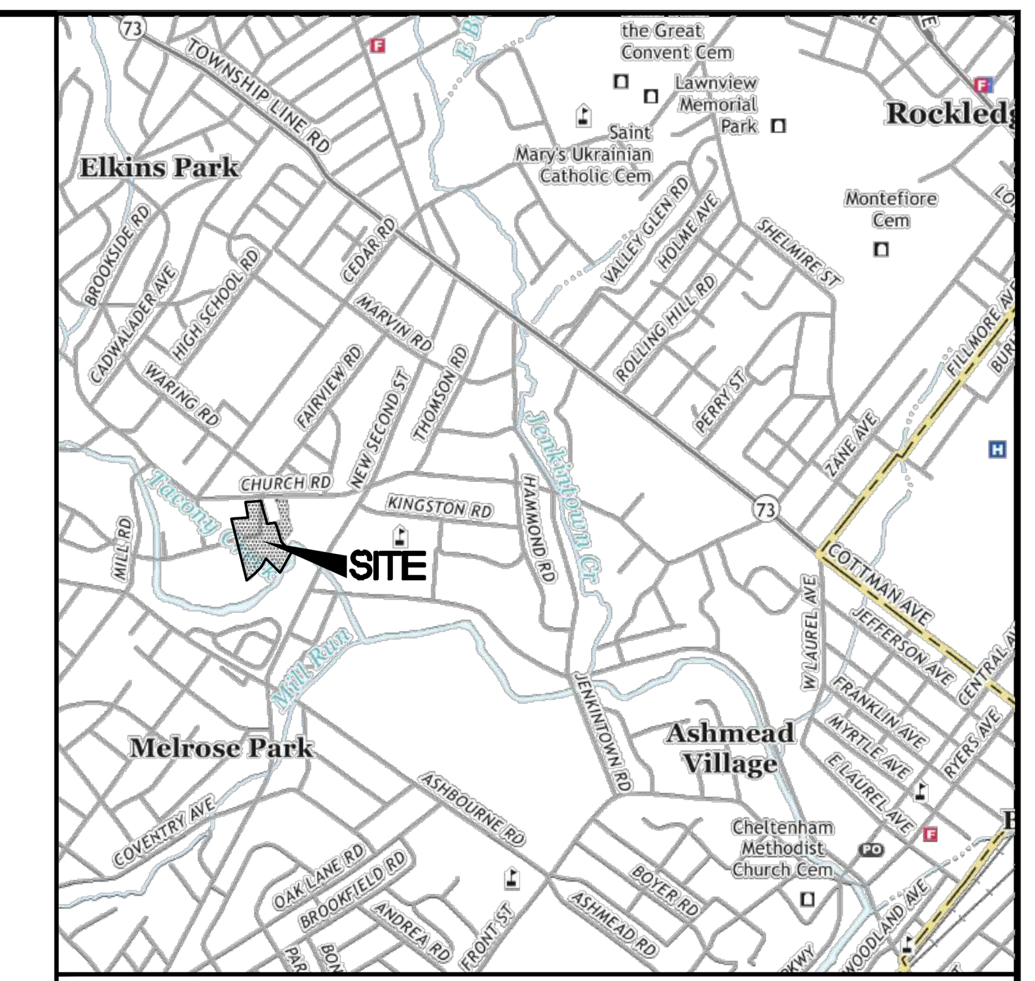

LOCATION MAP
SCALE: 1"=2,000'

THE NATIONAL MAP BY U.S.G.S.
FRANKFORD PA 2019 QUADRANGLE

ZONING: R2 – RESIDENTIAL DISTRICT		
	REQUIREMENTS	EXISTING (222 E. CHURCH)
§295–602.A MINIMUM LOT AREA:	10,000 S.F.	5.0503 ACRES (219,992.75 S.F.)
§295–602.A MINIMUM LOT WIDTH:	70 FT.	172.14 FT.
§295–602.A SETBACKS:	FRONT YARD = 40 FT. SIDE YARD (AGG.) = 30 FT. SIDE YARD (MIN.) = 10 FT. REAR YARD = 25 FT.	FRONT YARD = 40 FT. SIDE YARD (AGG.) = 30 FT. SIDE YARD (MIN.) = 15 FT. REAR YARD = 25 FT.
§295–602.A MAX. BUILDING COVERAGE:	20%	1.4% (3,788 S.F.)
§295–602.A MAX. IMPERVIOUS COVERAGE:	40%	8.0% (21,590 S.F.)
§295–602.A MAX. BUILDING HEIGHT:	<40 FT.	<40 FT.
§295–602.A GARAGE SETBACK*	10 FT. BACK FROM FRONT FACADE	<10 FT.[1]
* ADDITIONAL REGULATIONS UNDER §295–603		
[1] EXISTING NON–CONFORMITY		

SURVEY NOTES:

1. THIS PLAN REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED BY CHARLES E. SHOEMAKER, INC. COMPLETED IN FEBRUARY, 2021.

2. SITE DATA:

   CURRENT OWNER: 222 CHURCH ROAD LLC (C/O RABBI ZVI BLOOM)
   C/O RABBI ZVI BLOOM
   509 CEDARHILL ROAD

   SITE ADDRESS: 222 E. CHURCH ROAD
   ELKINS PARK, PA 19027
   TAX MAP: BLOCK 47 – UNIT 3
   TAX NUMBER: PARCEL 31–00–06637–001
   DB 6206 PG 272

   RECORDED DATA: CHELTENHAM TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

3. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CONFIRM THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

4. A PORTION OF THE PROJECT SITE SHOWN LIES WITHIN A SPECIAL FLOOD HAZARD AREA ("SFHA") – ZONE AE, AS DOCUMENTED ON THE FLOOD INSURANCE RATE MAP IDENTIFIED AS PANEL 403 OF 451, COMMUNITY NUMBER 420696, MAP NUMBER 42091C0403G; EFFECTIVE DATE: MARCH 2, 2016. THE DATUM FOR THIS MAP IS NAVD88.

5. THE VERTICAL DATUM FOR THIS SITE IS NAVD 1988 BASED ON GPS OBSERVATIONS.

6. PA ONE CALL SERIAL NUMBER: SERIAL #20212303507, DATED AUGUST 21, 2021

7. THE GROSS AND NET AREA OF 222 E. CHURCH ROAD IS 272,238 S.F. OR 6.2497 ACRES.

8. THIS PROPERTY HAS DIRECT ACCESS TO CHURCH ROAD (SR 2023), A PUBLIC STREET, THROUGH TWO (2) TWO–WAY MACADAM DRIVEWAYS. ADDITIONAL THIS PROPERTY HAS DIRECT ACCESS TO HARRISON AVENUE, A PUBLIC STREET.

9. AS OF THE DATE OF SURVEY (APRIL 10, 2020), THERE WAS NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS, EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS.

10. PLAN REFERENCES:

    10.1. SUBDIVISION PLAN FOR 216 & 222 E. CHURCH ROAD, PREPARED BY CHARLES E. SHOEMAKER, INC., DATED MARCH 1, 2021, LAST REVISED MARCH 31, 2021.

