ANY REQUIRED REPLACEMENT WELL, INCLUDING ALL PERMITS, APPROVALS, MEANS AND METHODS, AND COMPLIANCE WITH APPLICABLE REGULATIONS. ENGINEER AND OWNER ASSUME NO RESPONSIBILITY FOR REGULATORY COORDINATION OR FIELD EXECUTION.
2. CONTRACTOR SHALL OBTAIN THE SITE SAFETY PLAN AND SOIL MANAGEMENT PLAN FROM THE OWNER, MERCER NODE PROPERTY, LLC, ACKNOWLEDGE RECEIPT THEREOF, AND ENFORCE ALL REQUIREMENTS FOR ITSELF AND ALL SUBCONTRACTORS. NO SITE DISTURBANCE ACTIVITIES SHALL COMMENCE UNTIL THESE PLANS ARE OBTAINED AND FULLY IMPLEMENTED, AND COMPLIANCE SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION.

UTILITY NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES WHICH MAY HAVE UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 3 WORKING DAYS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. A LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THIS SHEET. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.
2. THE CONTRACTOR IS EXPRESSLY CAUTIONED THAT THE LOCATIONS AND/OR ELEVATIONS OF THE EXISTING UTILITIES SHOWN HEREON ARE BASED ON TOPOGRAPHIC SURVEYS, RECORD DRAWINGS, AND OTHER INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ENGINEER. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER AS SOON AS POSSIBLE. NO GUARANTEE IS MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE PERFORMING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO DETERMINE THE EXACT LOCATION AND/OR PROTECT ANY UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COSTS INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
3. PROPOSED SUBSTATION AND TRANSMISSION LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING, AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY OR AGENCY.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS IN ACCORDANCE WITH THE UTILITY COMPANY'S REGULATIONS, SPECIFICATIONS, AND STANDARD DETAILS UNLESS OTHERWISE NOTED ON THE PLANS.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND PRODUCT SUBMITTALS TO UTILITY COMPANIES PRIOR TO ORDERING MATERIALS. APPROVAL OF MATERIALS AND EQUIPMENT BY UTILITY COMPANIES IS REQUIRED PRIOR TO INSTALLATION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING, AND FINAL ACCEPTANCE OF PROPOSED UTILITIES UNLESS OTHERWISE COORDINATED WITH THE OWNER BEFOREHAND.
7. 18-INCH MINIMUM VERTICAL SEPARATION MUST BE MAINTAINED AT ALL UTILITY CROSSINGS UNLESS OTHERWISE NOTED ON THE PLAN.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES. ALL UTILITIES SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION. WHERE UTILITIES ARE INSTALLED WITHIN EXISTING PAVEMENT, CONTRACTOR TO BACKFILL UTILITY TRENCH IN ACCORDANCE WITH PROJECT REQUIREMENTS AND RESTORE SURFACE TO EXISTING CONDITION.
9. SHOWN UTILITY LOCATIONS ARE APPROXIMATE; THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATIONS. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER. THE ENGINEER IS HELD HARMLESS FOR CONFLICTS NOT REPORTED PRIOR TO CONSTRUCTION.
10. TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED. TRENCH SPOILS SHALL BE TESTED TO DETERMINE FEASIBILITY TO BE INCORPORATED INTO EARTHWORK AT OTHER LOCATIONS ON THE SITE OR REQUIRED TO BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFF SITE AT AN ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
11. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OFF-SITE OF ALL ITEMS SHOWN ON THE DEMOLITION PLAN INCLUDING ITEMS ENCOUNTERED DURING EXCAVATION OF BUILDING FOUNDATIONS AND UTILITY PLACEMENT.
2. PRIOR TO STARTING DEMOLITION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES.
3. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR THE DISCONNECTION AND REMOVAL OF SERVICES TO EXISTING STRUCTURES.
4. ITEMS SHOWN ON THE DEMOLITION PLAN TO BE SALVAGED SHALL BE TRANSPORTED TO LOCATION SPECIFIED BY THE OWNER OR HIS/HER REPRESENTATIVE.
5. ITEMS OF SALVAGEABLE VALUE TO THE CONTRACTOR MAY BE REMOVED WITH THE OWNER OR HIS/HER REPRESENTATIVE'S PERMISSION. THE CONTRACTOR SHALL NOT STORE THESE ITEMS ON SITE.
6. THE CONTRACTOR MAY NOT USE EXPLOSIVES OR BURN DEBRIS.
7. CONDUCT DEMOLITION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH ROADS, SIDEWALKS AND ANY OTHER ADJACENT OCCUPIED FACILITIES.
8. DO NOT CLOSE OR OBSTRUCT ROADS, SIDEWALKS OR ANY OTHER OCCUPIED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITY HAVING JURISDICTION AND/ OR PROPERTY OWNERS.
9. THE CONTRACTOR SHALL ENSURE SAFE PASSAGE OF PERSON TRAVERSING THROUGH OR AROUND THE CONSTRUCTION SITE.
10. THE CONTRACTOR SHALL PROTECT FROM DAMAGE, SURROUNDING STRUCTURES, UTILITIES AND OTHER FACILITIES DURING DEMOLITION AND REMOVAL OPERATIONS.
11. BUILDING STRUCTURES INCLUDING FOUNDATIONS OR BASEMENTS SHALL BE REMOVED AND BACKFILLED WITH APPROVED BACKFILL MATERIAL. BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM EIGHT INCH LIFTS AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT OR A MINIMUM OF 95% OF A STANDARD PROCTOR.
12. UTILITIES SHALL BE REMOVED AND BACKFILLED WITH APPROVED BACKFILL MATERIAL. BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM EIGHT INCH LIFTS AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT OR A MINIMUM OF 95% OF A STANDARD PROCTOR.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE CONSTRUCTION SITE AND SURROUNDING AREAS ARE FREE OF ACCUMULATED DEBRIS.

FIRST ENERGY GUIDELINES

WORKING SAFETY RESTRICTIONS

- OCCUPATIONAL SAFETY HEALTH ADMINISTRATION (OSHA) SAFE-WORKING CLEARANCE FROM A PERSON OR ANY CONDUCTIVE OBJECT TO THE ENERGIZED BARE WIRES SHALL BE MAINTAINED AT ALL TIMES. CONDUCTIVE OBJECTS DO NOT HAVE TO MAKE PHYSICAL CONTACT WITH THE CONDUCTORS FOR ELECTRICITY TO FLOW IN UNWANTED DIRECTIONS.
- THE LINE SHALL BE CONSIDERED ENERGIZED AT ALL TIMES.
- NOTICE: CONDUCTOR POSITION CHANGES CONTINUOUSLY DEPENDING ON LOAD, AMBIENT TEMPERATURE, WIND SPEED, ETC. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR MONITORING CONDUCTOR POSITION TO DETERMINE OSHA SAFE WORKING CLEARANCE.
- PARKING OR OPERATING A VEHICLE OR EQUIPMENT WITHIN OR ADJACENT TO THE RIGHT-OF-WAY MAY INDUCE AN ELECTRIC CHARGE. INDUCED ELECTRIC CHARGES MAY ALSO BE IMPOSED ON OBJECTS SUCH AS FENCES, SIGNS, OR ANY OTHER CONDUCTIVE OBJECT. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO SATISFY THEMSELVES ON THE NECESSITY OF GROUNDING AND TO ENSURE THAT A PROPER GROUNDING SYSTEM DESIGNED BY A REGISTERED DESIGN PROFESSIONAL IS IN PLACE, IF APPLICABLE. CONSTRUCTION VEHICLES AND EQUIPMENT OPERATING NEAR TRANSMISSION LINES MAY ALSO REQUIRE GROUNDING.

RIGHT-OF-WAY ACCESS

- FIRSTENERGY-AUTHORIZED PERSONNEL, VEHICLES AND EQUIPMENT MUST HAVE CONTINUOUS ACCESS TO THE RIGHT-OF-WAY AND ALL FIRSTENERGY STRUCTURES.
- ALL OBJECTS OR EQUIPMENT LEFT WITHIN THE RIGHTS-OF-WAY ARE SUBJECT TO REMOVAL. FIRSTENERGY IS NOT RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANYTHING IN THE TRANSMISSION RIGHTS-OF-WAY DAMAGED OR DESTROYED BECAUSE OF EMERGENCY OR MAINTENANCE OPERATIONS.
- FIRSTENERGY RESERVES THE RIGHT TO INSPECT AT ANY TIME CONSTRUCTION OR OTHER ACTIVITIES WITHIN THE RIGHTS-OF-WAYS, EASEMENTS, OR PROPERTY OWNED BY FIRSTENERGY.

RIGHT-OF-WAY RESTRICTIONS

- CONSENTS AND/OR EASEMENTS FOR ANY UTILITY, ACCESS ROAD, ETC. WILL BE LIMITED TO A MAXIMUM OF 20 FEET IN WIDTH WITHIN THE FIRSTENERGY RIGHTS-OF-WAY UNLESS PROVISIONS ARE DEFINED IN THE EASEMENTS, DEEDS, ETC.
- CHANGES TO GRADE ELEVATIONS WITHIN THE FIRSTENERGY TRANSMISSION RIGHT OF WAY ARE NOT PERMITTED. GROUND DISTURBANCE OR EXCAVATIONS ARE NOT PERMITTED WITHIN 50 FEET OF ANY FIRSTENERGY STRUCTURE (POLES, TOWERS, GUYS, ETC). IN THE EVENT THAT THE EASEMENT WIDTH FROM THE STRUCTURE FOUNDATION IS LESS THAN 50', THE DISTANCE FROM THE STRUCTURE TO THE EDGE OF THE EASEMENT WILL BE THE DISTANCE USED.
- PROTECTIVE BARRIERS MUST BE USED FOR ANY DRIVEWAYS, ACCESS ROADS, OR PARKING AREAS, ETC., WITHIN 25 FEET OF ANY FIRSTENERGY STRUCTURE (POLES, TOWERS, GUYS, ETC).
- RIGHTS-OF-WAY, TEMPORARY EASEMENTS, LIMITS OF DISTURBANCE, LIMITS OF CONSTRUCTION, ETC., SHALL NOT INCLUDE TRANSMISSION OR DISTRIBUTION STRUCTURES WITHIN ITS LIMITS.
- UNLESS LEGAL DOCUMENTS MAKE PROVISIONS FOR SUCH, NO BUILDINGS, LIGHTING FIXTURES, SIGNS, BILLBOARDS, SWIMMING POOLS, DECKS, FLAG POSTS, SHEDS, BARNs, GARAGES, PLAYGROUNDS, FENCES OR OTHER STRUCTURES ARE PERMITTED WITHIN THE RIGHT OF WAY. OTHER RESTRICTIONS MAY APPLY FOR SPECIFIC SITUATIONS. SEPTIC SYSTEMS, LEACH BEDS, AND/OR WELLS ARE NOT PERMITTED WITHIN A FIRSTENERGY TRANSMISSION RIGHT OF WAY.
- KITE FLYING, MODEL AIRPLANE FLYING, OR SIMILAR ACTIVITY, IS STRICTLY PROHIBITED ON OR NEAR FIRSTENERGY TRANSMISSION RIGHT OF WAY.
- WHEN UTILITIES ARE APPROVED AND INSTALLED IN THE FIRSTENERGY RIGHTS OF WAYS/EASEMENTS, ETC., VISIBLE MARKERS IDENTIFYING THE UTILITY, OWNER AND CONTACT INFORMATION MUST BE INSTALLED ON EACH SIDE OF THE RIGHT OF WAY AT NO GREATER THAN 300 FEET INTERVALS. PROVIDE ON THE PLANS THE EXACT LOCATION OF THE PIPELINE INCLUDING GPS LATITUDE AND LONGITUDE COORDINATES IN DECIMAL DEGREES. ALSO, PROVIDE ON THE DRAWINGS, PIPE DIAMETER, PIPE DEPTH, PIPE MATERIAL, DIMENSIONS FROM THE STRUCTURE(S), RIGHTS-OF-WAYS, PROPERTY LINES, ETC.
- THE INSTALLATION OF 'DANGER —OVERHEAD ELECTRIC LINES' SIGNS ARE RECOMMENDED IN THE AREA OF THE TRANSMISSION RIGHTS-OF-WAY. PLEASE REFERENCE THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' AT WWW.MUTCD.FHWA.DOT.GOV/ FOR APPROPRIATE SIGNS, ETC.
- DAMAGE TO ANY FIRSTENERGY FACILITIES DURING THE PROPOSED CONSTRUCTION MUST BE REPORTED IMMEDIATELY TO THE CONTACT CENTER.
- UNLESS LEGAL DOCUMENTS MAKE PROVISIONS FOR SUCH, BLASTING IS NOT PERMITTED WITHIN THE FIRSTENERGY RIGHTS-OF-WAYS OR EASEMENTS. EXPLOSIVE OR COMBUSTIBLE LIQUID, SUBSTANCE, OR MATERIAL SHALL BE STORED WITHIN THE RIGHT-OF-WAY. PROHIBITED MATERIALS INCLUDE BUT ARE NOT LIMITED TO: FUEL, WOOD CHIPS, MULCH, BRUSH, AND TRES, ETC.
- NO SOIL PILES OR OTHER MATERIALS SHALL BE PLACED OR STORED UNDER THE TRANSMISSION LINE CONDUCTORS AT ANY TIME.
- WHATEVER DISTURBANCES ARE CAUSED DURING CONSTRUCTION MUST BE RESTORED TO AN EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION CONDITION WITHIN 7 DAYS OF COMPLETION. ALL AREAS OF EXPOSED SOIL MUST BE RESEDED AND MULCHED WITHIN 7 DAYS OF COMPLETION.
- ALL VEGETATION ON OR ADJACENT TO THE RIGHT-OF-WAY SHALL BE LOW GROWING. VEGETATION THAT PROMOTES A LOW GROWING PLANT COMMUNITY OF GRASSES, HERBS AND SHRUBS THAT ARE 5-3.5 FOOT MAXIMUM MATURE HEIGHT, (3-FOOT IN N.J.), ARE PERMITTED ON FIRSTENERGY TRANSMISSION RIGHTS OF WAY, HOWEVER IT IS PREFERRED THAT THE PLANTING OF ANY WOODY VEGETATION BE DONE OUTSIDE THE WIRE ZONE OF TRANSMISSION FACILITIES. (THE WIRE ZONE IS THE AREA DIRECTLY UNDER THE CONDUCTORS AND EXTENDING TO ABOUT 15 ON EACH SIDE). (ALL APPROVED SHRUBBERY PLANTED NEAR FIRSTENERGY STRUCTURES (POLES, TOWERS, GUYS, ETC.) SHALL ALLOW FOR WORKING AREA AND ACCESSIBILITY AT GROUND LEVEL (NO CLOSER THAN 10 FEET FROM THE STRUCTURE, IN ANY DIRECTION).
- FIRSTENERGY HAS INSTALLED COUNTERPOISE ON NUMEROUS STRUCTURE LOCATIONS. THE EXACT LOCATIONS ARE NOT MARKED ON THE FIELD. SHOULD THE COUNTERPOISE BE DISTURBED OR DAMAGED, IT IS THE RESPONSIBILITY OF THE DEVELOPER AND/OR ITS SUBCONTRACTORS, TO IMMEDIATELY NOTIFY THE COMPANY'S MANAGER, TRANSMISSION LINE ENGINEERING BY CALLING THE CONTACT CENTER. COST OF REPAIRS FOR DAMAGED FIRSTENERGY FACILITIES WILL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.
- FOR PIPELINE REQUESTS TO RUN PARALLEL TO THE FIRSTENERGY EASEMENT/RIGHT-OF-WAY, PIPELINES SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE EDGE OF THE RIGHT OF WAY. PARALLEL RUNS SHOULD BE OUTSIDE THE RIGHTS-OF-WAY, BUT WHEN ALLOWED CAN BE ALLOWED TO RUN WITHIN 10 FEET OF THE OUTSIDE EDGE OF THE RIGHT-OF-WAY, MAXIMUM, THAT INCLUDES THE LIMITS OF TRENCHING.
- IF POSSIBLE, IT IS RECOMMENDED THAT THE PIPELINES BE NON-METALLIC.
- PIPELINES OR RELATED APPURTENANCES SHALL NOT BE PLACED WITHIN 50 FEET OF A TRANSMISSION STRUCTURE, GUY ANCHOR, ETC. IN THE EVENT THAT THE OUTSIDE EDGE OF THE FIRSTENERGY EASEMENT TO THE TRANSMISSION STRUCTURE MEASURES LESS THAN THIS WIDTH, THE EDGE OF THE EASEMENT, CORNER, AND/OR ANCHOR CAN BE COMPROMISED BY EXCAVATION OPERATIONS.
- IT IS POSSIBLE THAT THE REQUESTOR WILL BE REQUIRED TO REIMBURSE FIRSTENERGY FOR ANALYTICAL AND ENGINEERING EXPENSES. FEES MAY ALSO BE REQUIRED FOR USE OF ANY FIRSTENERGY OWNED PROPERTY.
- THE DOUBLE-DITCH METHOD SHOULD BE UTILIZED FOR PIPELINE CONSTRUCTION AS THE EXCAVATIONS COMMENCE. THE TOPSOIL IS TO BE PLACED ON ONE SIDE OF THE TRENCH AND THE SUBSOIL TO THE OTHER SIDE.
- APPLICABLE PERMITTING FOR ANY CONSTRUCTION OR OPERATIONAL ACTIVITIES ASSOCIATED WITH THE PROJECT CONDUCTED ON THE FIRSTENERGY EASEMENT/RIGHTS-OF-WAY IS THE RESPONSIBILITY OF THE DEVELOPER.

GENERAL NOTES

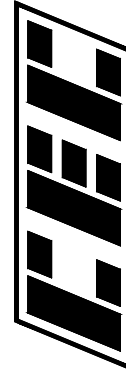
DRAWING NO:
C001

SHEET 2 OF 22

DATE: APRIL 2025
DWG SCALE: N/A
PROJECT NO: 353-024
APPROVED BY: MEA

DRAWN BY: VWF
CHECKED BY: BJH
DATE: APRIL 2025

MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA



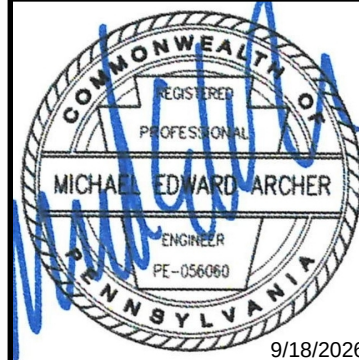
Civil & Environmental
Consultants, Inc.

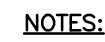
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Moon Township, PA 15108
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REVISION RECORD

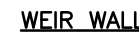
NO	DATE	DESCRIPTION
1	04/01/2025	RESPONSE TO ACPM COMMENTS LETTER DATED 03/04/2025
2	04/01/2025	RESPONSE TO TECHNICAL DEPENDENCY LETTER DATED 04/01/2025
3	04/01/2025	RESPONSE TO TECHNICAL DEPENDENCY LETTER DATED 04/01/2025

ENGINEERING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF N.C., P.L.C. SERVICES IN PLANNED ROAD WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF N.C., P.L.C. ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.