SOILS TABLE PER USDA NRCS						
MAP SYMBOL	SOIL NAME	SLOPES	HYDROLOGIC GROUP	DEPTH TO WATER TABLE	DRAINAGE CHARACTERISTICS	HYDRIC SOIL
Ha	HATBORO SILT LOAM	0 – 3	B / D	0" – 6"	POORLY DRAINED	YES
UugB	URBAN LAND – URDORTHENTS	0 – 8	C	> 60"	WELL DRAINED	NO
UugD	URBAN LAND – UDORTHENTS	8 – 25	C	> 60"	WELL DRAINED	NO
W	WATER	–	–	–	–	–

LEGEND

- STORM INLET TYPE 'C'
- STORM INLET TYPE 'M'
- STORM MANHOLE
- SANITARY MANHOLE
- U.P. UTILITY POLE
- L.P. LAMP POST
- F.H. FIRE HYDRANT
- W.V. WATER VALVE
- STEEP SLOPES (15%–25%)
- VERY STEEP SLOPES (>25%)
- STREAM
- FLOODPLAIN
- FENCE
- WALL
- MACADAM EDGE
- CONC. CURB
- DEPRESSED CURB
- CONCRETE
- SLATE
- TREELINE
- PROPERTY CORNER
- IRON PIN FOUND
- RIPARIAN CORRIDOR – ZONE 1
- RIPARIAN CORRIDOR – ZONE 2
- TO BE DEMOLISHED
- WETLANDS 'A'
- WL–A11 WETLANDS FLAG DESIGNATION

REGISTERED PROFESSIONAL ENGINEER
REGISTERED PROFESSIONAL ENGINEER ROBERT E. BLUE, JR. No. PE026169-E
9/12/2023
ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169–E

PROFESSIONAL LAND SURVEYOR
REGISTERED PROFESSIONAL LAND SURVEYOR ROBERT E. BLUE, JR. SU1323A
9/12/2023
ROBERT E. BLUE JR. (DATE)
LICENSE NO. SU1323A

REVISIONS
5) 2022–02–08; REV. PER MCCD COMMENTS
6) 2022–03–04; REV. PER ADD'L TREE SURVEY
7) 2022–04–14; REV. PER ADD'L TREE SURVEY
8) 2022–07–19; REV PER TWP. REVIEW
9) 2022–09–28; ISSUED FOR FINAL LD REVIEW
10) 2023–02–03; REV. PER TWP. REVIEWS
11) 2023–02–28; REV. PER NPDES SUBMISSION
12) 2023–05–26; REV. PER NPDES RESUBMISSION
13) 2023–06–29; REV. PER NPDES RESUBMISSION
14) 2023–09–12; REV. PER NPDES RESUBMISSION

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GRAPHIC SCALE
0 50 100 150 200

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FINAL PLAN

EXISTING FEATURES

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=50'
DATE: 2021–07–23	JOB NUMBER: 2154–10E	SHEET NUMBER: 4 of 31

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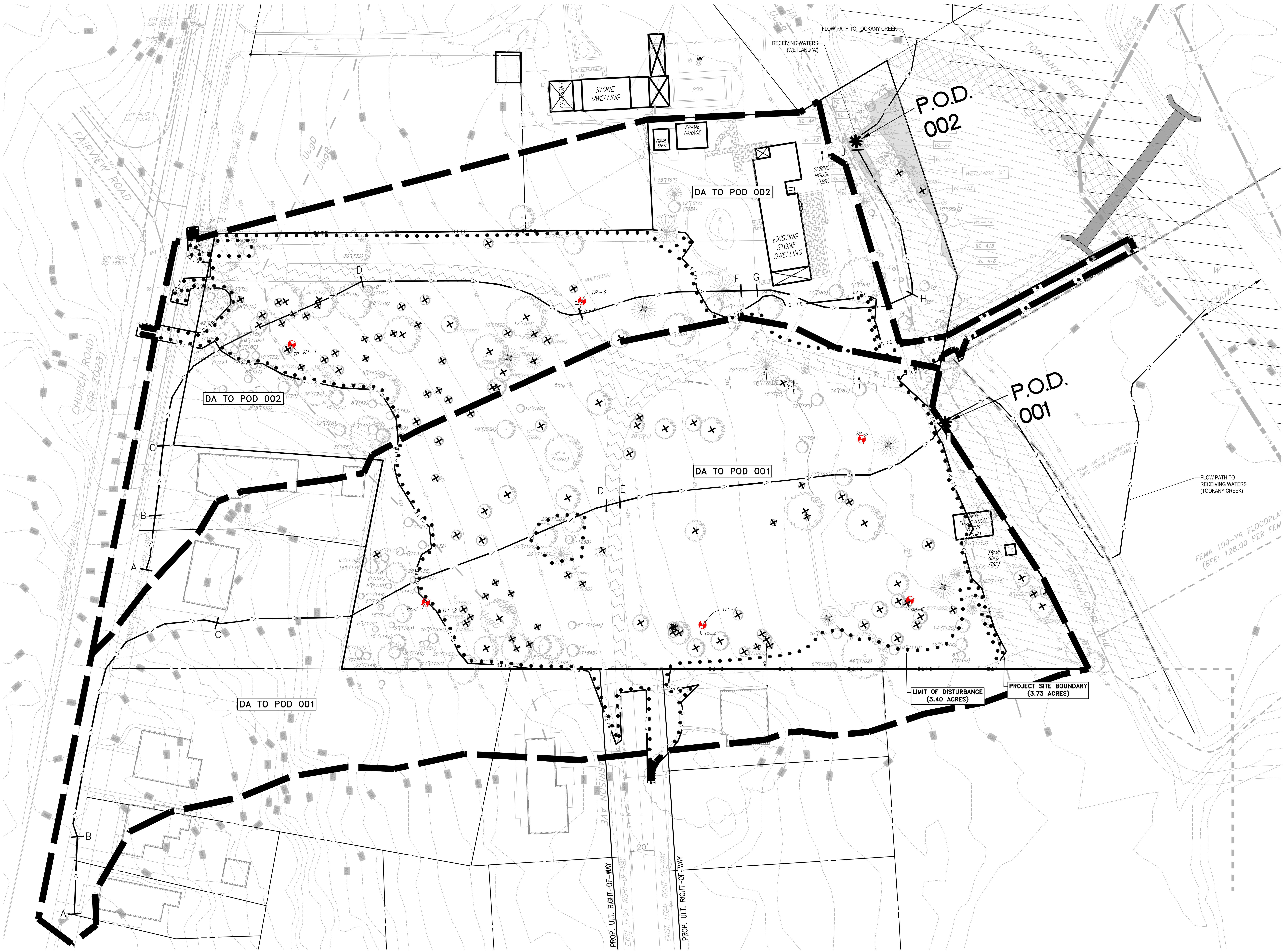

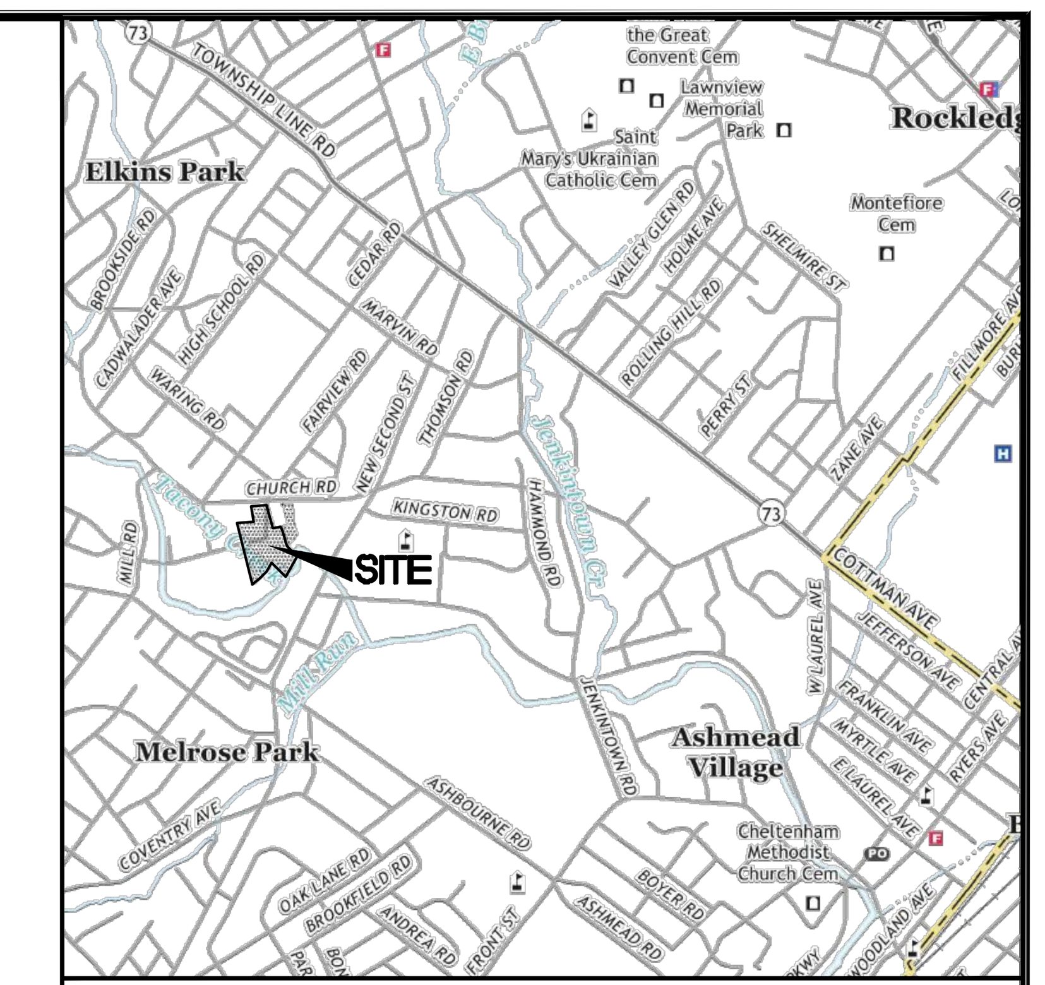

LOCATION MAP
SCALE: 1"=2,000'

THE NATIONAL MAP BY U.S.G.S.
FRANKFORD PA 2019 QUADRANGLE

LEGEND

- PRE-DEVELOPMENT DRAINAGE AREA BOUNDARY
- P.O.D. — POINT OF DISCHARGE
- LIMIT OF DISTURBANCE
- PROJECT SITE BOUNDARY
- TIME OF CONCENTRATION PATH

REVISIONS

5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
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GRAPHIC SCALE: 0 40 80 120 160

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FINAL PLAN

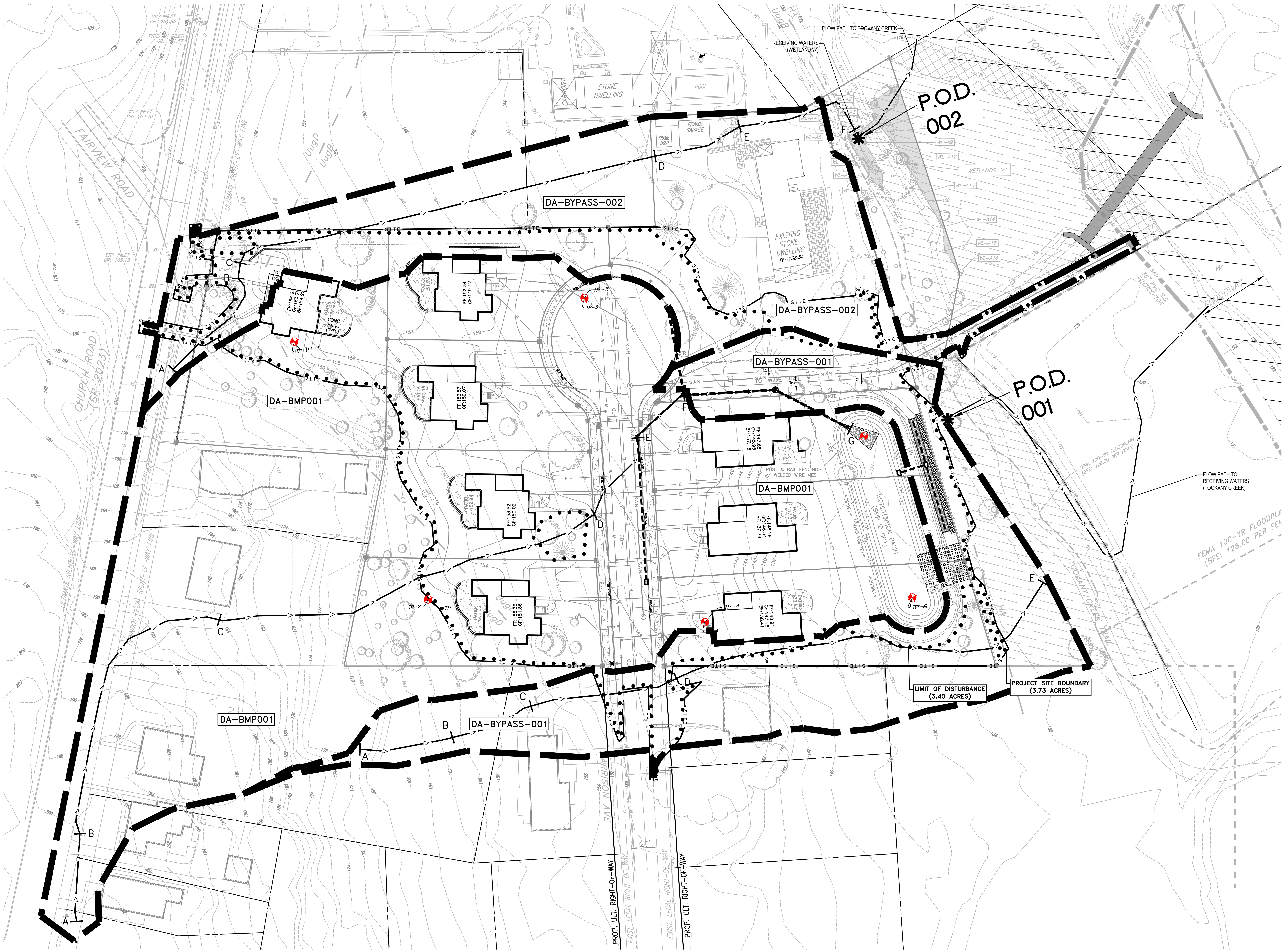
PRE-DEVELOPMENT DRAINAGE AREA BOUNDARY PLAN