1. ALL CONCRETE SHALL BE CLASS A CONCRETE, 4000 PSI, 5% AIR ENTRAINED.
2. LIFTING HOLES TO BE POINTED WITH NON-SHRINK GROUT, AND LEFT WATERTIGHT, NEAT AND SMOOTH.
3. PRECAST SECTIONS SHALL CONFORM TO ASTM C-408 AS REVISED.
4. INLET MANHOLE SHALL BE CAST IN SPRING LINE OF PIPE WITH SIDES SLOPING 1/2" TO 1"-0" TO INSIDE FACE OF PRECAST BASE SECTION.
5. DIVERSION STRUCTURE MUST BE A PRECAST SINGLE UNIT OR CAST IN PLACE. DIVERSION STRUCTURE UNIT SHALL BE CAST TO CONCRETE SLAB ON GRADE.
6. PRECAST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS CERTIFIED BY A LICENSED PA PROFESSIONAL ENGINEER FOR ALL PRECAST STRUCTURES. WHERE STRUCTURES MUST BE CAST IN-PLACE, CONTRACTOR WILL BE RESPONSIBLE FOR POST CASTING DETAILS FOR EACH STRUCTURE PREPARED, SIGNED, AND SEALED BY A LICENSED PA PROFESSIONAL ENGINEER.



- NOTES:**
1. ENGINEER / CONTRACTOR TO CONFIRM PIPE MATERIALS AND APPLICABLE ADAPTERS.
 2. CONTRACTOR IS RESPONSIBLE FOR MATERIAL AND LABOR TO BRING CASTINGS TO FINISHED GRADE.
 3. CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
 4. UNIT SHALL CONFORM TO HS20-44 LOAD RATINGS.

N.T.S.



N.T.S.



NOT TO SCALE



NOT TO SCALE

REVISION RECORD			DESCRIPTION
NO	DATE		
1	06/03/2026		RESPONSE TO INCOMPLETENESS LETTER DATED 06/04/2026;
2	08/14/2026		RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 07/18/2026;
3	09/18/2026		RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 09/10/2026;

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**MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
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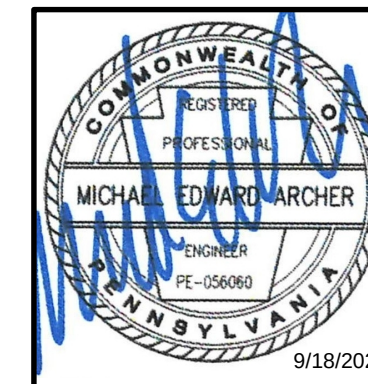
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS SUBSTATION

DATE:	APRIL 2026	DRAWN BY:	VMF
DWG SCALE:	AS SHOWN	CHECKED BY:	BJH
PROJECT NO:	353-024		
APPROVED BY:	MEA		

DRAWING NO.

C401

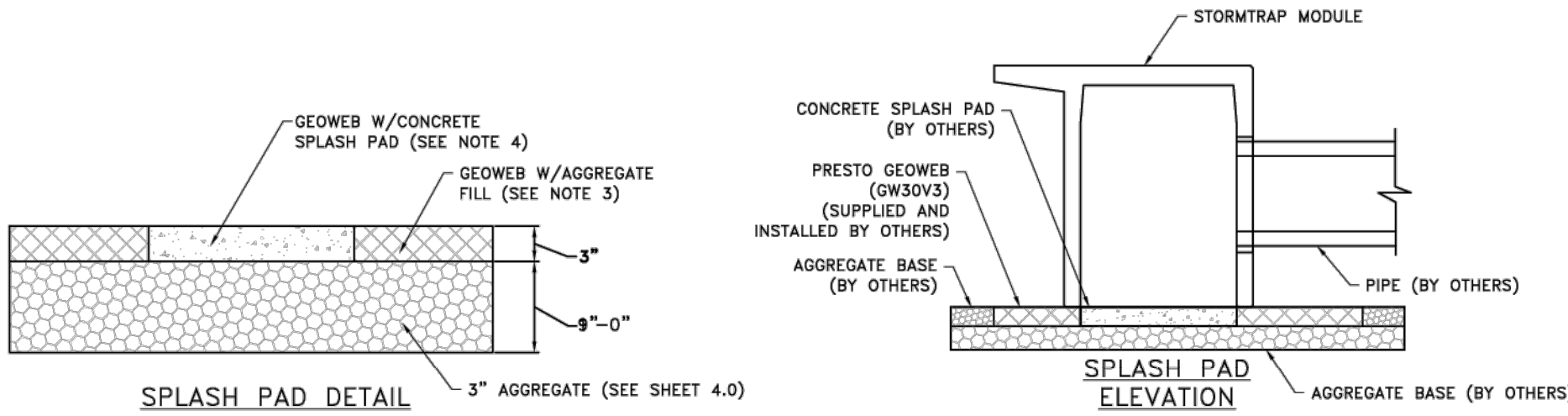
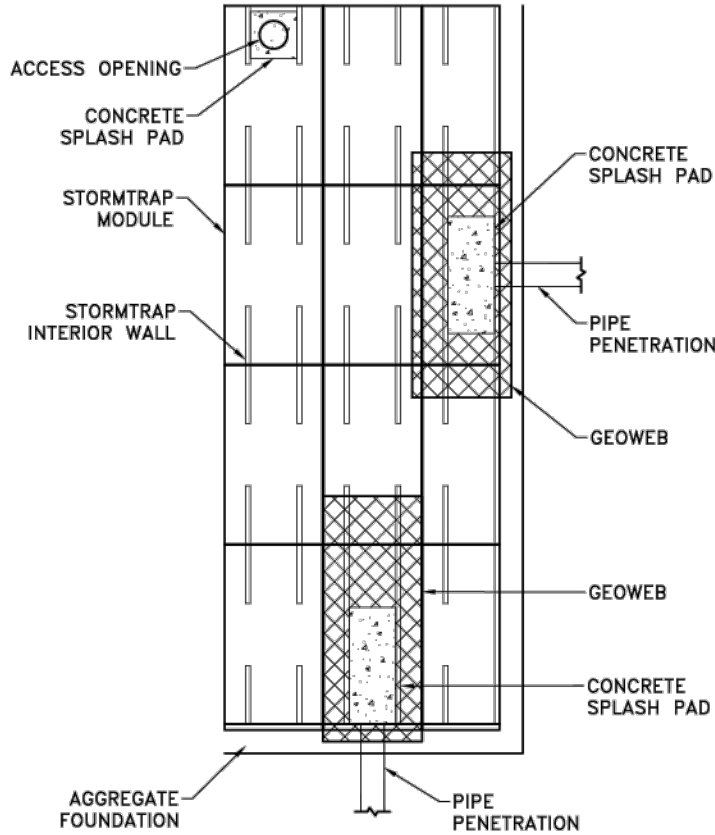
SHEET 8 OF 22



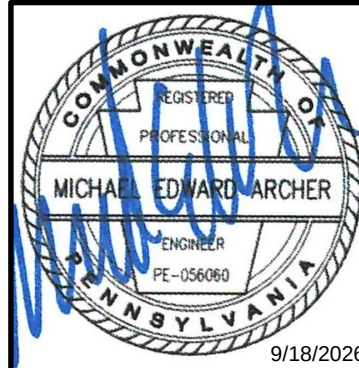
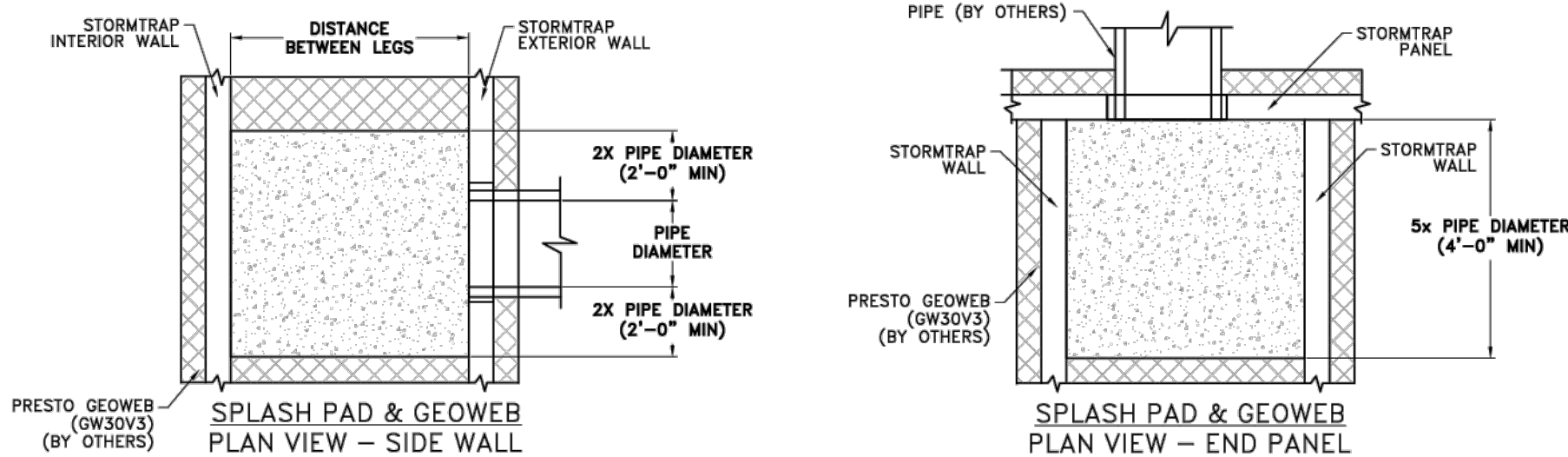
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- GEOWEB AND SPLASH PAD INSTALLATION SPECIFICATION**
1. THE APPROVED GEOWEB SHALL BE PRESTO GEOWEB (GW30V3). THE GEOWEB NOMINAL DIMENSIONS SHALL BE 9'-FT x 25'-FT.
 2. THE CONCRETE SPLASH PAD AND GEOWEB SHALL BE INSTALLED PRIOR TO INSTALLATION OF THE STORMTRAP MODULES.
 3. THE GEOWEB INFILL MATERIAL SHALL BE #5 AGGREGATE.
 4. THE CONCRETE SPLASH PAD SHALL BE INSTALLED WITHIN THE GEOWEB AND IS REQUIRED AT ALL PIPE ENTRY LOCATIONS.
 5. THE GEOWEB EDGE SHALL BE INSTALLED 1'-FT BEYOND THE OUTER PERIMETER OF THE STORMTRAP SYSTEM.
 6. THE GEOWEB LONGITUDINAL DIMENSION (25'-FT) SHALL BE INSTALLED PARALLEL TO THE STORMTRAP LEGS.
 7. THE CONCRETE SPLASH PAD AND GEOWEB SHALL BE CENTERED AT THE PIPE PENETRATION.
 8. REFER TO SPLASH PAD LAYOUT FOR CONCRETE SPLASH PAD DIMENSIONS.
 9. IF ANY PRODUCT OTHER THAN PRESTO GEOWEB IS TO BE INSTALLED, THE PRODUCT MANUFACTURER IS REQUIRED TO SUBMIT A LETTER STATING THAT THE PRODUCT IS EQUAL OR BETTER THEN PRESTO GEOWEB, BOTH IN PERFORMANCE AND IN STRUCTURAL CAPACITY.
 10. ALL GEOWEB AND SPLASH PADS TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
 11. A CONCRETE SPLASH PAD IS REQUIRED AT ANY ACCESS OPENING THAT HAS AN OPEN GRATE FOR DRAINAGE. THE CONCRETE SPLASH PAD SHALL EXTEND BETWEEN THE UNIT LEG WALLS AND 3'-0" FROM THE CENTERLINE OF THE OPENING ON BOTH SIDES UNLESS SPECIFIED OTHERWISE ON THE SPLASH PAD LAYOUT. GEOWEB IS NOT REQUIRED UNDER ACCESS OPENINGS.

SPLASH PAD CONFIGURATION



DETAIL 6
SPLASH PAD AND GEOWEB DETAILS
N.T.S.



**POST CONSTRUCTION STORMWATER
MANAGEMENT DETAILS SUBSTATION**

DRAWING NO.: **C402**

SHEET 9 OF 22

DATE: APRIL 2026 | DRAWN BY: VMF
DWG SCALE: AS SHOWN | CHECKED BY: BJH
PROJECT NO: 353-024
APPROVED BY: MEA

MERCER NODE PROPERTY, LLC
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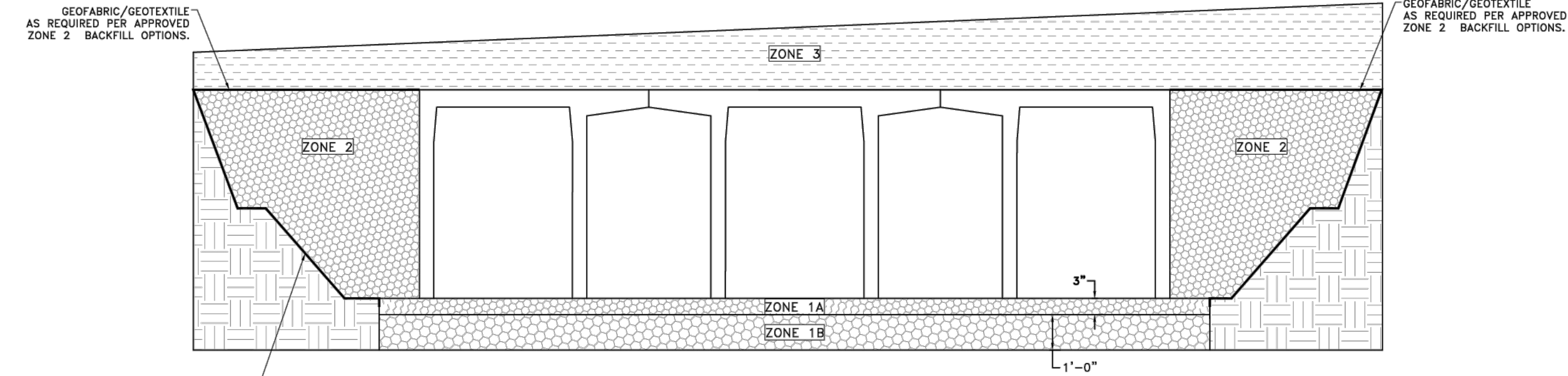
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ZONE CHART		
ZONES	ZONE DESCRIPTIONS	REMARKS
ZONE 1A	FOUNDATION AGGREGATE	#5 (3") STONE ANGULAR AGGREGATE (SEE NOTE 4 FOR DESCRIPTION)
ZONE 1B	FOUNDATION AGGREGATE (INFILTRATION NOT ALLOWED)	3" RECYCLED CRUSHED CONCRETE (SEE NOTES 5 & 6 FOR DESCRIPTION)
	FOUNDATION AGGREGATE (INFILTRATION ALLOWED)	3" STONE AGGREGATE (SEE NOTE 5)
ZONE 2	BACKFILL	UNITED SOILS CLASSIFICATION (GW, DP, SW, SP) OR SEE BELOW FOR APPROVED BACKFILL OPTIONS
ZONE 3	FINAL COVER OVERTOP	MATERIALS NOT TO EXCEED 120 PCF

FILL DEPTH	TRACK WIDTH	MAX VEHICLE WEIGHT (KIPS)	MAX GROUND PRESSURE
12"	12"	51.8	1690 psf
	18"	55.1	1219 psf
	24"	68.1	1111 psf
	30"	76.7	1000 psf
	36"	85.0	924 psf

NOTE:
TRACK LENGTH NOT TO EXCEED 15'-4".
ONLY TWO TRACKS PER VEHICLE.

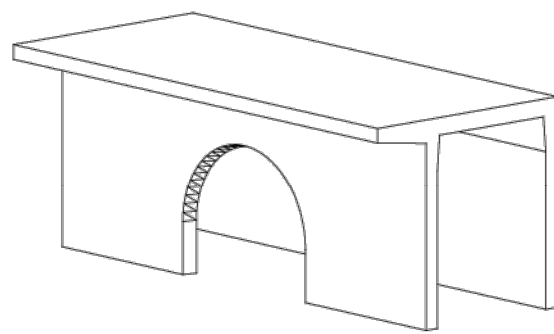
APPROVED ZONE 2 BACKFILL OPTIONS	
OPTION	REMARKS
3" STONE AGGREGATE	THE STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING ANGULAR MATERIAL. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOTEXTILE AROUND THE PERIMETER OF THE BACKFILL (ASTM SIZE #87) AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
SAND	IMPORTED PURE SAND IS PERMITTED TO BE USED AS BACKFILL IF IT IS CLEAN AND FREE DRAINING. THE SAND USED FOR BACKFILLING SHALL HAVE LESS THAN 40% PASSING #40 SIEVE AND LESS THAN 5% PASSING #200 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOTEXTILE AROUND THE PERIMETER OF THE SAND BACKFILL.
CRUSHED CONCRETE AGGREGATE	CLEAN, FREE DRAINING CRUSHED CONCRETE AGGREGATE MATERIAL CAN BE USED AS BACKFILL FOR STORMTRAP'S MODULES. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOTEXTILE AROUND THE PERIMETER OF THE BACKFILL.
ROAD PACK	STONE AGGREGATE 100% PASSING THE 1-1/2" SIEVE WITH LESS THAN 12% PASSING THE #200 SIEVE (ASTM SIZE #467), GEOTEXTILE AS PER GEOTECHNICAL ENGINEER RECOMMENDATION.



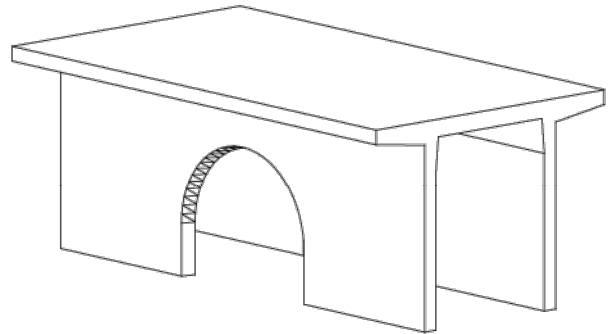
BACKFILL DETAIL

DETAIL 10
SINGLETRAP BACKFILL SPECIFICATION

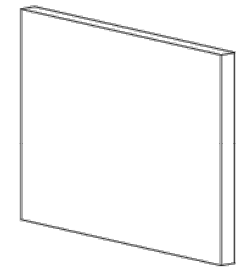
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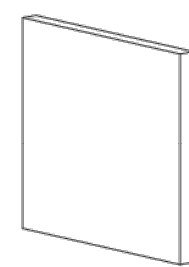
5'-6" SINGLETRAP
TYPE IV



5'-6" SINGLETRAP
TYPE II



5'-6" SINGLETRAP
TYPE II END PANEL



5'-6" SINGLETRAP
TYPE IV END PANEL

- NOTES:
1. OPENING LOCATIONS AND SHAPES MAY VARY.
 2. SP - INDICATES A MODULE WITH MODIFICATIONS.
 3. P - INDICATES A MODULE WITH A PANEL ATTACHMENT.
 4. POCKET WINDOW OPENINGS ARE OPTIONAL.

DETAIL 12
SINGLETRAP MODULE TYPES

N.T.S.

ACCESS OPENING SPECIFICATION

1. A TYPICAL ACCESS OPENING FOR THE STORMTRAP SYSTEM ARE 2'-0" IN DIAMETER. ACCESS OPENINGS LARGER THAN 4'-0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL OPENINGS MUST RETAIN AT LEAST 2'-0" OF CLEARANCE FROM THE END OF THE STORMTRAP MODULE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED ON INSIDE LEG UNLESS OTHERWISE SPECIFIED. SEE SHEET 2.0 FOR SIZES AND LOCATIONS.
2. UNLESS OTHERWISE SPECIFIED, PLASTIC COATED STEPS ARE PROVIDED INSIDE ANY MODULE WHERE DEEMED NECESSARY. THE HIGHEST STEP IN THE MODULE IS TO BE PLACED A DISTANCE OF 1'-0" FROM THE INSIDE EDGE OF THE STORMTRAP MODULES. ALL ENSUING STEPS SHALL BE PLACED AT A DISTANCE BETWEEN 10" MIN AND 14" MAX BETWEEN THEM. STEPS MAY BE MOVED OR ALTERED TO AVOID OPENINGS OR OTHER IRREGULARITIES IN THE MODULE.
3. STORMTRAP LIFTING INSERTS MAY BE RELOCATED TO AVOID INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
4. STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO AVOID INTERFERENCE WITH INLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
5. ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
6. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHERS)

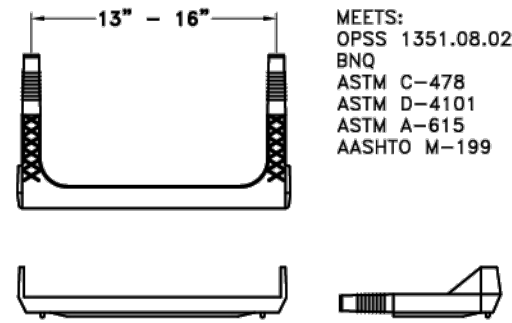
PIPE OPENING SPECIFICATION

1. MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0".
2. CONNECTING PIPES MAY BE INSTALLED WITH A 1'-0" CONCRETE COLLAR AND AN AGGREGATE CRADLE (AS REQUIRED) FOR AT LEAST ONE PIPE LENGTH (SEE PIPE CONNECTION DETAIL). A STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MAY BE USED.
3. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

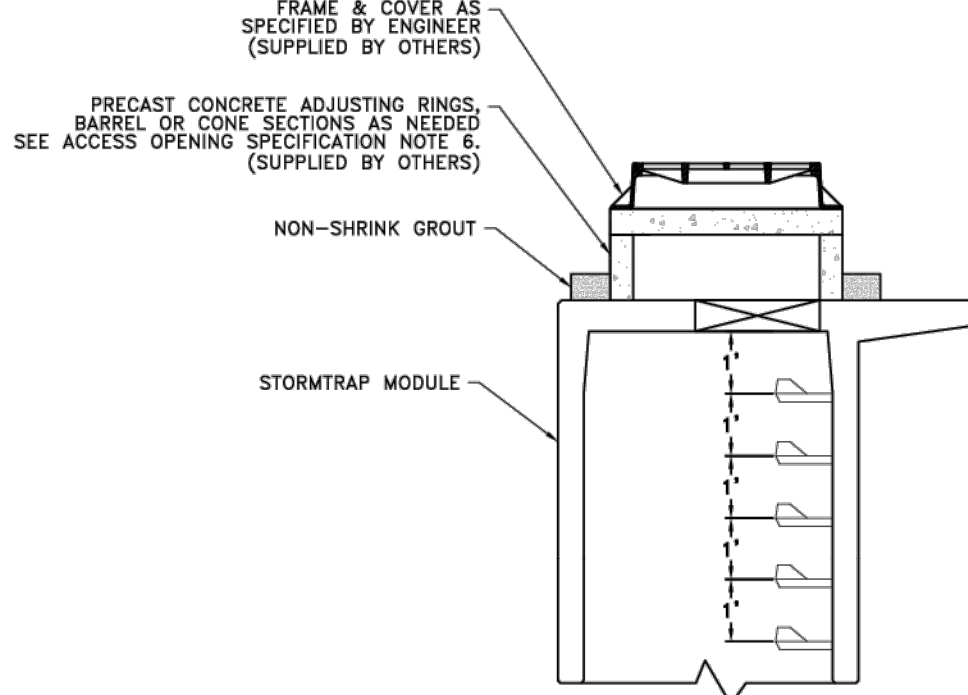
PIPE INSTALLATION INSTRUCTIONS

1. CLEAN AND LIGHTLY LUBRICATE ALL OF THE PIPE TO BE INSERTED INTO STORMTRAP.
2. IF PIPE IS CUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES. BEVEL AND LUBRICATE LEAD END OF PIPE.
3. ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

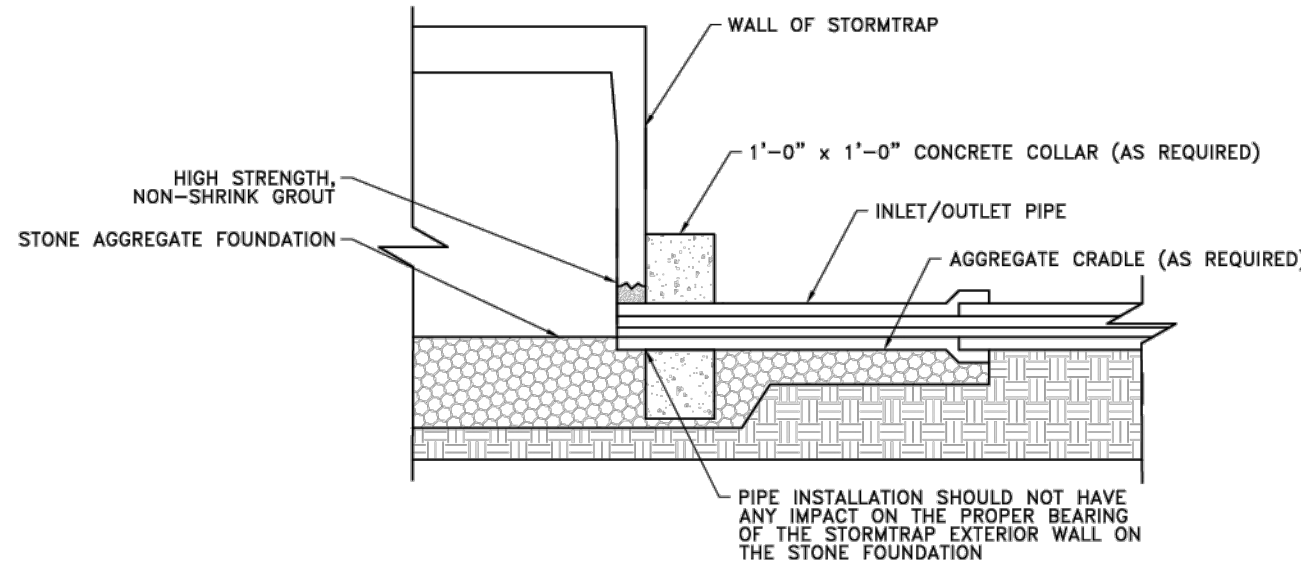
NOTE: ALL ANCILLARY PRODUCTS/SPECIFICATIONS RECOMMENDED AND SHOWN ON THIS SHEET INCLUDING BUT NOT LIMITED TO CONCRETE COLLARS, AGGREGATE CRADLES, GRADE RINGS, RISER SECTIONS, ETC., ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR AND/OR PER LOCAL MUNICIPAL CODE/REQUIREMENTS.



STEP DETAIL



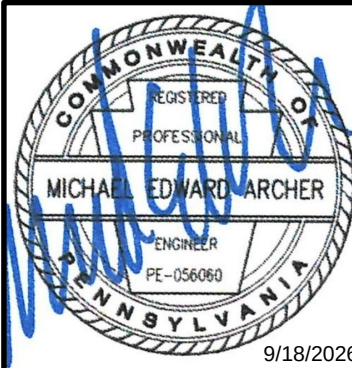
RISER/STAIR DETAIL



PIPE CONNECTION DETAIL
WHEN PIPE INVERT IS AT
INVERT OF STORMTRAP SYSTEM

DETAIL 11
SINGLETRAP PIPE/ACCESS OPENING SPECIFICATION

N.T.S.



POST CONSTRUCTION STORMWATER
MANAGEMENT DETAILS SUBSTATION

DATE: APRIL 2026 | DRAWN BY: VMF
DWG SCALE: AS SHOWN | CHECKED BY: BJH
PROJECT NO: 353-024
APPROVED BY: MEA

MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA



700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/04/2026	RESPONSE TO INCOMPLETENESS LETTER DATED 04/04/2026
2	04/16/2026	RESPONSE TO TECHNICAL DISCREPANCY LETTER DATED 07/16/2024
3	04/16/2026	RESPONSE TO TECHNICAL DISCREPANCY LETTER DATED 08/16/2024

ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF N.C., P.C. SERVICES IN FLUENT RFD WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF N.C., P.C. ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.

STRUCTURAL DESIGN LOADING CRITERIA	
LIVE LOADING: AASHTO HS-20 HIGHWAY LOADING	
GROUND WATER TABLE: BELOW LEVEL OF SYSTEM	
SOIL BEARING PRESSURE: 3000 PSF	
SOIL DENSITY: 120 PCF	
EQUIVALENT UNSATURATED	
LATERAL ACTIVE EARTH PRESSURE:	35 PSF / FT.
EQUIVALENT SATURATED	
LATERAL ACTIVE EARTH PRESSURE:	80 PSF/FT. (IF WATER TABLE PRESENT)
APPLICABLE CODES: ASTM C857	
ACI-318	
BACKFILL TYPE: SEE SHEET 4.0 FOR BACKFILL OPTIONS	

STORMTRAP SYSTEM INFORMATION		
UNIT HEADROOM:	6'-6" DOUBLETRAP	
WATER STORAGE PROV:	187.73	CUBIC FEET
TOTAL COMBINED STORAGE PROV:	11,202.38	CUBIC FEET

1. STORMWATER UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE CITY ENGINEER. CONTRACTOR SHALL SUBMIT TO LEAD AGENCY TESTING. OTHER SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 2.05' MAX. 3.90' CONSULT STORMTAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY, SHALL BE DETERMINED BY SUBMITTAL TO LEAD AGENCY TESTING.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW INVERT OF SYSTEM IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTAP.
5. SYSTEM DESIGN INTENT IS TO CONTAIN WATER AND / OR PREVENT GROUNDWATER MIGRATION INTO THE LEAKAGE ZONE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER-PROOFING SOLUTION. IF WATER-PROOFING IS REQUIRED FOR SEALING OF SYSTEM / MODULE JOINTS AND SEAMS. SOLUTION TO BE PROVIDED AND INSTALLED BY CONTRACTOR IN ACCORDANCE WITH THIRD PARTY WATER-PROOFING SUPPLIER'S PRODUCT SPECIFICATIONS.



1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL (4) CHAINS/CABLES ARE SECURED PROPERLY TO THE LIFTING ANCHORS AND IN EQUAL TENSION WHEN LIFTING THE STORMTAP MODULE.
2. MINIMUM 7"-Ø CHAIN/CABLE LENGTH TO BE USED TO LIFT STORMTAP MODULES (SUPPLIED BY CONTRACTOR).
3. CONTRACTOR TO ENSURE MINIMUM LIFTING ANGLE IS 60° FROM TOP SURFACE OF STORMTAP MODULE. SEE DETAIL.
4. IT IS UNDERSTOOD AND AGREED THAT AT ALL TIMES DURING WHICH HOISTING AND RIGGING EQUIPMENT IS BEING SUPPLIED TO THE PURCHASER, OPERATOR OF SUCH EQUIPMENT SHALL BE IN CHARGE OF THE ENTIRE EQUIPMENT AND SHALL AT ALL TIMES BE THE JUDGE OF THE SAFETY AND PROPERTY OF ANY SUGGESTION TO HIM FROM THE SELLER, THE AGENT OR EMPLOYEE OF THE SELLER OR THE AGENT OR EMPLOYEE OF THE PURCHASER. THE SELLER OR AGENT MAKES NO CLAIMS, DEMANDS OR CAUSES OF ACTION, WHICH MAY ARISE FROM THE EXISTENCE OR OPERATION OF SAID EQUIPMENT.

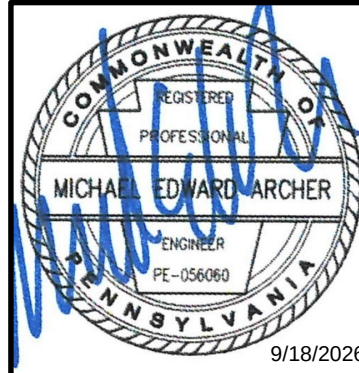
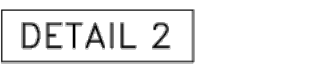


1. END PANELS SHALL BE SUPPLIED TO CLOSE OFF OPEN ENDS OF ROWS.
2. PANELS SHALL BE INSTALLED IN A TILT UP FASHION DIRECTLY ADJACENT TO OPEN END OF ROWS (REFER TO SHEET 2.0 FOR END PANEL LOCATIONS). SIDE WITH LIFTERS INDICATES OUTSIDE FACE.
3. CONNECTION HOOPS WILL BE SUPPLIED WITH END PANELS TO SECURELY CONNECT PANEL TO ADJACENT STORMTRAP MODULE (SEE PANEL CONNECTION ELEVATION VIEW).
4. ONCE CONNECTION HOOP IS ATTACHED, LIFTING CLUTCHES MAY BE REMOVED.
5. JOINT WRAP SHALL BE PLACED AROUND PERIMETER JOINT PANEL (SEE SHEET 3.2).



TAIL 14

1. STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891 (STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES). THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS ARE PROVIDED FOR THE STORMTRAP SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR FOLLOWING ASTM C891 IN ITS ENTIRETY AND IMPLEMENTING ALL APPROPRIATE MEASURES. THE INSTALLING CONTRACTOR OBTAINS AND IS RESPONSIBLE FOR THE STORMTRAP SYSTEM UPON REMOVAL OF THE MODULES FROM THE DELIVERY TRUCK THROUGH THE FINAL CONSTRUCTION. FINAL CONSTRUCTION IS ACHIEVED WHEN ALL MODULES ARE SET, FULLY BACKFILLED, AND WHEN FINAL FINISHED GRADES ARE REACHED. THE CONTRACTOR IS RESPONSIBLE FOR ANY COUNTERMEASURES NECESSARY TO RESIST UPLIFT/BUOYANCY BEFORE "FINAL CONSTRUCTION" IS ACHIEVED.
2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES.
3. STORMTRAP MODULES SHALL BE PLACED ON A LEVEL, 6" FOUNDATION OF 3" AGGREGATE EXTENDING 2'-0" PAST THE PERIMETER OF THE STORMTRAP. (SEE DETAIL 1.) AND SHALL BE PLACED ON PROPERLY COMPACTED SOILS (SEE SHEET 1.2 FOR SOIL BEARING CAPACITY REQUIREMENTS), AND IN ACCORDANCE WITH ASTM C891 STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES.
4. THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADJACENT MODULES DOES NOT EXCEED 3" (SEE DETAIL 2.) IF THE SPACE EXCEEDS 3", THE MODULES SHALL BE RESET WITH APPROPRIATE ADJUSTMENTS TO LINE AND GRADE TO BRING THE SPACE INTO SPECIFICATION.
5. STORMTRAP MODULES ARE NOT WATERTIGHT. IF A WATERTIGHT SOLUTION IS REQUIRED, CONTACT STORMTRAP FOR RECOMMENDATIONS. THE WATERTIGHT APPLICATION IS TO BE PROVIDED AND IMPLEMENTED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE SELECTED WATERTIGHT SOLUTION PERFORMS AS SPECIFIED BY THE MANUFACTURER.
6. THE HORIZONTAL JOINT PLANE BETWEEN THE TOP AND BASE LEG CONNECTIONS OF ALL PERIMETER STORMTRAP MODULES SHALL BE SEALED USING MAXIMUM TAPE ACCORDING TO ASTM C891, 8.8 AND 6.12. (SEE DETAIL 3.) THE MASTIC JOINT TAPE DOES NOT PROVIDE A WATERTIGHT SEAL.
7. ALL EXTERIOR ROOF AND EXTERIOR VERTICAL WALL JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH 8" WIDE PRE-FORMED, COLD-APPLIED, SELF-ADHERING ELASTOMERIC RESIN, BONDED TO A WOVEN, HIGHLY PUNCTURE-RESISTANT POLYMER FABRIC, CONFORMING TO ASTM C891 AND SHALL BE INTEGRATED WITH PRIMER TO PROVIDE AN IMPROVED JOINT SEAL. (SEE DETAIL 4.) THE JOINT WRAP SHALL BE APPLIED TO THE WATERTIGHT SEAL. THE SOLE PURPOSE OF THE JOINT WRAP IS TO PROVIDE A SILT AND SOIL TIGHT SYSTEM. THE ADHESIVE EXTERIOR JOINT WRAP SHALL BE INSTALLED ACCORDING TO THE FOLLOWING INSTALLATION INSTRUCTIONS:
 - 7.1. USE A BRUSH OR WET CLOTH TO THOROUGHLY CLEAN THE OUTSIDE SURFACE AT THE JOINT WHERE JOINT WRAP IS TO BE APPLIED.
 - 7.2. A RELEASE PAPER PROTECTS THE ADHESIVE SIDE OF THE JOINT WRAP. PLACE THE ADHESIVE TAPE (ADHESIVE SIDE DOWN) ALONG THE STRUCTURE, REMOVING THE RELEASE PAPER AS YOU GO. PRESS THE JOINT WRAP FIRMLY AGAINST THE STORMTRAP MODULES SURFACE WHEN APPLYING.
 - 7.3. IF THE CONTRACTOR NEEDS TO CANCEL ANY SHIPMENTS, THEY MUST DO SO 48 HOURS BEFORE THEIR SCHEDULED ARRIVAL AT THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE PROJECT MANAGER.
 - 7.4. IF THE STORMTRAP MODULE(S) IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND TO DETERMINE WHETHER OR NOT THE MODULE(S) WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT; CONTACT STORMTRAP IMMEDIATELY... ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
10. STORMTRAP MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP.



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Civil & Environmental
Consultants, Inc.

**MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA**

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS SUBSTATION

DRAWING NO.