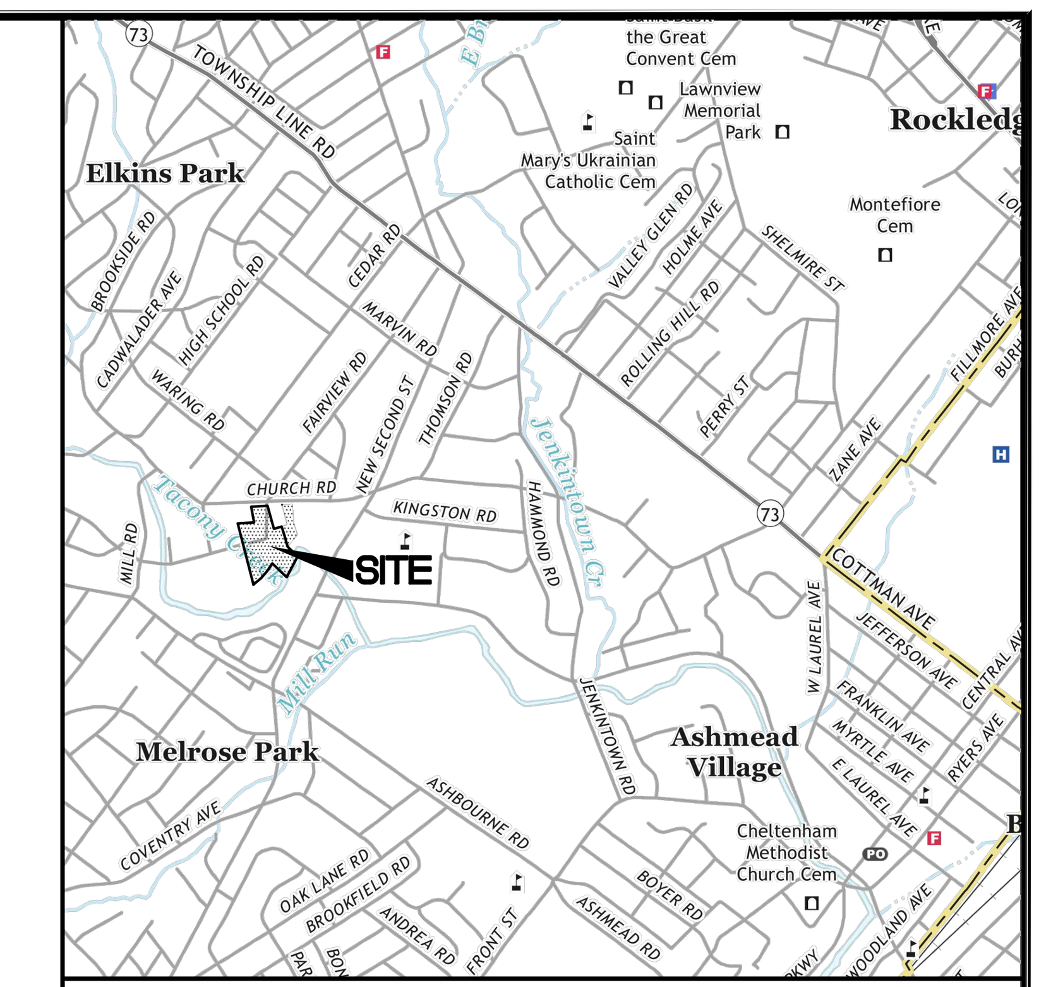
222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — ROBERT E. BLUE, JR.
9/12/2023
ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=40'
DATE:	JOB NUMBER:	SHEET NUMBER:
2021-09-30	2154-10E	17 of 31





LOCATION MAP
SCALE: 1"=2,000'

THE NATIONAL MAP BY U.S.G.S.
FRANKFORD PA 2019 QUADRANGLE

LEGEND

P.O.D. ✱	POINT OF DISCHARGE
	LIMIT OF DISTURBANCE
—— SITE ——	PROJECT SITE BOUNDARY
	POST-DEVELOPMENT DRAINAGE AREA BOUNDARY
—>—	TIME OF CONCENTRATION PATH

REVISIONS

5) 2022-02-08; REV. PER MCCD COMMENTS
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REGISTERED PROFESSIONAL ENGINEER

ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E
9/12/2023

FINAL PLAN

POST-DEVELOPMENT DRAINAGE AREA BOUNDARY PLAN

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=40'
DATE:	JOB NUMBER:	SHEET NUMBER:
2021-09-30	2154-10E	18 of 31

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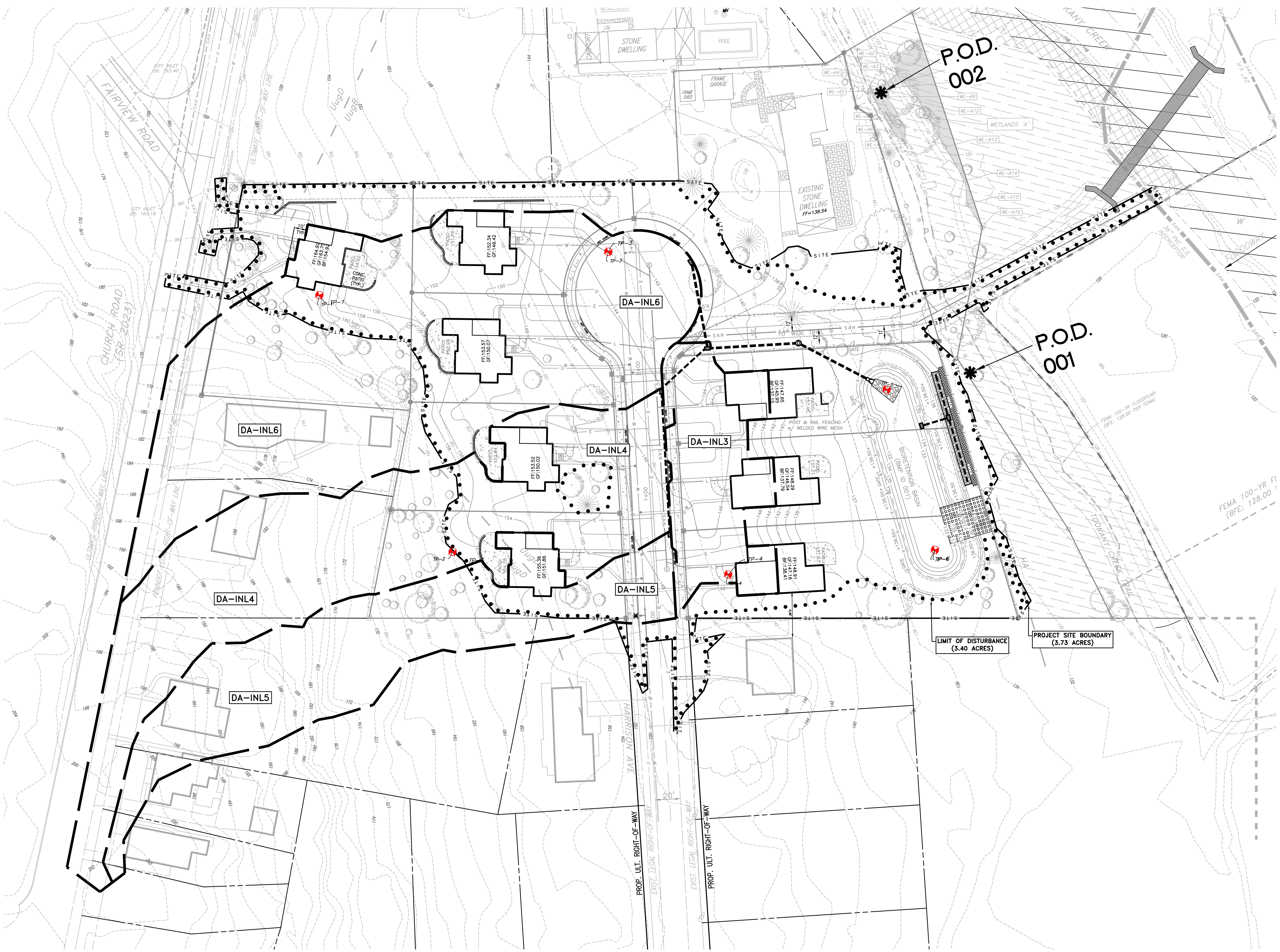