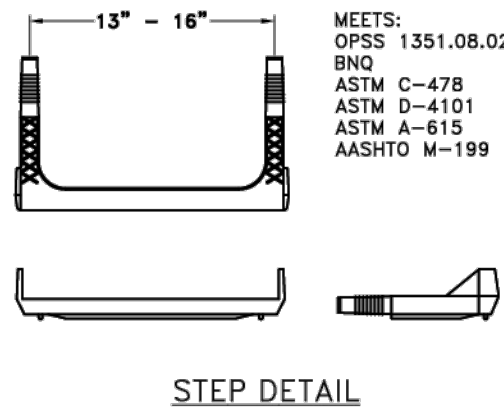
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SHEET 12 OF 22

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ACCESS OPENING SPECIFICATION

- A TYPICAL ACCESS OPENING FOR THE STORMTRAP SYSTEM ARE 2'-0" IN DIAMETER. ACCESS OPENINGS LARGER THAN 4'-0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL OPENINGS MUST RETAIN AT LEAST 2'-0" OF CLEARANCE FROM THE END OF THE STORMTRAP MODULE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED ON INSIDE LEG UNLESS OTHERWISE SPECIFIED. SEE SHEET 2.0 FOR SIZES AND LOCATIONS.
- UNLESS OTHERWISE SPECIFIED, PLASTIC COATED STEPS ARE PROVIDED INSIDE ANY MODULE WHERE DEEMED NECESSARY. THE HIGHEST STEP IN THE MODULE IS TO BE PLACED A DISTANCE OF 1'-0" FROM THE INSIDE EDGE OF THE STORMTRAP MODULES. ALL ENSUING STEPS SHALL BE PLACED AT A DISTANCE BETWEEN 10" MIN AND 14" MAX BETWEEN THEM. STEPS MAY BE MOVED OR ALTERED TO AVOID OPENINGS OR OTHER IRREGULARITIES IN THE MODULE.
- STORMTRAP LIFTING INSERTS MAY BE RELOCATED TO AVOID INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
- STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO AVOID INTERFERENCE WITH INLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
- ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
- USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHERS)



STEP DETAIL

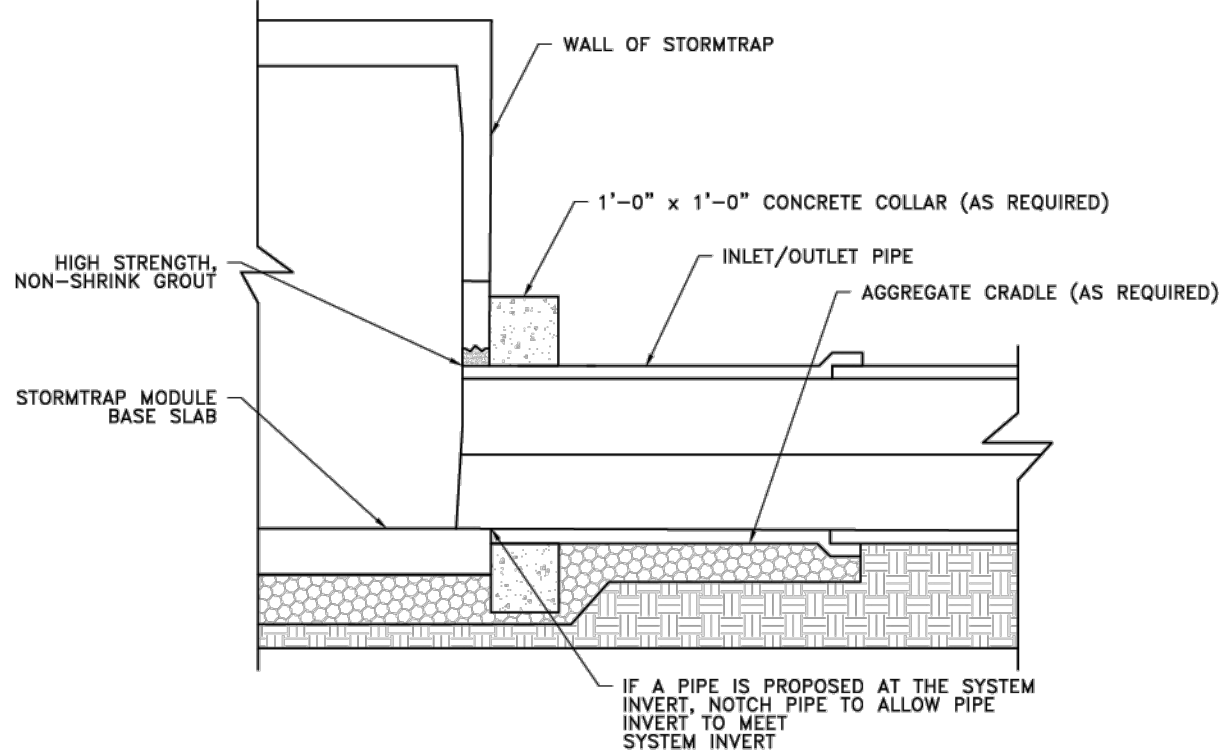
PIPE OPENING SPECIFICATION

- MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0".
- CONNECTING PIPES MAY BE INSTALLED WITH A 1'-0" CONCRETE COLLAR (AND AN AGGREGATE CRADLE (AS REQUIRED) FOR AT LEAST ONE PIPE LENGTH (SEE PIPE CONNECTION DETAIL). A STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MAY BE USED.
- THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

PIPE INSTALLATION INSTRUCTIONS

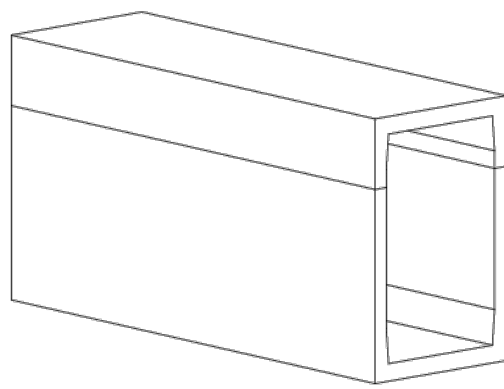
- CLEAN AND LIGHTLY LUBRICATE ALL OF THE PIPE TO BE INSERTED INTO STORMTRAP.
- IF PIPE IS CUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES, BEVEL AND LUBRICATE LEAD END OF PIPE.
- ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

NOTE: ALL ANCILLARY PRODUCTS/SPECIFICATIONS RECOMMENDED AND SHOWN ON THIS SHEET INCLUDING BUT NOT LIMITED TO CONCRETE COLLARS, AGGREGATE CRADLES, GRADE RINGS, RISER SECTIONS, ETC., ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR AND/OR PER LOCAL MUNICIPAL CODE/REQUIREMENTS.



NOTCHED PIPE CONNECTION DETAIL
WHEN PIPE INVERT IS AT
INVERT OF STORMTRAP SYSTEM

DETAIL 15
DOUBLETRAP PIPE/ACCESS OPENING SPECIFICATION
N.T.S.



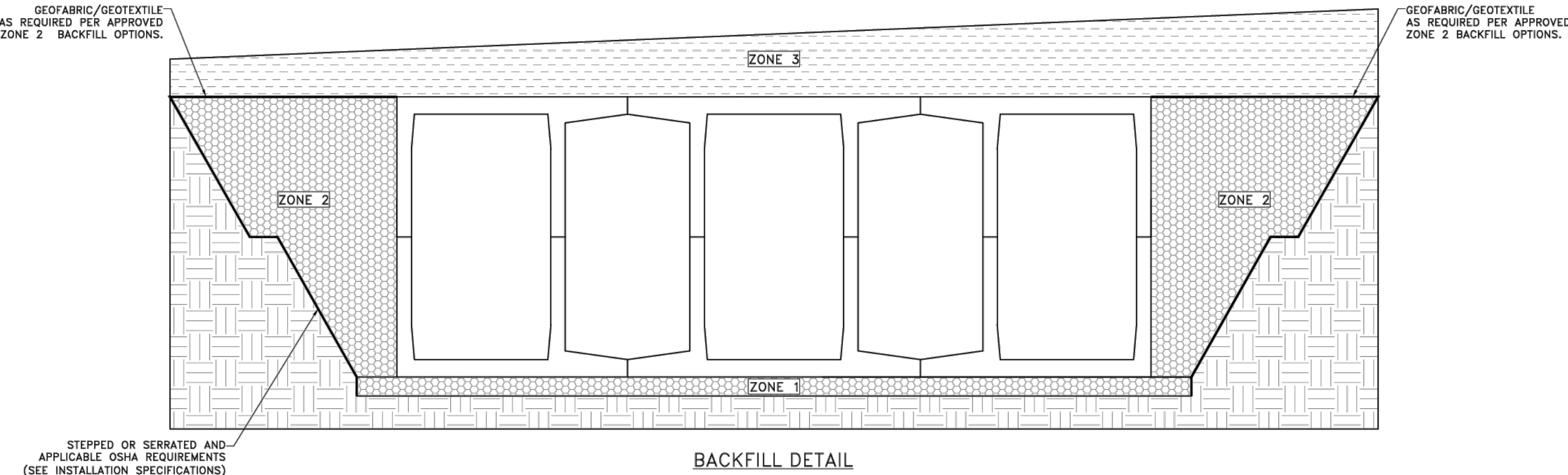
6'-6" DOUBLETRAP
TYPE VII

- NOTES:
- OPENING LOCATIONS AND SHAPES MAY VARY.
 - SP - INDICATES A MODULE WITH MODIFICATIONS.
 - P - INDICATES A MODULE WITH A PANEL ATTACHMENT.
 - POCKET WINDOW OPENINGS ARE OPTIONAL.

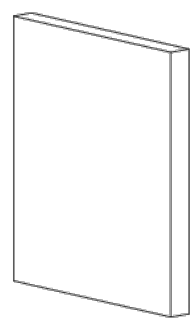
DETAIL 17
DOUBLETRAP MODULE TYPES
N.T.S.

ZONE CHART		
ZONES	ZONE DESCRIPTIONS	REMARKS
ZONE 1	FOUNDATION AGGREGATE	#5 (1") STONE ANGULAR AGGREGATE (SEE NOTE 4)
ZONE 2	BACKFILL	UNIFIED SOILS CLASSIFICATION (GW, GP, SW, SP) OR SEE BELOW FOR APPROVED BACKFILL OPTIONS
ZONE 3	FINAL COVER OVERTOP	MATERIALS NOT TO EXCEED 120 PCF

APPROVED ZONE 2 BACKFILL OPTIONS	
OPTION	REMARKS
1" STONE AGGREGATE	THE STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING ANGULAR MATERIAL. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOTEXTILE AROUND THE PERIMETER OF THE BACKFILL (ASTM SIZE #97) AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
SAND	IMPORTED PURE SAND IS PERMITTED TO BE USED AS BACKFILL IF IT IS CLEAN AND FREE DRAINING. THE SAND USED FOR BACKFILLING SHALL HAVE LESS THAN 40% PASSING #40 SIEVE AND LESS THAN 5% PASSING #200 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOTEXTILE AROUND THE PERIMETER OF THE SAND BACKFILL.
CRUSHED CONCRETE AGGREGATE	CLEAN, FREE DRAINING CRUSHED CONCRETE AGGREGATE MATERIAL CAN BE USED AS BACKFILL FOR STORMTRAP'S MODULES. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOTEXTILE AROUND THE PERIMETER OF THE BACKFILL.
ROAD PACK	STONE AGGREGATE 100% PASSING THE 1-1/2" SIEVE WITH LESS THAN 12% PASSING THE #200 SIEVE (ASTM SIZE #487). GEOTEXTILE AS PER GEOTECHNICAL ENGINEER RECOMMENDATION.



DETAIL 16
DOUBLETRAP BACKFILL SPECIFICATION
N.T.S.



6'-6" DOUBLETRAP
TYPE IV END PANEL



6'-6" DOUBLETRAP
TYPE VII END PANEL

STORMTRAP ZONE INSTALLATION SPECIFICATION/PROCEDURE

- THE FILL PLACED AROUND THE STORMTRAP MODULES MUST BE DEPOSITED ON BOTH SIDES AT THE SAME TIME AND TO APPROXIMATELY THE SAME ELEVATION. AT NO TIME SHALL THE FILL BEHIND ONE SIDE WALL BE MORE THAN 2'-0" HIGHER THAN THE FILL ON THE OPPOSITE SIDE. BACKFILL SHALL EITHER BE COMPACTED AND/OR VIBRATED TO ENSURE THAT BACKFILL AGGREGATE/STONE MATERIAL IS WELL SEATED AND PROPERLY INTER LOCKED. CARE SHALL BE TAKEN TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE, AND ALL SLOPES WITHIN THE AREA TO BE BACKFILLED MUST BE STEPPED OR SERRATED TO PREVENT WEDGING ACTION. CARE SHALL ALSO BE TAKEN AS NOT TO DISRUPT THE JOINT WRAP FROM THE JOINT DURING THE BACKFILL PROCESS. BACKFILL MUST BE FREE-DRAINING MATERIAL. SEE ZONE 2 BACKFILL CHART ON THIS PAGE FOR APPROVED BACKFILL OPTIONS. IF NATIVE EARTH IS SUSCEPTIBLE TO MIGRATION, CONFIRM WITH GEOTECHNICAL ENGINEER AND PROVIDE PROTECTION AS REQUIRED (PROVIDED BY OTHERS). ALL MODULES MUST BE SET AND ALL SIDES MUST BE FULLY BACKFILLED BEFORE TRAVEL OVERTOP THE SYSTEM IS PERMITTED. SEE NOTE 2 FOR EXCEPTIONS AND LIMITATIONS.
- THE FILL PLACED OVERTOP THE SYSTEM SHALL BE PLACED IN MINIMUM 6" LIFTS. AT NO TIME SHALL MACHINERY OR VEHICLES GREATER THAN THE DESIGN LIVE LOAD LISTED ON SHEET 1.1 TRAVEL OVERTOP THE SYSTEM. IF TRAVEL OVER THE SYSTEM OCCURS BEFORE THE MINIMUM DESIGN COVER IS ACHIEVED, IT MAY BE NECESSARY TO REDUCE THE ULTIMATE LOAD/BURDEN OF THE OPERATING MACHINERY SO AS TO NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM. VEHICLES AND MACHINERY USED TO PLACE FILL MATERIAL ON TOP OF THE SYSTEM SHALL TRAVEL PARALLEL TO THE LONGITUDINAL AXIS OF THE STORMTRAP MODULES WHENEVER POSSIBLE.
- THE VIBRATORY FUNCTION OF ANY ROLLER, COMPACTOR, VEHICLE, ETC. SHALL NOT BE USED OVERTOP THE SYSTEM WITHOUT PRIOR APPROVAL FROM STORMTRAP. IN SOME CASES, HAND COMPACTION MAY BE NECESSARY TO ENSURE THAT THE ALLOWABLE DESIGN LOADING IS NOT EXCEEDED.
- STONE AGGREGATE FOUNDATION IN ZONE 1 IS FOR LEVELING PURPOSES.

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/10/2026	RESPONSE TO TECHNICAL DEPENDENCY LETTER DATED 07/16/2024
2	04/10/2026	RESPONSE TO TECHNICAL DEPENDENCY LETTER DATED 07/16/2024
3	04/10/2026	RESPONSE TO TECHNICAL DEPENDENCY LETTER DATED 07/16/2024

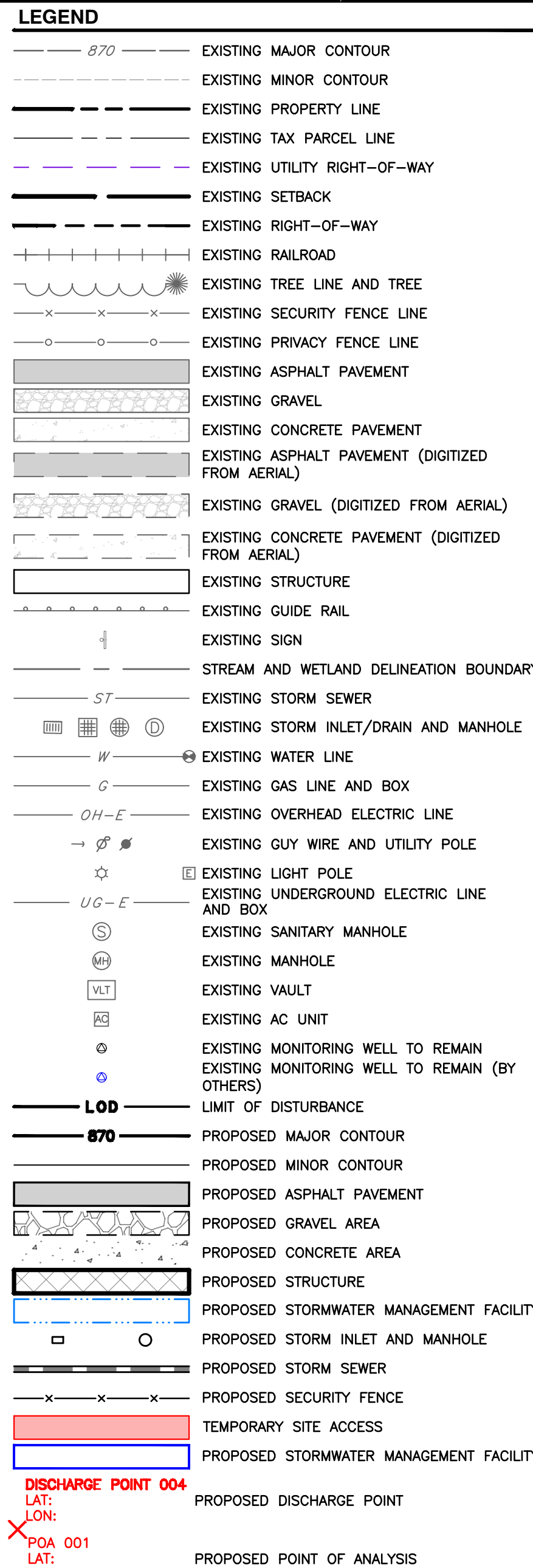
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

**Civil & Environmental
Consultants, Inc.**

MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA

POST CONSTRUCTION STORMWATER
MANAGEMENT DETAILS SUBSTATION
DRAWING NO: **C406**
SHEET 13 OF 22

DATE:	APRIL 2026	DRAWN BY:	VMF
DWG SCALE:	AS SHOWN	CHECKED BY:	BJH
PROJECT NO:	353-024	APPROVED BY:	MEA



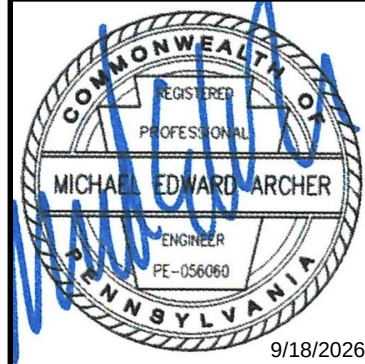
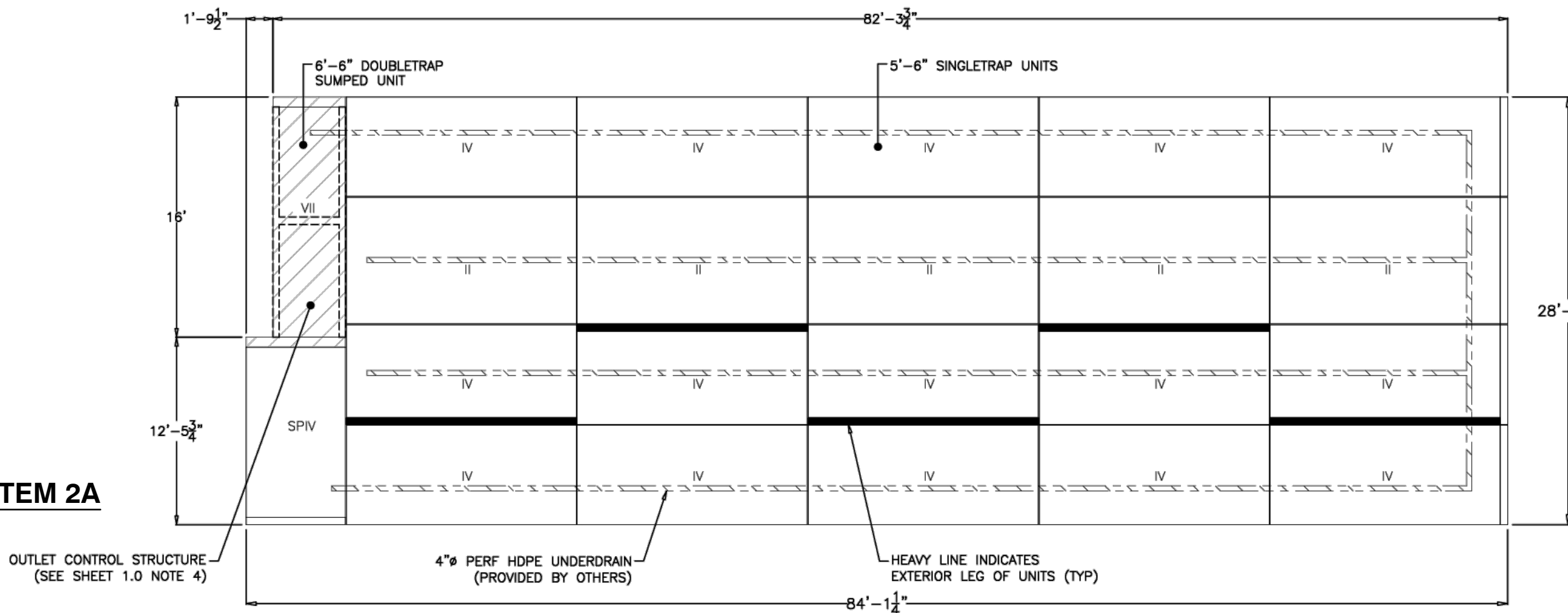
BILL OF MATERIALS					
QTY.	UNIT	DESCRIPTION	TOP WEIGHT	BASE WEIGHT	
0	I	6"-6" DOUBLET RAP	-	-	
0	II	6"-6" DOUBLET RAP	-	-	
0	III	6"-6" DOUBLET RAP	-	-	
0	IV	6"-6" DOUBLET RAP	-	-	
2	V	6"-6" DOUBLET RAP	8615	15323	
0	VII-1	6"-6" DOUBLET RAP	-	-	
0	VII-2	6"-6" DOUBLET RAP	-	-	
0	VII-3	6"-6" DOUBLET RAP	-	-	
0	VII-4	6"-6" DOUBLET RAP	-	-	
0	SPIII	6"-6" DOUBLET RAP	VARIES	VARIES	
0	SPV	6"-6" DOUBLET RAP	VARIES	VARIES	
0	T2	PANEL 8" THICK PANEL	-	-	
1	T4	PANEL 8" THICK PANEL	4969		
1	T7	PANEL 8" THICK PANEL	3625		
1	J	JOINT RAP150' PER ROLL			
8	J	JOINT TAPE14.5' PER ROLL			
TOTAL PRECES = 2					
TOTAL PANELS = 2					
HEAVIEST PICK WEIGHT = 15,323					

GENERAL NOTES:

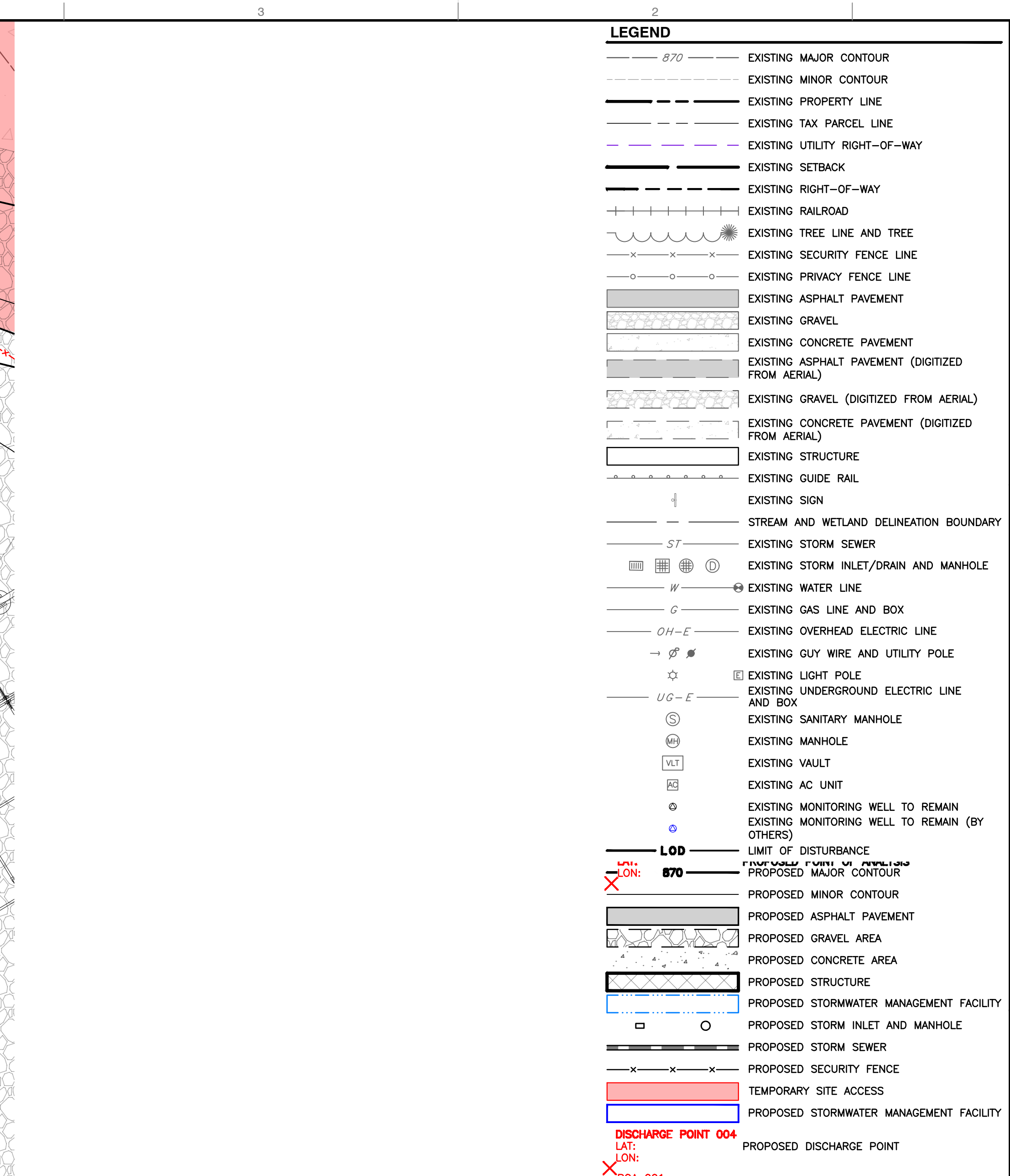
1. **STRUCTURE PROXIMITY LOADING DISCLAIMER:**
 STORMTRAP MODULES AND FOUNDATION ARE NOT DESIGNED TO ACCEPT ANY ADDITIONAL LOADING FROM ANY NEARBY STRUCTURES NEXT TO OR OVER THE TOP OF STORMTRAP. EXAMPLES OF NEARBY STRUCTURES MAY INCLUDE, BUT ARE NOT LIMITED TO BUILDINGS, FOUNDATION ELEMENTS, RETAINING WALLS, LIGHT POLES, BOLLARDS, SIGNPOSTS, FENCES. ADDITIONALLY, STORMTRAP IS NOT RESPONSIBLE FOR INSTALLATION CONFLICTS ARISING FROM ANY OF THESE NEARBY STRUCTURES. IF ADDITIONAL LOADING CONSIDERATIONS ARE REQUIRED FOR STRUCTURAL DESIGN OF STORMTRAP, PLEASE CONTACT STORMTRAP IMMEDIATELY. FOR LIGHT POLES SHOWN OVER THE TOP OF THE SYSTEM, STORMTRAP WILL PROVIDE A 5'-0" LATERAL DISTANCE CAVITY AROUND THE LIGHT POLE TO ACCOMMODATE IT. THE EOR TO TAKE RESPONSIBILITY FOR ENSURING THE LIGHT POLE IS NOT INFLECTING ANY LOADING ON THE STORMTRAP MODULES AND FOUNDATION.
2. **TREE LOADING DISCLAIMER:**
 THE NUMBER OF TREES OR WEIGHT OF TOTAL PLANT MATERIAL PRESENT ON TOP OF A SINGLE STORMTRAP MODULE SHALL NOT EXCEED 16,000 LBS. THE REQUIREMENTS LISTED HERE APPLY AT BOTH THE TIME OF INSTALLATION AND FOR THE LIFE OF THE TREES AND PLANTS IN QUESTION. THE EOR AND LANDSCAPE ARCHITECT ARE RESPONSIBLE FOR ENSURING THAT TREE AND OTHER PLANT ROOTS DO NOT INTERFERE WITH OR COMPROMISE THE FUNCTIONAL AND STRUCTURAL INTEGRITY OF STORMTRAP'S UNDERGROUND MODULES. APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ROOT GROWTH INTO THE STORMTRAP SYSTEM FROM ADJACENT OR OVERHEAD TREES. FURTHERMORE, THE ROOTS OF THE TREES MUST BE CONTAINED TO PREVENT FUTURE DAMAGE TO THE STORMTRAP SYSTEM. STORMTRAP ACCEPTS NO LIABILITY FOR DAMAGES CAUSED BY TREES OR OTHER VEGETATION PLACED AROUND OR ON TOP OF THE SYSTEM.
3. **PRE-TREATMENT/SEDIMENT/FILTER CHAMBER DISCLAIMER:**
 FOR SYSTEMS CONTAINING PRE-TREATMENT, SEDIMENTATION AND/OR FILTER CHAMBERS; IF REQUIRED TO BE SEALED TO PREVENT SAND AND/OR PRE-TREATED WATER FROM MIGRATING INTO ADJOINING MODULES, IT IS THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT THOSE MODULES ARE SEALED.
4. **OUTLET CONTROL STRUCTURE DISCLAIMER (IF SHOWN ON THESE PLANS):**
 IF A WATERTIGHT SOLUTION IS REQUIRED FOR AN OUTLET CONTROL STRUCTURE, ALL EXTERIOR COLD JOINTS, INCLUDING JOINT BETWEEN TOP AND BASE MODULES, BETWEEN TOP AND BASE OF ADJOINING SYMONS WALLS, AND JOINTS BETWEEN MODULES AND ADJACENT END PANELS WILL BE THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO PROVIDE AND INSTALL THE WATERTIGHT APPLICATION PER THE EOR'S SPECIFICATION.

REFERENCES

1. EXISTING SITE FEATURES AND UTILITIES ARE BASED ON A COMBINATION OF SURVEY PERFORMED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) DATED 07-14-2025 THROUGH 10-22-2025 AND ALTA SURVEY COMPLETED 10-30-2025 BY CEC.
2. PLAN NORTH IS BASED ON PENNSYLVANIA STATE PLAN NAD83-2011, NORTH ZONE, AS DETERMINED BY CEC USING SURVEY GRADE GPS MEASUREMENTS AND OPUS POST-PROCESSING.
3. VERTICAL DATUM IS BASED ON NAVD83 (GEOID 18), AS DETERMINED BY CEC USING SURVEY GRADE GPS MEASUREMENTS AND OPUS POST-PROCESSING.
4. STREAM AND WETLAND DELINEATION PERFORMED BY CEC ON 07-11-2025.
5. PROPERTY IS LOCATED IN FLOOD ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS DEPICTED ON FLOOD INSURANCE RATE MAP 4208SC0307D, EFFECTIVE DATE 06-09-2014, MERCER COUNTY COUNTY, PENNSYLVANIA. THIS STATEMENT DOES NOT GUARANTEE THAT THE SUBJECT PROPERTY WILL OR WILL NOT FLOOD.
6. EXISTING CONTOURS ARE DERIVED FROM PENNSYLVANIA SPATIAL DATA COMMISSION (PASDA) 2 AND 10 STATEMENTS DATED 2006-2008.
7. SUBSTATION LAYOUT PROVIDED BY ASPHLUND ENGINEERING SERVICES ON 02-04-2026.
8. AIR PHOTOGRAPHY PER MERCER COUNTY 10 MAP PREPARED BY THE PADOT DATED 2024.
9. AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH, ACCESS THROUGH FROM PLEX EARTH ON 01/28/2026. DATE OF PHOTOGRAPHY 10-02-2024.
10. APPROXIMATE GROUND WATER MONITORING WELL LOCATIONS ARE BASED ON THE DIGITIZATION OF AN EXHIBIT ISSUED BY ENVIRONMENTAL PROTECTION AGENCY AND FIELD SURVEY BY CEC IF ABOVE GROUND EVIDENCE WAS OBSERVED AND SHOULD NOT BE CONSIDERED ACCURATE.



DRAWING NO.: C407		POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS SUBSTATION		MERCER NODE PROPERTY, LLC MERCER NODE DEVELOPMENT 200 CLARK STREET CITY OF SHARON MERCER COUNTY, PA		 Civil & Environmental Consultants, Inc.		700 Cherrington Parkway Moon Township, PA 15108 Ph: 412.429.2324 · 800.365.2324 www.cecinc.com		<table><thead><tr><th colspan="3">REVISION RECORD</th></tr><tr><th>NO.</th><th>DATE</th><th>DESCRIPTION</th></tr></thead><tbody><tr><td>△</td><td>06/10/2006</td><td>RESPONSE TO ACHIEVE FIRMNESS LETTER DATED 06/06/2006</td></tr><tr><td>△</td><td>06/14/2006</td><td>RESPONSE TO ACHIEVE FIRMNESS LETTER DATED 06/06/2006</td></tr><tr><td>△</td><td>06/14/2006</td><td>RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 07/10/2006</td></tr><tr><td>△</td><td>06/15/2006</td><td>RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 06/10/2006</td></tr></tbody></table> ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF INC., PLLC. SERVICES IN PUERTO RICO WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF INC., PLLC. SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.		REVISION RECORD			NO.	DATE	DESCRIPTION	△	06/10/2006	RESPONSE TO ACHIEVE FIRMNESS LETTER DATED 06/06/2006	△	06/14/2006	RESPONSE TO ACHIEVE FIRMNESS LETTER DATED 06/06/2006	△	06/14/2006	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 07/10/2006	△	06/15/2006	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 06/10/2006
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BILL OF MATERIALS					
QTY.	UNIT	DESCRIPTION	TOP WEIGHT	BASE WEIGHT	
0	I	6'-6" DOUBLETAP	—	—	
0	II	6'-6" DOUBLETAP	—	—	
0	III	6'-6" DOUBLETAP	—	—	
0	IV	6'-6" DOUBLETAP	—	—	
2	VII	6'-6" DOUBLETAP	8615	15323	
0	VII-1	6'-6" DOUBLETAP	—	—	
0	VII-2	6'-6" DOUBLETAP	—	—	
0	VII-3	6'-6" DOUBLETAP	—	—	
0	VII-4	6'-6" DOUBLETAP	—	—	
0	SPIII	6'-6" DOUBLETAP	VARIABLES	VARIABLES	
0	SPV	6'-6" DOUBLETAP	VARIABLES	VARIABLES	
0	T2	Panel 8" THICK PANEL	—	—	
1	14	Panel 8" THICK PANEL	4969	—	
1	17	Panel 8" THICK PANEL	3625	—	
1	JOINT	WRAPO' PER ROLL	—	—	
8	JOINT	14.5' PER ROLL	—	—	
TOTAL PRECS = 2					
TOTAL PANELS = 2					
HEAVIEST PICK WEIGHT = 15,323					

NOTES:

1. DIMENSIONING OF STORMSTRAP SYSTEM SHOWN BELOW ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
2. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
3. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.
4. SP - INDICATES A MODULE WITH MODIFICATIONS.
5. P - INDICATES A MODULE WITH A PANEL ATTACHMENT.
6. CONTRACTORS RESPONSIBILITY TO ENSURE CORRECTNESS/ACCURACY TO FINAL ENGINEER OF RECORD PLAN SET.
7. IN ORDER FOR STORMSTRAP TO BE USED FOR EROSION CONTROL, EROSION CONTROL, CIVIL ENGINEERING DRAWINGS MUST BE PROVIDED TO STORMSTRAP AND SHALL INCLUDE ALL PIPE SIZES, PIPE MATERIAL, PIPE INVERT ELEVATIONS, ACCESS OPENING SIZE AND SHAPE. IN ADDITION, FINAL GRADING PLANS SHALL ALSO INCLUDE MINIMUM AND MAXIMUM GRADES OVER THE TOP OF THE STORMSTRAP SYSTEM.

3. **STRUCTURE PROXIMITY LOADING DISCLAIMER:**

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4. **TREE LOADING DISCLAIMER:**

THE NUMBER OF TREES OR WEIGHT OF TOTAL PLANT MATERIAL PRESENT ON TOP OF A SINGLE STORMTRAP MODULE SHALL NOT EXCEED 16,000 LBS. THE REQUIREMENTS LISTED HERE APPLY AT BOTH THE TIME OF INSTALLATION AND FOR THE LIFE OF THE TREES AND PLANTS IN QUESTION. THE EOR AND LANDSCAPE ARCHITECT ARE RESPONSIBLE FOR ENSURING THAT TREE AND OTHER PLANT ROOTS DO NOT INTERFERE WITH OR COMPROMISE THE FUNCTIONAL AND STRUCTURAL INTEGRITY OF STORMTRAP'S UNDERGROUND MODULES. APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ROOT GROWTH INTO THE STORMTRAP SYSTEM FROM ADJACENT OR OVERHEAD TREES. FURTHERMORE, THE ROOTS OF THE TREES MUST BE CONTAINED TO PREVENT FUTURE DAMAGE TO THE STORMTRAP SYSTEM. STORMTRAP ACCEPTS NO LIABILITY FOR DAMAGES CAUSED BY TREES OR OTHER VEGETATION PLACED AROUND OR ON TOP OF THE SYSTEM.

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6. **OUTLET CONTROL STRUCTURE DISCLAIMER (IF SHOWN ON THESE PLANS):**

IF A WATERTIGHT SOLUTION IS REQUIRED FOR AN OUTLET CONTROL STRUCTURE, ALL EXTERIOR COLD JOINTS, INCLUDING JOINT BETWEEN TOP AND BASE MODULES, BETWEEN TOP AND BASE OF ADJOINING SYMONS WALLS, AND JOINTS BETWEEN MODULE AND ADJACENT END PANELS WILL BE THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO PROVIDE AND INSTALL THE WATERTIGHT APPLICATION PER THE EOR'S SPECIFICATION.

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3. VERTICAL DATUM IS BASED ON NAVD83 (EPOCH 18), AS DETERMINED BY CEC USING SURVEY GRADE GPS MEASUREMENTS AND OPUS POST-PROCESSING.
4. STREAM AND WETLAND DELINEATION PERFORMED BY CEC ON 07-11-2025.
5. FLOOD RISK MAP (FLOOD INSURANCE RATE MAP) IS BASED ON FEMA (FLOOD INSURANCE HAZARD) AS DEPICTED ON FLOOD INSURANCE RATE MAP 4208SC0307D, EFFECTIVE DATE 06-09-2014, MERCER COUNTY COUNTY, PENNSYLVANIA. THIS STATEMENT DOES NOT GUARANTEE THAT THE SUBJECT PROPERTY WILL OR WILL NOT FLOOD.
6. EXISTING CONTOURS ARE DERIVED FROM PENNSYLVANIA SPATIAL DATA ACCESS (PSDA) 2 AND 10 CONTOURS DATED 2006-2008.
7. SUBSTATION LAUNCH PROVIDED BY ASP/LINDBH ENGINEERING SERVICES ON 02-4-2026.
8. CLARK STREET IS A PADOT STREET PER MERCER COUNTY 10 MAP PREPARED BY THE PADOT DATED 2024.
9. AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH. ACCESS THROUGH PLEX EARTH ON 01/26/2026. DATE OF PHOTOGRAPHY 10-02-2024.
10. APPROXIMATE GROUND WATER MONITORING WELL LOCATIONS ARE BASED ON THE DIGITIZATION OF AN EXHIBIT ISSUED BY THE COUNTY OF JOSEPH AND FIELD SURVEY BY CEC IF ABOVE GROUND EVIDENCE WAS OBSERVED AND SHOULD NOT BE CONSIDERED ACCURATE.