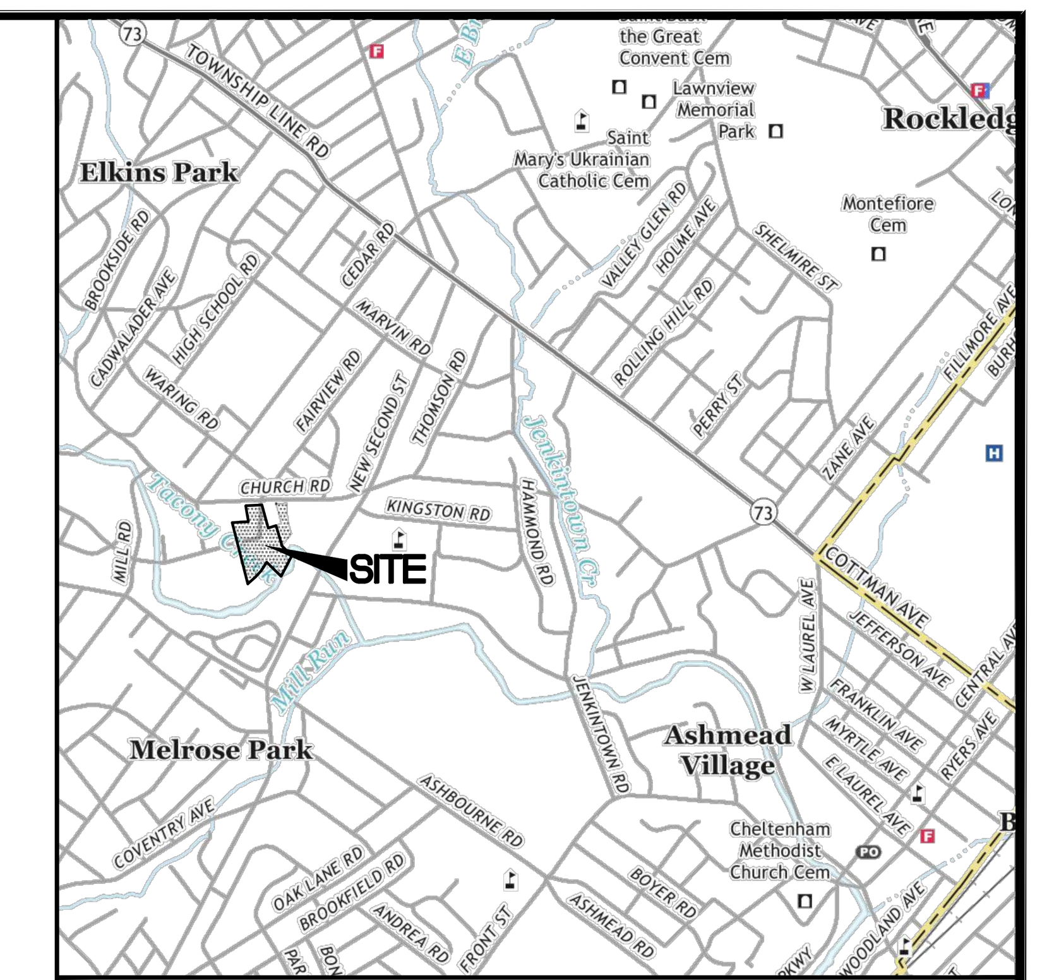

LOCATION MAP
SCALE: 1"=2,000'

THE NATIONAL MAP BY U.S.G.S.
FRANKFORD PA 2019 QUADRANGLE

LEGEND

- P.O.D. ✱ POINT OF DISCHARGE
- LIMIT OF DISTURBANCE
- PROJECT SITE BOUNDARY
- INLET DRAINAGE AREA BOUNDARY

REGISTERED PROFESSIONAL ENGINEER

ROBERT E. BLUE JR. 9/12/2023 (DATE)
LICENSE NO. 26169-E

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FINAL PLAN

INLET DRAINAGE AREA BOUNDARY PLAN

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

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DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=40'
DATE: 2021-09-30	JOB NUMBER: 2154-10E	SHEET NUMBER: 19 of 31

GENERAL NOTES:

1. THE STORMWATER MANAGEMENT FACILITIES AND INFRASTRUCTURE (AS SHOWN ON THE PLANS) ARE PERMANENT FACILITIES AND SUBJECT TO THE CONDITIONS OF AN APPROVED NPDES PERMIT WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PADEP). THE STORMWATER FACILITIES AND SHALL NOT BE MODIFIED OR REMOVED UNLESS PRIOR APPROVAL IS GRANTED BY THE MUNICIPALITY AND THE PADEP.
2. CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY SITE CONSTRUCTION ACTIVITIES.
3. IN ALL CASES, WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL NOT USE SCALED DIMENSIONS FOR CONSTRUCTION WITHOUT CONFIRMATION BY THE DESIGN ENGINEER. CONTRACTOR SHALL VERIFY AD BE RESPONSIBLE FOR ALL DIMENSIONS ON THE PROJECT SITE. THE DESIGN ENGINEER MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.
4. IF THE CONDITIONS ON THE GROUND DIFFER FROM THE APPROVED PLANS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER AND THE MUNICIPAL ENGINEER IN WRITING.
5. SHOULD A PERCHED WATER TABLE BE ENCOUNTERED DURING THE INSTALLATION OF ANY BMP, THE DESIGN ENGINEER SHALL BE NOTIFIED TO ADDRESS ANY POTENTIAL PLAN AND PERMITTING REVISIONS.
6. WETLANDS: NO ALLUVIAL SOILS OR WETLAND AREAS ARE PRESENT WITHIN THE PROJECT LIMITS.
7. SOILS BOUNDARIES AND INFORMATION HAS BEEN TAKEN FROM THE U.S. DEPARTMENT OF AGRICULTURE WEB SOIL SURVEY (WWW.WEBSOILSURVEY.NRCS.USDA.GOV)
8. THE SITE DOES NOT CONTAIN PRIME AGRICULTURAL SOILS. REFER TO THE SOIL SUMMARY TABLE FOR ADDITIONAL INFORMATION.
9. THE SITE DOES NOT LIE WITHIN THE DESIGNATED FEMA 100-YR FLOODPLAIN LIMIT. FLOOD PLAIN MAPPING TAKEN FROM FEMA MAP NUMBER 40291C0403G DATED MARCH 2, 2016.
10. BASE MAPPING ON SITE TAKEN FROM A FIELD SURVEY PERFORMED BY ROBERT E. BLUE CONSULTING ENGINEERS, P.C.

SEQUENCE OF CONSTRUCTION

NOTES:

A. ALL EARTH DISTURBANCE SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF CONSTRUCTION. EACH STAGE/STEP SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE/STEP IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE.
B. EROSION AND SEDIMENT CONTROLS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREA OF THESE CONTROLS. ONLY LIMITED DISTURBANCE IS PERMITTED TO PROVIDE ACCESS TO THE EROSION AND SEDIMENT CONTROL AREAS FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE CONTROLS. THE O/RP MUST INFORM THE MUNICIPALITY THAT THE APPLICABLE E&S CONTROLS ARE INSTALLED, STABILIZED AND FUNCTIONAL BEFORE INITIATING EARTH DISTURBANCE.
C. WORK AREAS SHALL BE DELINEATED AND SURVEY CONTROL POINTS SHALL BE PROTECTED. WETLANDS ARE TO BE FENCED OR STAKED IN THE FIELD. THERE IS TO BE NO EARTH DISTURBANCE OR VEGETATIVE CLEARING IN AREAS PROTECTED BY BARRIER FENCE OR STAKES. EARTH DISTURBANCE WITHIN THESE AREAS WITHOUT REQUIRED PERMITS WILL RESULT IN POTENTIAL VIOLATIONS OF COMMONWEALTH AND FEDERAL REGULATIONS. ALL COSTS ASSOCIATED WITH DISTURBANCE OF THESE AREAS WILL BE INCURRED SOLELY AT CONTRACTOR'S EXPENSE.
D. ALL EARTH DISTURBANCES SHALL BE WITHIN THE DELINEATED LIMITS OF DISTURBANCE. NO FILL SHALL BE TAKEN OR PLACED OUTSIDE THE DESIGNATED LIMITS OF DISTURBANCE.

SEQUENCE:

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATION SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER AND THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE MEETING.
2. MARK THE LIMIT OF DISTURBANCE.
3. INSTALL PERIMETER CONTROLS, ROCK CONSTRUCTION ENTRANCE, COMPOST FILTER SOCK, INLET PROTECTION AND TREE PROTECTION FENCING. A CONCRETE WASHOUT SHALL ALSO BE PROVIDED PRIOR TO COMMENCING ANY CONCRETE ACTIVITIES. LIMITED DISTURBANCE IS PERMITTED FOR THE INSTALLATION OF THESE CONTROLS.
4. **(CRITICAL STAGE) INSTALL SEDIMENT TRAP #1.** CONSTRUCTION OF SEDIMENT TRAP #1 SHALL INCLUDE:
   - 4.1. PROVIDE TEMPORARY CONSTRUCTION FENCING AROUND THE FOOTPRINT OF SEDIMENT TRAP #1 (BMP ID 001). HEAVY MACHINERY SHALL BE KEPT OUT OF THE FOOTPRINT AREA OF SEDIMENT TRAP #1 TO THE GREATEST EXTENT FEASIBLE, AND CARE SHOULD BE TAKEN NOT TO COMPACT SOILS WITHIN THE BASIN AREA.
   - 4.2. STRIP TOPSOIL WITHIN THE VICINITY OF SEDIMENT TRAP #1 AND PERFORM EARTHWORK NECESSARY TO CONSTRUCT THE BERM.
   - 4.3. **(CRITICAL STAGE): INSTALLATION OF LEVEL SPREADER #1.** INSTALLATION OF LEVEL SPREADER #1 SHALL INCLUDE:
     - 4.3.1. STRIP TOPSOIL IN THE VICINITY OF LEVEL SPREADER #1.
     - 4.3.2. EXCAVATE TO THE BOTTOM OF LEVEL SPREADER.
     - 4.3.3. INSTALL THE FLAT CONCRETE WALL ALONG THE LOW EDGE AND SIDES OF THE LEVEL SPREADER.
     - 4.3.4. INSTALL STONE BEDDING, INLET STRUCTURE (LS#1), AND PERFORATED PIPING ALONG THE LENGTH OF THE SPREADER.
     - 4.3.5. BACKFILL WITH STONE TO THE ELEVATIONS SPECIFIED AND STABILIZE THE AREA AROUND THE LEVEL SPREADER WITH PERMANENT SLOPE MATTING.
   - 4.4. INSTALL THE SEDIMENT TRAP #1 OUTLET STRUCTURE AND PIPE CONNECTION TO LEVEL SPREADER #1. ANTI-SEEP COLLARS SHALL BE INSTALLED ALONG THE OUTLET PIPE IN ACCORDANCE WITH THE DETAIL PROVIDED ON THESE PLANS.
   - 4.5. CONDUCT THE REMAINING EXCAVATION AND EARTHWORK NECESSARY TO INSTALL SEDIMENT TRAP #1, INCLUDING THE EMERGENCY SPILLWAY. THE EMERGENCY SPILLWAY SHALL BE STABILIZED WITH CONCRETE CHECKER BLOCKS AS SPECIFIED ON THESE PLANS.
   - 4.6. INSTALL THE BAFFLE WALLS AND PLACE THE CLEANOUT STAKE.
   - 4.7. INSTALL THE FILTREXX RUNOFF DIVERSION SOCK TO PROVIDE POSITIVE DRAINAGE TO THE SEDIMENT TRAP. THE FILTREXX RUNOFF DIVERSION SOCK SHALL REMAIN IN PLACE UNTIL INLET (INL-6) AND THE ASSOCIATED STORMWATER PIPES CONVEYING RUNOFF TO SEDIMENT TRAP #1.
   - 4.8. COMPOST FILTER SOCK CFS-5 MAY BE REMOVED ONCE LS#1 AND SEDIMENT TRAP #1 ARE FUNCTIONING AND THE AREA DOWNSLOPE OF SEDIMENT TRAP #1 AND LS#1 IS STABILIZED.
5. INSTALL COMPOST FILTER SOCK SEDIMENT TRAP #1.
6. CLEAR AND GRUB WITHIN THE REMAINDER OF THE LIMIT OF DISTURBANCE. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE PLANS. EXISTING FEATURES SHALL BE REMOVED IN ACCORDANCE WITH THE DEMOLITION PLAN.
7. PERFORM EARTHWORK TO REACH SUBGRADE ELEVATIONS FOR THE REMAINDER OF THE SITE. CARE SHOULD BE TAKEN TO PROVIDE POSITIVE DRAINAGE TO THE SEDIMENT TRAP DURING EARTHWORK OPERATIONS.
8. INSTALL REMAINING UTILITIES INCLUDING STORMWATER, SANITARY, WATER, ELECTRIC, LIGHTING POWER CONDUITS, GAS, AND COMMUNICATIONS, AS APPLICABLE. UTILITY INSTALLATION MAY BE PERFORMED CONCURRENTLY WITH THE EARTHWORK OPERATIONS AS NEEDED TO LIMIT EXCAVATION DEPTH. STORMWATER AND SANITARY GRAVITY SYSTEMS SHALL BE INSTALLED STARTING AT THE FARTHEST DOWNSTREAM END AND WORKING UPSTREAM. RIPRAP APRONS SHALL BE INSTALLED IMMEDIATELY FOR ANY STORMWATER OUTFALLS, END WALLS, OR FLARED END SECTIONS.
   - 8.1. SEDIMENT LADEN RUNOFF SHOULD BE DIRECTED TOWARDS NEWLY INSTALLED INLETS (AND ULTIMATELY THE SEDIMENT TRAP) IMMEDIATELY AFTER INSTALLATION THROUGH THE USE OF EARTHEN BERMS OR OTHER EQUIVALENT DIVERSION UNTIL STABILIZATION IS ACHIEVED.
9. UPON INSTALLATION OF INLET (INL-6) AND ASSOCIATED CURBING, TEMPORARY EARTHEN BERM, OR EQUIVALENT MEASURE TO CONVEY SEDIMENT LADEN RUNOFF TO SEDIMENT TRAP #1, THE FILTREXX RUNOFF DIVERSION SOCK MAY BE REMOVED.
10. COMMENCE BUILDING CONSTRUCTION. BUILDING CONSTRUCTION MAY BE PERFORMED CONCURRENTLY WITH UTILITY INSTALLATION AT THE CONTRACTOR'S DISCRETION.
11. INSTALL CURBING AND PAVEMENT AREAS.
12. PERFORM FINAL GRADING AND PLACEMENT OF TOPSOIL IN ALL LANDSCAPE AREAS. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. ANY AREAS WILL NOT BE CONSIDERED STABILIZED UNTIL A MINIMUM UNIFORM 70% VEGETATIVE COVER HAS BEEN ACHIEVED. IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED.
13. INSTALL THE PROPOSED LANDSCAPING, LIGHT FIXTURES, AND SIGNAGE.
14. **(CRITICAL STAGE):** CONVERT SEDIMENT TRAP #1 TO ITS FINAL CONFIGURATION AS PCSM BMP ID 001 (BIORETENTION BASIN). CONVERSION OF THE SEDIMENT TRAP SHALL CONSIST OF THE FOLLOWING:
    - 14.1. CONVERSION OF THE SEDIMENT TRAP MAY COMMENCE ONCE A MINIMUM OF 70% OF THE AREA TRIBUTARY TO THE SEDIMENT TRAP REACHES FINAL STABILIZATION.
    - 14.2. THE STORMWATER DRAINAGE SYSTEM TRIBUTARY TO THE SEDIMENT TRAP, THE OUTLET STRUCTURE, AND THE PIPE SYSTEM WITHIN LEVEL SPREADER #1 SHALL BE FLUSHED CLEAN OF ANY SEDIMENT.
    - 14.3. REMOVE THE BAFFLE WALLS AND CLEANOUT STAKE. ACCUMULATED SEDIMENT SHALL BE EXCAVATED AND REMOVED.
    - 14.4. EXCAVATE TO THE BASIN BOTTOM, SCARIFY THE UNCOMPACTED SUBGRADE SOILS, AND INSTALL THE AMENDED SOIL TO REACH FINISHED GRADE. AMENDED SOILS SHALL BE INSTALLED IN MAXIMUM 18-INCH LIFTS.
    - 14.5. THE TEMPORARY DEWATERING HOLES OF THE OUTLET STRUCTURE (OS#1) FROM THE E&S CONFIGURATION SHALL BE REPAIRED WITH A PERMANENT WATERTIGHT SEAL.
    - 14.6. INSTALL SEED MIX AND COVER CROP PROPOSED WITHIN THE BASIN BOTTOM AND SIDE SLOPES. **TEMPORARY STRAW MATTING OR A SUITABLE ALTERNATIVE SHALL BE INSTALLED IMMEDIATELY UPON PLANTING OF SEED MIX TO KEEP SEED IN PLACE.**
    - 14.7. ANY AREAS DISTURBED BY CONVERSION ACTIVITIES SHALL BE STABILIZED IMMEDIATELY.
15. INSTALL ASPHALT WEARING COURSE AND PAVEMENT STRIPING.
16. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (70% UNIFORM STABILIZATION OF DISTURBED SOIL ON SITE WILL BE COVERED WITH VEGETATION), TEMPORARY EROSION CONTROLS MUST BE REMOVED. SHOULD ANY AREAS BECOME DISTURBED DURING REMOVAL OF THE CONTROLS, THEY MUST BE STABILIZED IMMEDIATELY.
17. ALL SEDIMENT SHALL BE FLUSHED FROM THE ADJACENT STATE, MUNICIPAL AND COUNTY STORM SEWERS. CONTRACTOR SHALL NOT FLUSH SEDIMENT INTO WATERWAYS. TO FLUSH STORM SEWERS, CONTRACTOR SHALL BLOCK THE LOWEST INVERT OF THE SYSTEM AND PUMP SEDIMENT LADEN WATER THROUGH A FILTER BAG OR OTHER APPROVED DEVICE AND DISCHARGE IN AN APPROPRIATE MANNER (I.E. TO STABILIZED GRADE, OR TANKER TRUCK AND DISPOSED OF PROPERLY).
18. AT THE COMPLETION OF CONSTRUCTION AND UPON FINAL SITE STABILIZATION, THE O/RP SHALL SUBMIT THE NOTICE OF TERMINATION (N.O.T.) TO THE COUNTY CONSERVATION DISTRICT.