84'-1 1/4"

28'-0"

1'-9 1/4"

82'-3 3/4"

4" PERF HOPE UNDERDRAIN (PROVIDED BY OTHERS)

HEAVY LINE INDICATES EXTERIOR LEG OF UNITS (TYP)

SPV

6'-6" DOUBLETRAP SUMPED UNIT

6'-6" SINGLETRAP UNITS

IV

II

VII

NOTE 4)



POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS SUBSTATION		MERCER NODE PROPERTY, LLC MERCER NODE DEVELOPMENT 200 CLARK STREET CITY OF SHARON MERCER COUNTY, PA		 Civil & Environmental Consultants, Inc.		700 Cherrington Parkway Moon Township, PA 15108 Ph. 412.429.2324 • 800.365.2324 www.cecinc.com		REVISION RECORD	
NO	DATE	DESCRIPTION							
1	06/03/2006	RESPONSE TO INCOMPLETENESS LETTER DATED 06/04/2006.							
2	09/14/2007	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 07/10/2006.							
3	09/18/2007	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 09/10/2006.							
ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF INC., P.L.L.C. SERVICES IN PIERTO RICO WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF INC., P.L.L.C. ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, L.L.C.									

SHEET **15** OF **25**

C408

DRAWING NO.:

A:\300-0001\300-0001-C400\Draw\DWG\DWG1\300004-C401-C401-PCSM Notes and Details.dwg[c409] LS:07/14/2026 - mwhelling - LF: 9/16/2026 11:01 AM

POST CONSTRUCTION STORMWATER MANAGEMENT NOTES

- DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO EDGE OF STRUCTURE, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
- ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
- ANY WORK PERFORMED IN THE LOCAL OR STATE RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
- STORM PIPE MATERIAL OPTIONS ARE AS SHOWN ON THE DESIGN PLANS. ALL INLETS ARE TO BE PADOT TYPE M OR TYPE M MODIFIED INLETS UNLESS OTHERWISE SPECIFIED. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL FOR ALL INLETS, MANHOLES, YARD DRAINS AND ENDWALLS.
- BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THEY ARE NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
- APPROVAL OF A STORMWATER MANAGEMENT PLAN BY THE CITY SHALL NOT BE CONSTRUED AS AN INDICATION THAT SAID PLAN COMPLIES WITH THE REQUIREMENTS, LAWS, OR STANDARDS OF ANY AGENCY OF THE COMMONWEALTH WHICH MAY OR MAY NOT GOVERN SAID ACTIVITY.
- A LICENSED PROFESSIONAL OR THEIR DESIGNEE MUST BE PRESENT ON SITE DURING INSTALLATION OF THE STORMWATER MANAGEMENT CONTROLS (SCMS).
- IT SHALL BE UNLAWFUL TO ALTER OR REMOVE ANY PERMANENT STORMWATER SCM REQUIRED BY AN APPROVED STORMWATER MANAGEMENT PLAN, OR ALLOW THE PROPERTY TO REMAIN IN A CONDITION WHICH DOES NOT CONFORM TO AN APPROVED STORMWATER MANAGEMENT PLAN, UNLESS THE BOROUGH GRANTS AN EXCEPTION IN WRITING.
- INSTALL CONSTRUCTION FENCE AND 12" SILT SOCK AROUND THE PROPOSED SCMS PRIOR TO THE START OF CONSTRUCTION. THE SCMS SHALL BE PROTECTED FROM SEDIMENT LADEN RUNOFF DURING CONSTRUCTION.
- CONSTRUCTION WASTES ARE NOT ANTICIPATED ON SITE. PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH AND/OR FROM THE PROJECT SITE AND POST CONSTRUCTION STORMWATER MANAGEMENT BMPS WILL BE UNDERTAKEN IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTIONS, TITLE 25, CHAPTER 102.8 (F)(11).
- REFER TO THE PHASE 1 ESA FOR INFORMATION PERTAINING TO SITE CONTAMINATION.
- CONTRACTOR IS TO PROTECT ALL VEGETATION, STREAMS, AND WETLANDS THAT ARE OUTSIDE THE DETERMINED LIMIT OF DISTURBANCE AND LIMIT LAND CLEARING AND GRADING TO AREAS NECESSARY TO COMPLETE PROPOSED SITE IMPROVEMENTS.
- MINIMIZE SOIL COMPACTION TO THE FULLEST EXTENT POSSIBLE IN ALL PROPOSED UNIMPROVED AREAS AND THE DETENTION STORMWATER MANAGEMENT BMP.
- CONTRACTOR TO PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITIES OF THE RECEIVING STREAM.

POST CONSTRUCTION STORMWATER MANAGEMENT MAINTENANCE PROGRAM

TO PROVIDE EFFECTIVE OPERATION OF THE STORMWATER MANAGEMENT SYSTEM, THE FOLLOWING MAINTENANCE PROGRAM HAS BEEN DEVELOPED FOR THIS PROJECT. THE OWNER WILL OPERATE AND MAINTAIN ALL STORMWATER MANAGEMENT FACILITIES AND POST CONSTRUCTION STORMWATER MANAGEMENT SCMS PER THE CITY OF SHARON STORMWATER MANAGEMENT ORDINANCE, APPROVED PCSM PLAN, AND THE CURRENT PENNSYLVANIA REGULATIONS. INSPECTION OF THE FACILITIES WILL OCCUR NOT LESS THAN TWO TIMES PER YEAR.

MAINTENANCE OF THE PROJECT AND STORMWATER MANAGEMENT FACILITIES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR LANDOWNER AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

STORMWATER COLLECTION SYSTEM:

- INLET GRATES SHOULD BE KEPT FREE OF TRASH AND DEBRIS.
- INLETS SHOULD BE INSPECTED A MINIMUM OF TWO TIMES PER YEAR AND BE CLEANED OUT WHEN DEBRIS REACHES HALF THE DISTANCE FROM THE BOTTOM OF THE INLET TO THE INVERT OF THE OUTLET PIPE.
- PIPES SHOULD BE FLUSHED AS NEEDED TO CLEAR BUILD-UP OF DEBRIS THAT MAY INTERFERE WITH THE FLOW OF WATER THROUGH THE PIPES.

STORMWATER OUTFALLS:

- PIPE OUTFALLS SHOULD BE INSPECTED A MINIMUM OF TWO TIMES PER YEAR AND BE KEPT FREE OF DEBRIS AND VEGETATION THAT MAY INTERFERE WITH THE DISCHARGE OF WATER.
- CLEAR THE ENERGY DISSIPATORS/OUTLET PROTECTION APRONS OF ALL DEBRIS.
- REPLACE ANY DISLODGED ROCK. ROCK SHOULD BE REPLACED AS NEEDED TO PREVENT EROSION AND SCOUR AROUND THE OUTFALL.

GENERAL MAINTENANCE:

- SEDIMENT, MATERIALS MANAGEMENT PLAN, COA, ENVIRONMENTAL COVENANT, AND DEBRIS REMOVED FROM STORMWATER FACILITIES SHALL BE DISPOSED OF IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE LOCAL AND STATE CODES. UNDER NO CIRCUMSTANCE SHALL SEDIMENT BE DISPOSED OF IN OR NEAR WATERS OF THE COMMONWEALTH.

MRC STORMTRAP UNDERGROUND DETENTION SYSTEM:

IN GENERAL MAINTENANCE SHOULD OCCUR ON A QUARTERLY BASIS AND FOLLOWING STORM EVENTS GREATER THAN 1-IN IN A 24-HR PERIOD AND SHALL INCLUDE THE FOLLOWING ACTIVITIES:

- ACCUMULATED SEDIMENT SHALL BE REMOVED TO MAINTAIN FLOW PATHWAYS, PREVENT CONCENTRATED FLOWS, AND PREVENT OBSTRUCTION OF STRUCTURE. THIS ACTIVITY TO BE DONE AS NEEDED.
- INSPECT FLOW SPLITTERS AND REMOVE ANY TRASH, DEBRIS, AND SEDIMENT USING A VACUUM TRUCK OR OTHER APPROPRIATE METHOD.
- INSPECT FLOW CONTROL STRUCTURES AND REMOVE ANY TRASH, DEBRIS, AND SEDIMENT USING A VACUUM TRUCK OR OTHER APPROPRIATE METHOD.
- INSPECT STORMTRAP SYSTEM FOR ACCUMULATED SEDIMENT, TRASH, AND DEBRIS. USE A VACUUM TRUCK TO REMOVE ANY ACCUMULATED TRASH, DEBRIS, SEDIMENT.

ACADIA ARIOPC:

IN GENERAL MAINTENANCE SHOULD OCCUR ON A QUARTERLY BASIS AND FOLLOWING STORM EVENTS GREATER THAN 1-IN IN A 24-HR PERIOD AND SHALL INCLUDE THE FOLLOWING ACTIVITIES:

- DETERMINE THE SEDIMENT DEPTH BY LOWERING A STADIA ROD INTO THE MANHOLE UNTIL IT REACHES THE TOP OF THE CAPTURED SEDIMENT. MARK THIS SPOT ON THE ROD, THEN CONTINUE PUSHING THE ROD THROUGH THE SEDIMENT UNTIL IT REACHES THE BOTTOM OF THE SUMP. NEXT MARK THE SECOND SPOT ON THE ROD AND COMPARE THE TWO MARKINGS TO DETERMINE THE DEPTH OF SEDIMENT. MAINTENANCE SHOULD OCCUR WITH THE SEDIMENT HAS REACHED A DEPTH OF 18-INCHES.
- REMOVE THE MANHOLE COVER TO PROVIDE ACCESS TO THE THE POLLUTANT STORAGE. POLLUTANTS ARE STORED IN THE SUMP, BELOW THE UNIT ASSEMBLY. ACCESS THIS AREA THROUGH THE ACCESS CYLINDER.
- USE A VACUUM TRUCK TO REMOVE ALL WATER, DEBRIS, OIL, AND SEDIMENT.
- USE A HIGH PRESSURE HOSE TO CLEAN THE MANHOLE OF ALL THE REMAINING SEDIMENT AND DEBRIS. THEN, USE THE VACUUM TRUCK TO REMOVE THE WATER.
- FILL THE CLEAN MANHOLE WITH WATER UNTIL THE LEVEL REACHES THE INVERT OF THE OUTLET PIPE.
- REPLACE THE MANHOLE COVER.
- DISPOSE OF THE POLLUTED WATER, OIL, SEDIMENT, AND TRASH AT AN APPROVED FACILITY.

RECYCLING OR DISPOSAL OF MATERIALS

- ANY AND ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN A STATE APPROVED WASTE SITE IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED.
- THE CONTRACTOR IS RESPONSIBLE FOR MANAGING IMPORT AND EXPORT MATERIAL IN ACCORDANCE WITH THE PADEP'S MANAGEMENT OF FILL POLICY (MOST RECENT EDITION). THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF ANALYTICAL TESTING TO CHARACTERIZE MATERIALS IN ACCORDANCE WITH THE CLEAN FILL POLICY, AND RESPONSIBLE FOR THE COSTS ASSOCIATED WITH DISPOSING OF EXPORT MATERIAL IN ACCORDANCE WITH THE POLICY.
- CEC NOTES THAT HISTORIC FILLS (FILLS WITH RESIDUALS PLACED PRIOR TO 1988 AS DEFINED IN THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PADEP) CLEAN FILL POLICY) ARE SUBJECT TO ADDITIONAL TESTING, HANDLING, AND MANAGEMENT REQUIREMENTS PER THE PADEP'S CLEAN FILL POLICY, IF THEY NEED TO BE HAULED OFF-SITE. EXISTING FILL ON-SITE, IF ENCOUNTERED, WOULD BE CLASSIFIED AS HISTORIC FILL. HISTORIC FILLS CAN REMAIN ON-SITE WITHOUT THE NEED FOR ADDITIONAL TESTING. REFER TO THE CLEAN FILL POLICY FOR MORE INFORMATION.
- THE PADEP DEFINES ENVIRONMENTAL DUE DILIGENCE AS FOLLOWS REGARDING CLEAN FILL: INVESTIGATIVE TECHNIQUES, INCLUDING BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. DURING CONSTRUCTION, PADEP/CDD MUST BE CONTACTED WITHIN 24 HOURS IF SOIL SAMPLES ARE FOUND TO EXCEED CH. 250 MSC STANDARDS.

CONSTRUCTION SEQUENCE

- MOBILIZE EQUIPMENT, CONSTRUCTION TRAILER, MATERIAL STORAGE BINS, ETC. ON-SITE.
- LAYOUT THE LIMITS OF THE SITE, ESTABLISH BENCHMARKS, AND REFERENCE POINTS.
- INSTALL THE TIRE WASH ENTRANCE AT THE LOCATION SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE PROVIDED DETAIL.
- PERFORM INITIAL DEMOLITION FOR INSTALLATION OF PERIMETER BMPS. LIMIT DEMOLITION TO AREAS NECESSARY TO CONSTRUCT/INSTALL BMPS.
- INSTALL COMPOST FILTER SOCKS AT THE LOCATIONS AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE STANDARDS DETAILS. COMPOST FILTER SOCKS SHALL BE SIZED TO THE SPECIFICATIONS SHOWN ON THE E&S PLAN DRAWINGS.
- PERFORM SITE DEMOLITION ACTIVITIES.

- BEGIN BULK WORK EXCAVATION OF THE SITE. COMPOST FILTER SOCK BARRIERS 1A-13A SHALL TEMPORARILY BE REMOVED, AS NECESSARY, DURING DRY CONDITIONS, AND IMMEDIATELY REPLACED TO ACHIEVE FINAL SUBGRADE ELEVATION AROUND THE PERIMETER OF THE SITE.

HALT ALL ACTIVITIES AND CONTACT CEC PRIOR TO THE BEGINNING OF THE NEXT STEP IN THE CONSTRUCTION SEQUENCE. THE CONSTRUCTION OF THE UNDERGROUND MRC SYSTEM CONSISTS OF CRITICAL STAGES THAT A LICENSED PROFESSIONAL OR DESIGNEE MUST BE ON-SITE FOR INSPECTION. LICENSED PROFESSIONALS MUST BE LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.

- UPON ACHIEVING FINAL SUB-GRADE ELEVATION, BEGIN UNDERGROUND MRC 2A AND 2B EXCAVATION/CONSTRUCTION IN ACCORDANCE WITH THE APPROVED DETAILS. ENSURE THAT ALL STORMWATER RUNOFF IS DIRECTED DOWNSTREAM SUCH THAT PONDING OR FLOODING DOES NOT OCCUR.

CRITICAL STAGE

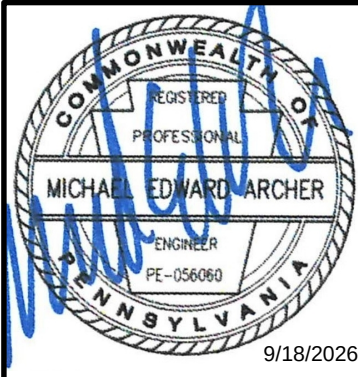
INSTALLATION OF UNDERGROUND MRCS 2A AND 2B IS A CRITICAL STAGE THAT A LICENSED PROFESSIONAL OR DESIGNEE MUST BE ON SITE TO CONSTRUCT. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3 BUSINESS DAYS NOTICE PRIOR TO THE INSTALLATION OF UNDERGROUND DETENTION SYSTEM. THE LICENSED PROFESSIONAL OR THEIR DESIGNATED REPRESENTATIVE MUST BE PRESENT DURING SUBGRADE PREPARATION, STONE PLACEMENT, AND UNDERDRAIN INSTALLATION.

- STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891 (STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES). THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS ARE FOLLOWING ASTM C891 IN ITS ENTIRETY AND IMPLEMENTING APPROPRIATE MEASURES. THE INSTALLING CONTRACTOR OWNS AND IS RESPONSIBLE FOR THE STORMTRAP SYSTEM UPON REMOVAL OF THE MODULES FROM THE DELIVERY TRUCK THROUGH FINAL CONSTRUCTION. FINAL CONSTRUCTION IS ACHIEVED WHEN ALL OF THE MODULES ARE SET, FULLY BACKFILLED, AND WHEN FINAL GRADES ARE REACHED. THE CONTRACTOR IS RESPONSIBLE FOR ANY COUNTERMEASURES NECESSARY TO RESIST UPLIFT/BUOYANCY BEFORE FINAL CONSTRUCTION IS ACHIEVED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES.
- STORMTRAP MODULES SHALL BE PLACED ON A LEVEL CONCRETE FOUNDATION WITH A 1'-0" OVERHANG ON ALL SIDES THAT SHALL BE POURED IN PLACE BY INSTALLING CONTRACTOR. THE GEOTECHNICAL ENGINEER OF RECORD TO ENSURE THAT THE SOIL BEARING PRESSURE MEETS OR EXCEEDS THE STRUCTURAL DESIGN LOADING CRITERIA.
- THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADVANCEMENT MODULES DOES NOT EXCEED 3/4". IF THE SPACE EXCEEDS 3/4", THE MODULES SHALL BE RESET WITH APPROPRIATE ADJUSTMENT MADE TO LINE AND GRADE TO BRING THE SPACE TO SPECIFICATION.
- THE PERIMETER HORIZONTAL JOINT BETWEEN THE STORMTRAP MODULES AND THE CONCRETE FOUNDATION SHALL BE SEALED TO THE FOUNDATION WITH PRE-FORMED MASTIC JOINT SEALER ACCORDING TO ASTM C891. 8.8 AND 8.12. THE MASTIC JOINT TAPE DOES NOT PROVIDE A WATERTIGHT SEAL.
- ALL EXTERIOR ROOF AND EXTERNAL VERTICAL WALL JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH 8-IN WIDE PRE-FORMED, COLD APPLIED, SELF ADHERING ELASTOMERIC RESIN, BONDED TO A WOVEN SEALANT AS APPROVED BY STORMTRAP. THE JOINT WRAP DOES NOT PROVIDE A WATERTIGHT SEAL. THE PURPOSE OF THE JOINT WRAP IS PROVIDE SILT AND SOIL TIGHT SYSTEM.
- IF THE STORMTRAP MODULE IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND DETERMINE WHETHER OR NOT THE MODULES WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT. CONTACT STORMTRAP IMMEDIATELY. ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- STORMTRAP MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP AND THE ENGINEER OF RECORD.

- INSTALL THE STORM SYSTEMS UPSTREAM OF THE UNDERGROUND MRCS. INSTALL ALL INLETS, MANHOLES, ACADIA 10 WATER QUALITY UNITS, AND PIPES DOWNSTREAM TO UPSTREAM PER PLANS. COMPOST FILTER SOCK SHALL BE REMOVED, AS NECESSARY, DURING DRY CONDITIONS, TO FACILITATE STORM SYSTEM INSTALLATION. REMOVED COMPOST FILTER SOCK SHALL BE REPLACED IMMEDIATELY FOLLOWING BACKFILLING OF STORM SEWER EXCAVATIONS. INSTALL INLET FILTER BAGS ON ALL INLETS FOLLOWING INSTALLATION.

- ONCE CONSTRUCTION IS COMPLETED, REMOVE ANY SEDIMENT THAT MAY HAVE ACCUMULATED IN THE PROPOSED STORM SEWER SYSTEM. STABILIZE THE DISTURBANCE AREAS WITH GRAVEL. INSTALL GEOMEMBRANE LINER BENEATH GRAVEL AREAS IN ACCORDANCE WITH THE PROVIDED DETAIL. REMOVE COMPOST FILTER SOCK BARRIERS 1A-13A AS GRAVEL STABILIZATION PROGRESSES.

- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, REMOVE ALL REMAINING E&S BMPS.
- AFTER PROJECT COMPLETION AND FINAL INSPECTION, IT IS REQUIRED TO SUBMIT THE NPDES NOTICE OF TERMINATION TO THE MERCER COUNTY CONSERVATION DISTRICT.



DRAWING NO.: C409

SHEET 17 OF 22

POST CONSTRUCTION STORMWATER MANAGEMENT NOTES

DATE: APRIL 2026
DWG SCALE: N.A.
PROJECT NO: 383-024
APPROVED BY: MEA

DRAWN BY: VMF
CHECKED BY: BJH

MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA



Civil & Environmental
Consultants, Inc.

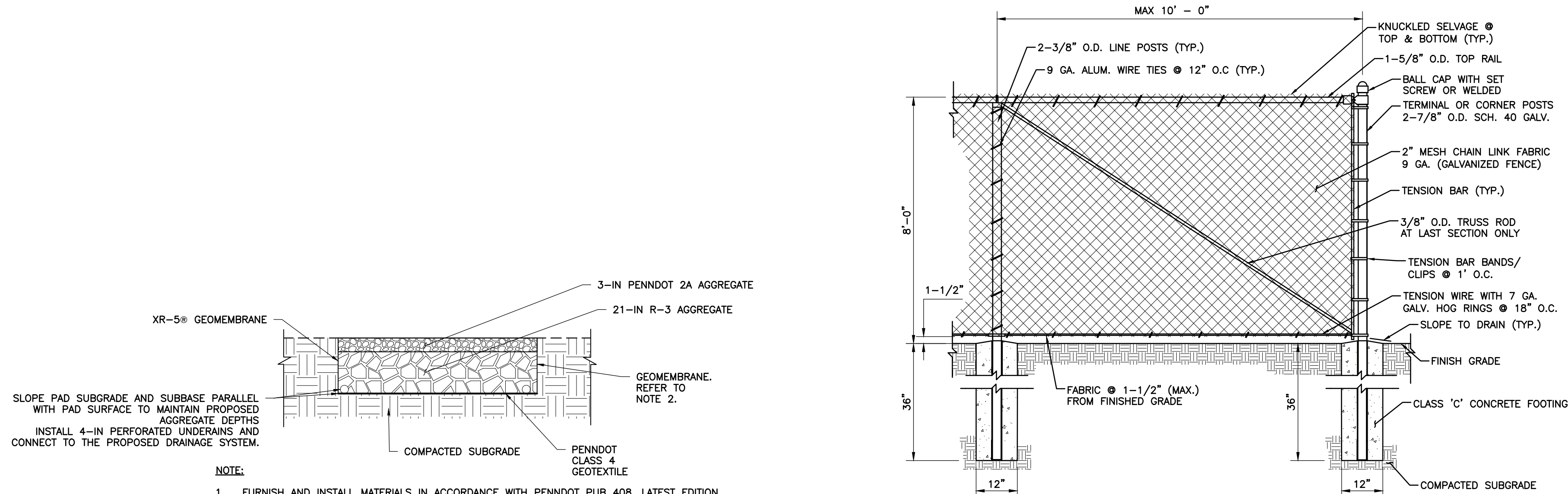
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 • 800.365.2324
www.cecinc.com

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/03/2026	RESPONSE TO INCOMPLETE LETTER DATED 04/04/2026
2	04/13/2026	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 07/16/2026
3	04/13/2026	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 08/16/2026

ENGINEERING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF N.C., P.L.L.C. SERVICES IN PORTER ROAD WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF N.C., P.L.L.C. ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.

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NOTE:

- FURNISH AND INSTALL MATERIALS IN ACCORDANCE WITH PENNDOT PUB 408, LATEST EDITION.
- GRAVEL AREAS LOCATED WITHIN, BENEATH, OR IMMEDIATELY ADJACENT TO IDENTIFIED OR SUSPECTED CONTAMINATION ZONES SHALL BE LINED WITH SEAMAN CORPORATION XR-5® GEOMEMBRANE OR APPROVED EQUAL. GRAVEL AREAS LOCATED OUTSIDE IDENTIFIED CONTAMINATION ZONES MAY BE LINED WITH SEAMAN CORPORATION XR-3® GEOMEMBRANE OR APPROVED EQUAL, SUBJECT TO CONTRACTOR VERIFICATION OF SITE CONDITIONS AND MANUFACTURER CONFIRMATION OF CHEMICAL COMPATIBILITY. CONTRACTOR REMAINS RESPONSIBLE FOR LINER SELECTION, INSTALLATION, AND PERFORMANCE BASED ON MANUFACTURERS SPECIFICATIONS.

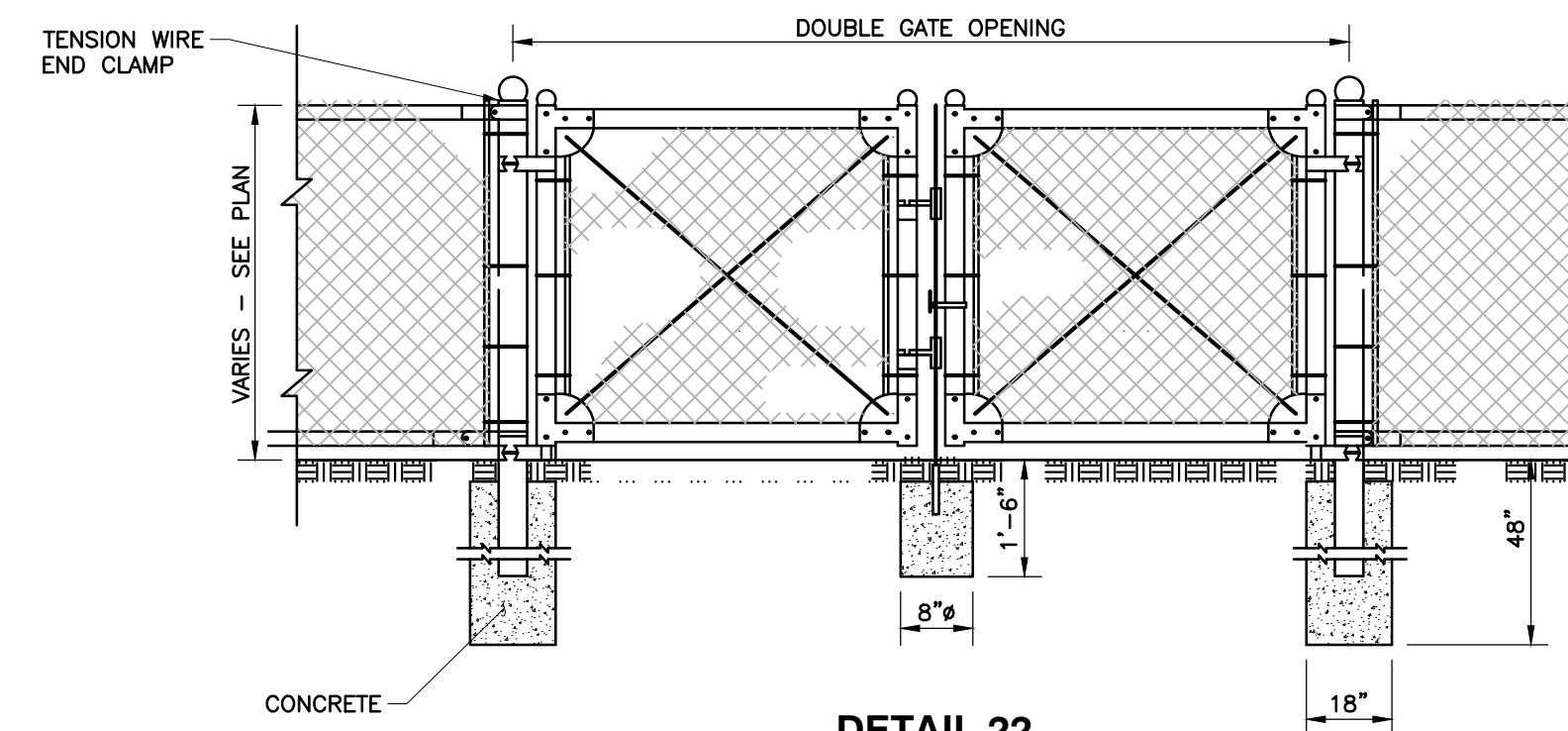
DETAIL 20
GRAVEL AREA
N.T.S.

DETAIL 21
SECURITY FENCE
N.T.S.

NOTES:

- METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
- FOOTING WIDTH TO BE (4)X POST WIDTH. MINIMUM DEPTH 36".
- FENCE TO HAVE 4-1/2" TOP RAIL COVER.
- FENCE MATERIAL TO BE COATED COLOR BLACK.
- ALL FENCE COMPONENTS (HANDLES, LATCHES, CONNECTIONS, POTS, FABRIC, ETC.) SHALL BE COATED COLOR BLACK.

END & CORNER POST TOP OPTIONS	TOP & BOTTOM FABRIC OPTIONS



DETAIL 22
SWING GATE
N.T.S.

GENERAL NOTES:

- PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE PENNDOT PUBLICATION 408 SPECIFICATIONS.
- REFER TO PENNDOT BUREAU OF HIGHWAY DESIGN STANDARDS FOR ROADWAY CONSTRUCTION, SERIES RC-45 AND RC-46, CURRENT EDITION, FOR DETAILS OF THE FRAMES AND GRATES, CONCRETE TOP UNITS, GRADE ADJUSTMENT RINGS, AND INLET BOXES.
- CEMENT CONCRETE USED TO CONSTRUCT THE STORM SEWER INLETS SHALL BE CLASS AA, AND SATISFY THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 704.
- REINFORCEMENT STEEL USED TO CONSTRUCT THE STORM SEWER INLETS SHALL BE ASTM-A615 GRADE 60 DEFORMED OR PLAIN STEEL BARS, AND SATISFY THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 714, AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
- PRE-CAST REINFORCED CONCRETE STORM SEWER INLET BOXES, CONCRETE TOP UNITS, AND GRADE ADJUSTMENT RINGS SHALL CONFORM TO THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 714, AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
- FRAMES AND GRATES SHALL BE NON-ROCKING AND MADE OF STRUCTURAL STEEL, AND SATISFY THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 605.2(c). ALL CASTINGS SHALL BE SET IN A FULL BED OF MORTAR.
- GRADE ADJUSTMENT RINGS SHALL BE OF PRECAST CONCRETE OR STRUCTURAL STEEL.
- ALL INLETS SHALL BE SIZED TO ACCOMMODATE THE REQUIRED PIPE SIZE. SEAL PIPE CONNECTIONS WITH MORTAR OR WATER TIGHT RUBBER FLEXIBLE CONNECTORS.
- BACKFILL PLACED AROUND THE STORM SEWER INLETS SHALL BE ASHTO NO. 57 CRUSHED Limestone AGGREGATE MEETING THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 703. THE AGGREGATE SHALL BE PLACED IN MAXIMUM 8" THICK LOOSE LIFTS AND COMPACTED TO A POINT OF NON-MOVEMENT BENEATH THE COMPACTION EQUIPMENT.
- BASE STONE UNDER INLETS SHALL BE 12" DEEP COMPACTED ASHTO NO. 57 CRUSHED STONE.
- INLET TOP UNITS SHALL BE PENNDOT TYPE M OR TYPE C (SEE PLANS) WITH STRUCTURAL STEEL BICYCLE SAFE GRATES.
- STEPS SHALL BE INSTALLED ON INLETS DEEPER THAN 4' IN ACCORDANCE WITH "PLASTIC MANHOLE/INLET STEP" DETAIL, THIS SHEET.

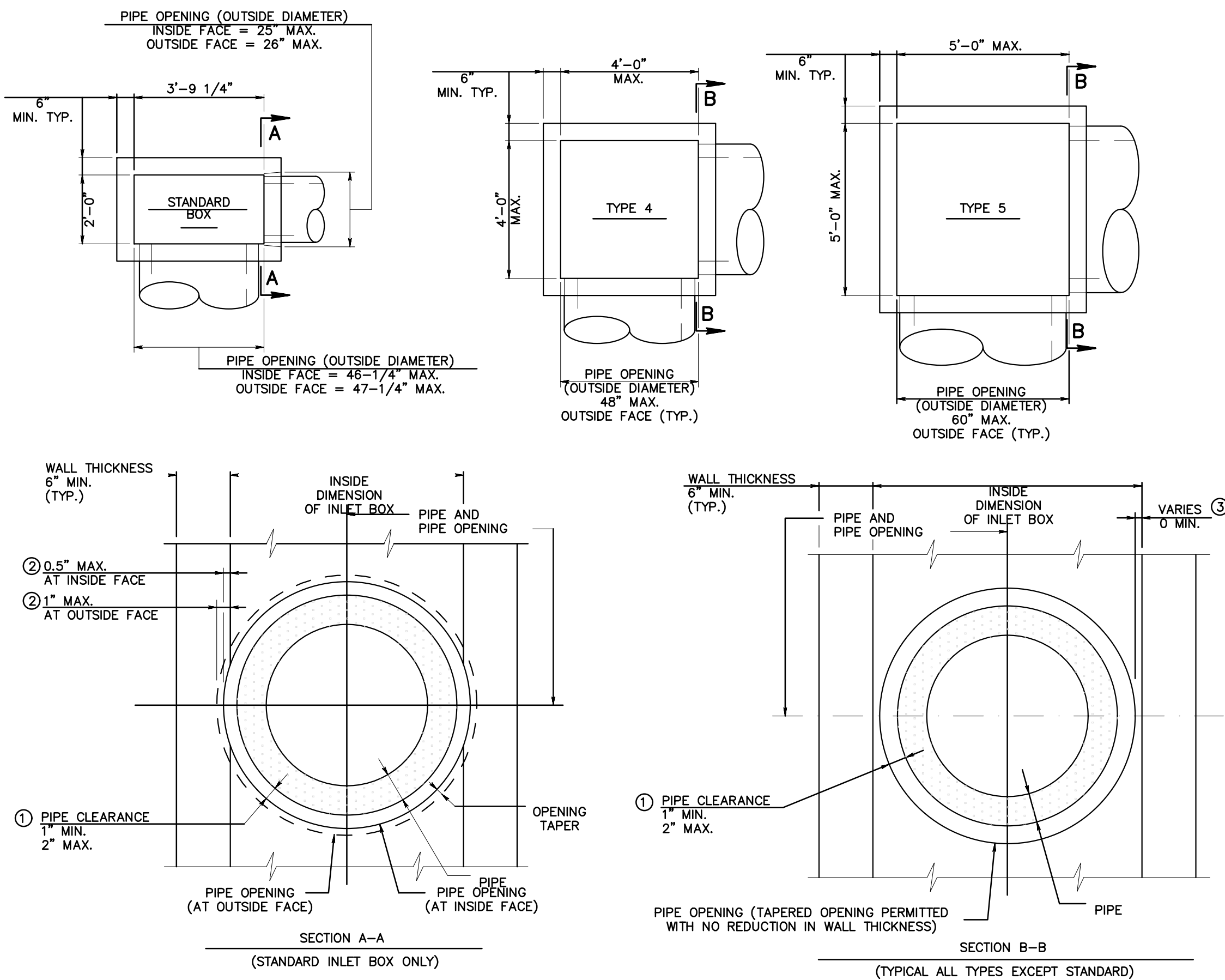
NOTES:

- FOR ADDITIONAL NOTES, REFER TO PENNDOT PUBLICATION 72M, RC-46M FOR DETAILS FOR THE CONCRETE TOP UNITS, FRAMES, AND GRATES.
- OUT TO OUT DIMENSIONS OF TOP SLABS TO MATCH SIZE OF INLET BOX.
- SET EDGE OF OPENING AT INSIDE FACE OF INLET BOX FOR ACCESS, IF POSSIBLE.

INLET WITH SUMP NOTES:

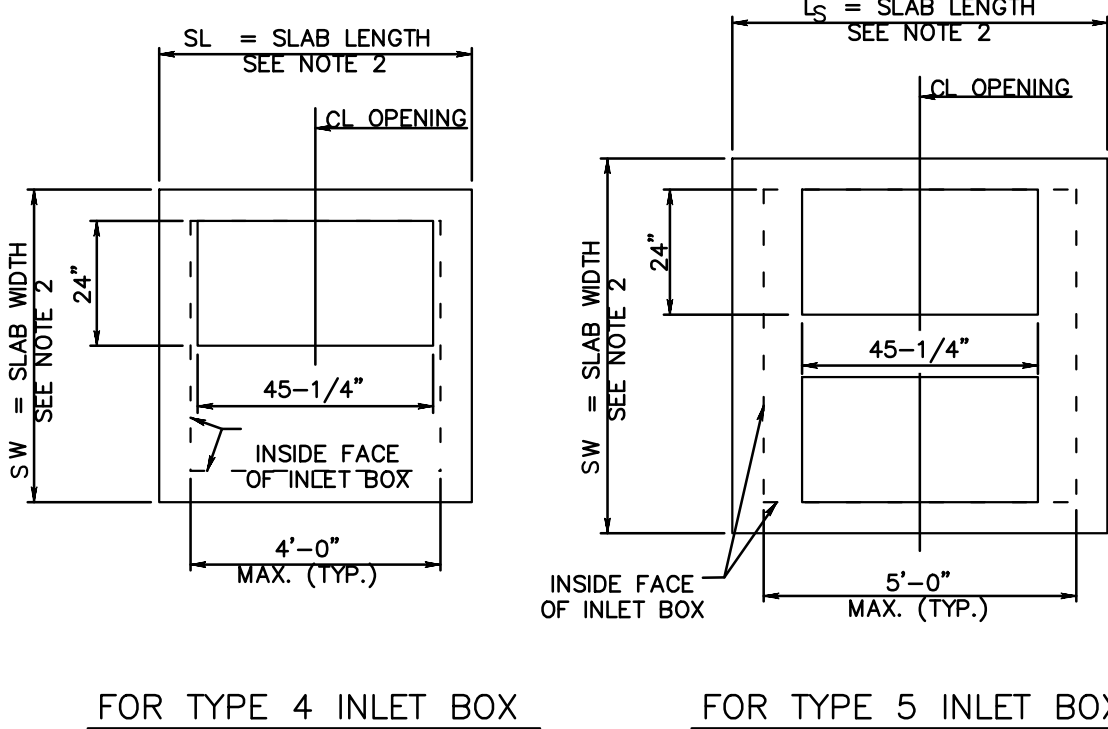
- SMALL WEEP HOLES SHOULD BE DRILLED INTO THE BOTTOM OF THE INLET TO PREVENT STANDING WATER FOR LONG PERIODS OF TIME.