CRITICAL STAGES:

THE PADEP CHAPTER 102 REGULATIONS REQUIRE A LICENSED PROFESSIONAL OR HIS/HER DESIGNEE BE PRESENT ON-SITE TO OBSERVE, INSPECT AND SIGN-OFF ON THE CRITICAL STAGES OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (PCSM) IMPLEMENTATION AND FACILITY INSTALLATION. THE LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ON-SITE FOR THE FOLLOWING CRITICAL STAGE OF THE PCSM PLAN IMPLEMENTATION:

- INSTALLATION OF SEDIMENT TRAP #1
- INSTALLATION OF LEVEL SPREADER #1
- CONVERSION OF SEDIMENT TRAP #1 INTO PCSM BMP ID 001 (BIORETENTION BASIN)

OPERATION AND MAINTENANCE NOTES:

THE STORMWATER INFRASTRUCTURE PROPOSED FOR THIS PROJECT SHALL BE DEFINED AS ALL SITE STORMWATER MANAGEMENT FACILITIES AND CONTROLS SPECIFIC AS INDICATED ON THE APPROVED PCSM PLAN. SPECIFIC OWNERSHIP AND MAINTENANCE RESPONSIBILITIES SHALL BE DEFINED AS FOLLOWS:

1. APPLICANT'S RESPONSIBILITIES: IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO ENSURE THAT ALL DEVICES HEREIN ARE INSTALLED AND MAINTAINED DURING CONSTRUCTION BY THE DESIGNATED CONTRACTOR(S) UNTIL SUCH TIME AS PERMANENT RESPONSIBILITY IS TRANSFERRED TO THE PROPERTY OWNER.
2. CONTRACTOR'S RESPONSIBILITIES: THE CONTRACTORS RESPONSIBILITIES SHALL INCLUDE BUT NOT BE LIMITED TO THE PROPER INSTALLATION AND MAINTENANCE OF THE DEVICES HEREIN UNTIL SUCH TIME AS PERMANENT OWNERSHIP IS TRANSFERRED TO THE PROPERTY OWNER.
3. PROPERTY OWNER RESPONSIBILITIES: THE PROPERTY OWNER, ITS SUCCESSOR OR ASSIGNS SHALL BE RESPONSIBLE FOR THE PERPETUAL MAINTENANCE OF ALL "SITE" STORMWATER MANAGEMENT DEVICES AND INFRASTRUCTURE, SUCH DEVICES SHALL INCLUDE:
   - 3.1. DEVICES DEFINED IN THE BMP MAINTENANCE RESPONSIBILITY SCHEDULE BELOW
   - 3.2. STORMWATER MANAGEMENT BASINS, INCLUDING ALL STORM SEWERS AND STRUCTURES TRIBUTARY TO SUCH BASINS.
4. PROPERTY OWNER'S RESPONSIBILITIES: DEVICES AS DEFINED IN THE BMP MAINTENANCE SCHEDULE BELOW, THE PROPERTY OWNER, ITS SUCCESSOR OR ASSIGNS SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT DEVICES DEPICTED HEREIN TO INCLUDE BIO-RETENTION BMPS AND LANDSCAPING.
5. EACH PCSM BMP SHOULD BE INSPECTED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE. THEY SHOULD ALSO BE INSPECTED AND MAINTENANCED AFTER 2-YEAR RAIN EVENTS. THEY SHOULD REGULARLY BE MAINTENANCED TWICE A YEAR IN SPRING AND FALL.