INLET TABLE						
STRUCTURE NAME	RIM E.	INVERT IN	INVERT OUT	BOTTOM ELEV.	INLET TYPE	GRATE TYPE
IN-2-202	869.21	863.82	863.82	863.82	TYPE 4 INLET BOX	TYPE M
IN-2-203	868.25	864.03	864.03	864.03	TYPE 4 INLET BOX	TYPE M
IN-3A-311	871.38	865.47	865.47	865.47	STANDARD INLET BOX	TYPE M
IN-3A-312	871.32	865.88	865.88	865.88	STANDARD INLET BOX	TYPE M
IN-3A-313	871.28		866.29	866.04	STANDARD INLET BOX	TYPE M



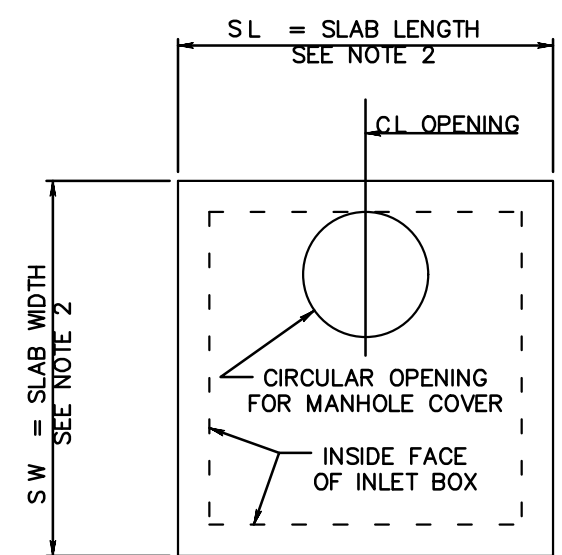
LEGEND

- OUTSIDE DIAMETER OF PIPE TO PIPE OPENING
- REDUCTION IN WALL THICKNESS DIMENSION
- INSIDE FACE OF BOX WALL TO OUTSIDE DIAMETER OF PIPE OPENING



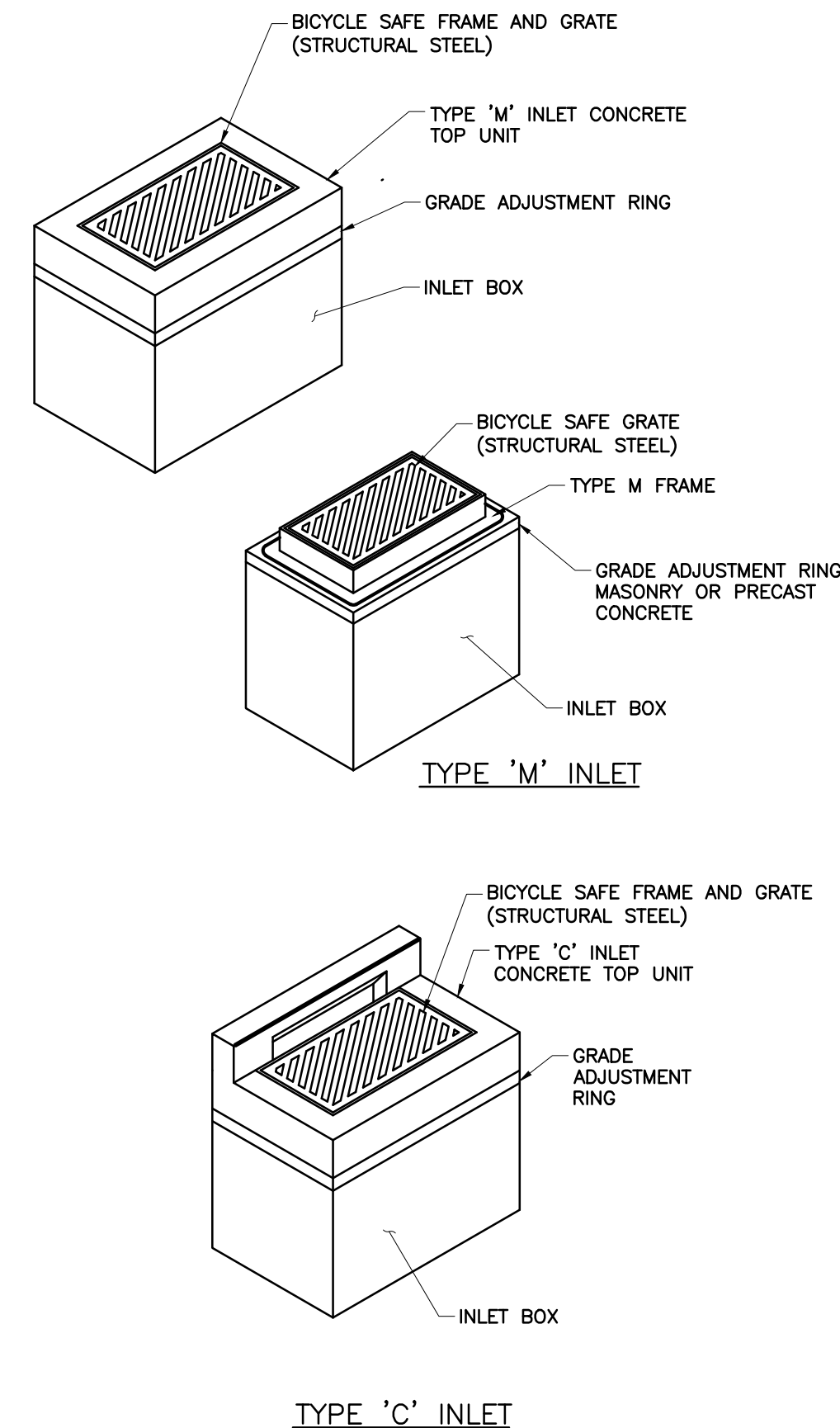
FOR TYPE 4 INLET BOX

FOR TYPE 5 INLET BOX



TYPE 4 OR 5 INLET BOX

DETAIL 23
PENNDOT INLET BOX ASSEMBLY
N.T.S.



TYPE 'C' INLET

REVISION RECORD

NO.	DATE	DESCRIPTION
1	08/03/2024	RESPONSE TO INCOMPLETE LETTER DATED 06/04/2024
2	08/14/2024	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 07/16/2024
3	08/16/2024	RESPONSE TO TECHNICAL DEFICIENCY LETTER DATED 08/16/2024

700 Cherrington Parkway
Moon Township, PA 15108
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CEC
Civil & Environmental
Consultants, Inc.

MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA

CONSTRUCTION DETAILS

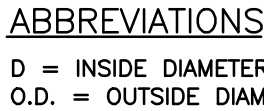
DATE:	APRIL 2025	DRAWN BY:	VMF
DWG SCALE:		CHECKED BY:	BJH
PROJECT NO:			353-024
APPROVED BY:			MEA

DRAWING NO.:
C800
SHEET 18 OF 22



1. ALL WELDING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(m).
2. ALL BEARING BARS AND PERIMETER BARS SHALL BE ASTM A572 GRADE 50 STEEL. ALL CROSS BARS SHALL BE A36 STEEL.
3. ALL CROSS BARS SHALL BE LOCATED FLUSH ALONG THE TOP SURFACE OF THE GRATE.
4. COAT GRATES WITH AN APPROVED BITUMINOUS PAINT, IN ACCORDANCE WITH PUBLICATION 408, SECTION 605.2(d), IN THE SHOP OF FIELD PRIOR TO INSTALLATION.
5. AS AN ALTERNATE TO BITUMINOUS PAINT, GALVANIZE GRATES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105.02(s).

DETAIL 24
PENNDOT INLET GRATE
N.T.S.



COVER REQUIREMENTS

UTILITY	MINIMUM COVER REQUIRED *
STORM SEWER	2.0 FT.

* AS MEASURED FROM TOP OF PIPE TO FINAL GROUND SURFACE. THIS VALUE MAY VARY

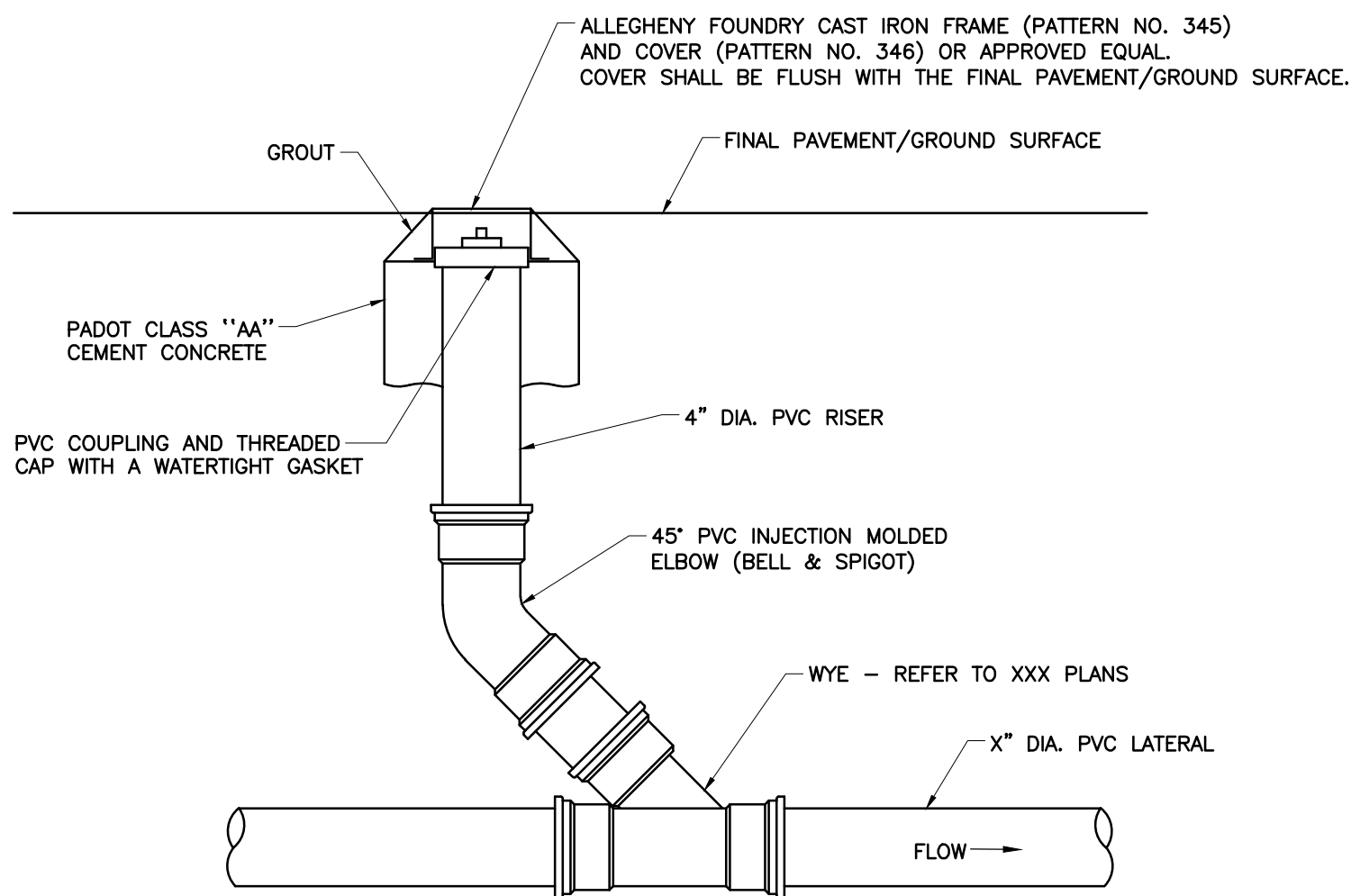
DETAIL 25
TRENCH DETAILS
N.T.S.

TABLE 1: MINIMUM TRENCH WIDTHS

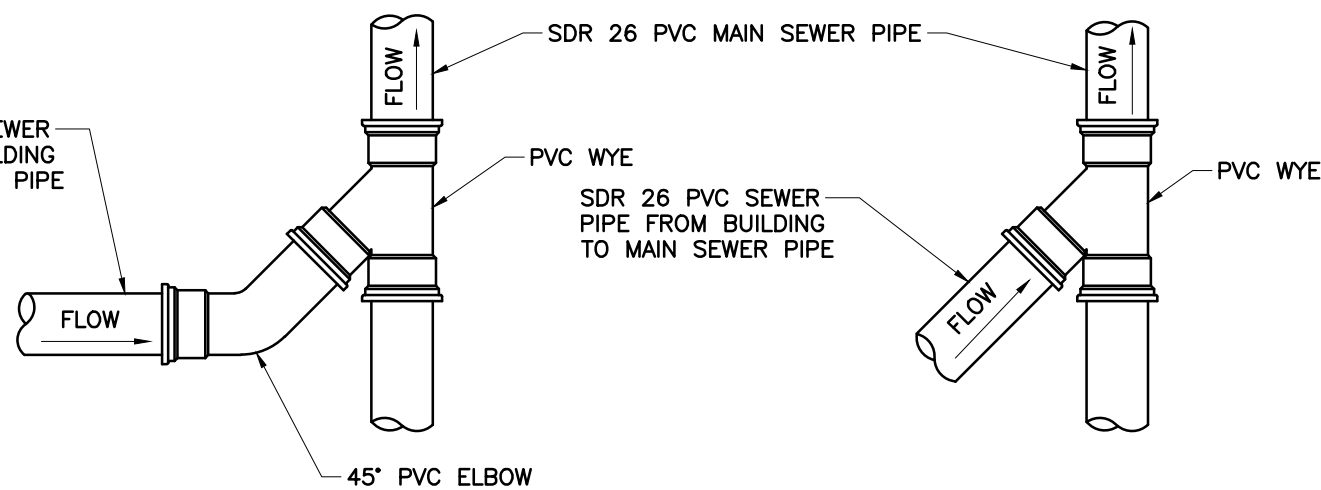
PIPE DIAMETER (in.)	TRENCH WIDTH (in.)
4-10	28
12	30
15	34
18	39
24	48
30	56
36	64
42	72
48	80
54	88
60	96

TABLE 2: BACKFILL MATERIAL AND COMPACTION REQUIREMENTS

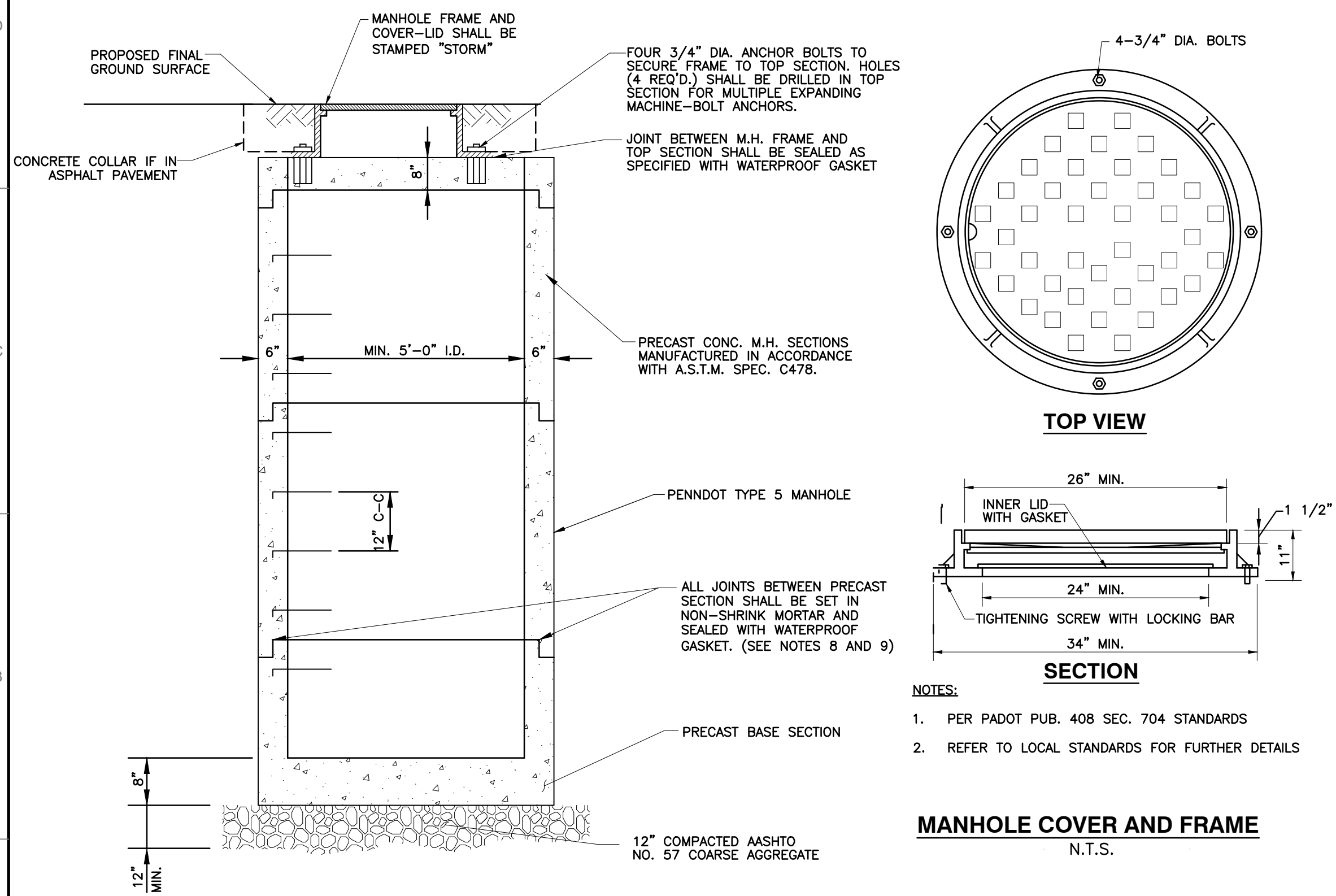
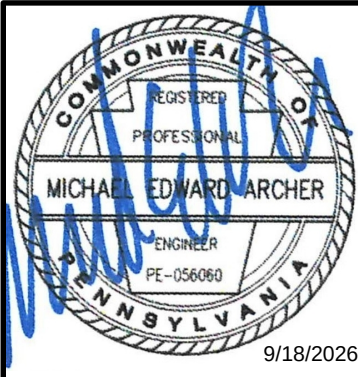
DESCRIPTION	SOIL CLASSIFICATIONS			MIN. MODIFIED PROCTOR DENSITY %
	ASTM D2321	ASTM D487	AASHTO M43	
GRADED OR CRUSHED STONE, GRAVEL	CLASS I	—	5 56	N/A SEE NOTES FOR VISUAL CRITERIA
WELL-GRADED SAND, GRAVELS AND GRAVEL/SAND MIXTURES; POORLY GRADED SAND, GRAVELS AND GRAVEL/SAND MIXTURES; LITTLE TO NO FINES	CLASS II	GW GP SW SP	57 6	95%
SILTY OR CLAYEY GRAVELS, GRAVEL/SAND/SILT OR GRAVEL AND CLAY MIXTURES; SILTY CLAYEY SANDS, SAND/CLAY OR SAND/SILT MIXTURES	CLASS III	GW GP SW SP	GRAVEL AND SAND ($<10\%$ FINES)	95%



DETAIL 27
STORM SEWER CLEAN OUT
N.T.S.



DETAIL 28
WYE CONNECTION
N.T.S.



DETAIL 26
PRECAST CONCRETE MANHOLE
N.T.S.

MANHOLE TABLE				
STRUCTURE NAME	RIM E.	INVERT IN	INVERT OUT	MANHOLE SIZE
CO-2A	868.78	862.10	863.60	DOWNSPOUT
CO-2B	868.87	862.10	863.60 862.10	DOWNSPOUT
MH-2-200	869.59	862.00	862.00	60" PRECAST MANHOLE
MH-2-200D	868.72	859.97 859.88	859.88	60" PRECAST MANHOLE

**MERCER NODE PROPERTY, LLC
MERCER NODE DEVELOPMENT
200 CLARK STREET
CITY OF SHARON
MERCER COUNTY, PA**

CONSTRUCTION DETAILS

DATE:	APRIL 2026	DRAWN BY:	VMF
DWG SCALE:	N/A	CHECKED BY:	BUH
PROJECT NO:			
APPROVED BY:	353-024		
	MEA		

DRAWING NO.:
C801

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