THE STORMWATER MANAGEMENT DEVICES FOR THE SUBJECT PROPERTY WILL BE INSTALLED, INSPECTED AND/OR MAINTAINED BE THE APPROPRIATE PARTY AS INDICATED IN THE RESPONSIBILITIES ABOVE. INSPECTIONS AND MAINTENANCE SHALL FALL INTO TWO CLASSIFICATIONS:

- * CLASS I: SHALL BE DEFINED AS THOSE ROUTINE INSPECTION AND/OR MAINTENANCE ACTIVITIES WHICH CAN BE PERFORMED WITHOUT THE DIRECTION OF A CERTIFIED PROFESSIONAL ENGINEER.
- * CLASS II: SHALL BE DEFINED AS THOSE INSPECTION AND/ OR MAINTENANCE ACTIVITIES WHICH MUST BE PERFORMED BY OR UNDER THE DIRECTION OF A CERTIFIED PROFESSIONAL ENGINEER LICENSED BY THE COMMONWEALTH OF PENNSYLVANIA.

INSTALLATION: INSTALLATION OF THE DEVICES WILL BE PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND/OR MANUFACTURERS SPECIFICATIONS UNLESS APPROVED BY THE MUNICIPALITY, COUNTY CONSERVATION AND/OR PADEP.

INSPECTIONS AND REPORTING: THE SITE STORMWATER INFRASTRUCTURE SHALL BE INSPECTED ON A ROUTINE BASIS AS DEFINED BELOW.

CLASS I INSPECTIONS SHALL BE PERFORMED ON A QUARTERLY BASIS FOR THE SPECIFIC CONTROL. RESULTS OF CLASS I INSPECTIONS SHALL BE COMMUNICATED TO THE CLASS II INSPECTOR AT THE TIME OF THE CLASS II INSPECTION. CLASS I INSPECTIONS ARE THE RESPONSIBILITY OF THE CONTROL OWNER.

CLASS II INSPECTIONS SHALL BE PERFORMED ONCE A YEAR FOR THE FIRST FIVE YEARS AND ONCE EVERY THREE YEARS THEREAFTER. IN ADDITION THE STORMWATER INFRASTRUCTURE SHALL BE INSPECTED AFTER EVERY MAJOR RAINFALL EVENT (2YR EVENT OR GREATER). INSPECTIONS FOR TMAJOR EVENTS MAY BE CONSIDERED THE ANNUAL INSPECTION IF THE STORM EVENT PRECEEDS OR FOLLOWS THE REGULAR DATE BY TWO WEEKS OR LESS. THE PRUPOSE OF THE INSPECTIONS IS TO ENSURE THE FACILITIES CONTINUE TO OPERATE AS DESIGNED. CLASS II INSPECTIONS FOR ALL CONTROL TYPES ARE THE RESPONSIBILITY OF THE CONTROL OWNER.

CLASS II INSPECTION REPORT: THE INSPECTING ENGINEER SHALL PREPARE A WRITTEN INSPECTION REPORT AND SUBMIT THE REPORT TO THE MUNICIPALITY AND THE COUNTY CONSERVATION DISTRICT FOR ALL MAJOR STORM EVENT, ANNUAL, AND TRIENIAL INSPECTIONS. THE MUNICIPALITY AND THE COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED WITHIN 10 DAYS UPON DISCOVERY OF DYSFUNCTIONAL STORMWATER FACILITIES. THE MUNICIPALITY AND THE COUNTY CONSERVATION DISTRICT SHALL ALSO BE MADE AWARE OF ANY AND ALL PROPOSED MODIFICATIONS AND REPAIRS OF THE FACILITIES PRIOR TO IMPLEMENTATION, EXCLUDING MAINTENANCE AS DESCRIBED BELOW. ALL REPAIRS AND MIDIFICATIONS SHALL BE ACCORDING TO THE SPECIFICATIONS AS NOTED ON THE APPROVED PLANS, WITHIN THE MANUFACTURERS SPECIFCATIONS OR THE INSPECTORS REPORT.

CLASS I INSPECTIONS ACTIVITIES:
THE FOLLOWING ARE THE REQUIREMENTS FOR ALL CLASS I INSPECTIONS:

1. STORMWATER RAIN GARDENS SHALL BE INSPECTED FOR SEDIMENT OR DEBRIS COLLECTION ON THE BOTTOM OF THE BASIN, OUTLET STRUCTURE, AND OUTLET PIPE. DEBRIS OR SEDIMENT SHALL BE REMOVED AS SOON AS POSSIBLE.
2. STORM INLETS SHALL BE VISUALLY INSPECTED AND SHALL BE CLEANED OF ANY LEAVES OR DEBRIS.
3. OBSTRUCTIONS OF THE INLETS OR OUTLET DEVICES BY TRASH AND DEBRIS
4. ANIMAL BURROWING
5. PERMANENTLY PONDED AREAS IN THE BOTTOM OF RAIN GARDENS OR BIORETENTION FACILITIES
6. ALGAE GROWTH, STAGNANT POOLS, OR NOXIOUS ODORS
7. POOR OR DISTRESSED STAND OF GRASS
8. DISTRESSED VEGETATION
9. SIGNS OF VANDALISM
10. SEDIMENT IN RIP-RAP APRONS

CLASS II INSPECTION ACTIVITIES: THE FOLLOWING ARE THE REQUIREMENTS FOR ALL CLASS II INSPECTIONS:

1. ALL ITEMS LISTED UNDER CLASS I INSPECTIONS
2. EXCESSIVE EROSION OR SEDIMENTATION
3. CRACKING OR SETTLING OF DEVICES
4. DETERIORATION OF PIPES AND CONDUITS, INCLUDING SEALS AND JOINTS AT ALL STRUCTURES
5. DETERIORATED EMERGENCY SPILLWAYS
6. WASHOUTS, BULGES OR SUMPS
7. UNSTABLE SIDE SLOPES AND EMBANKMENTS
8. DETERIORATION OF DOWNSTREAM CHANNELS
9. PIPING ALONG INLET/OUTLET BARRELS OF RAIN GARDENS
10. DETERIORATION/SCOURING OF ENERGY DISSIPATERS
11. OUTLET PROTECTION

MAINTENANCE: MAINTENANCE AND REPAIRS OF A CONTROL IS THE RESPONSIBILITY OF THE CONTROL OWNER. MAINTENANCE SHALL INCLUDE BUT NOT BE LIMITED TO THE MAINTENANCE OF ALL GRADES AND ELEVATIONS OF SUCH FACILITIES AND SHALL DO NOTHING TO ALTER OR DAMAGE SAME OR OTHER BASIN STRUCTURES AND DEVICES. THE AFORESAID RESPONSIBILITIES OF THE HOA SHALL BE SUBJECT TO ENFORCEMENT BY THE MUNICIPALITY. IN THE EVENT THAT THE OWNER FAILS TO HONOR THE RESPONSIBILITY SET FORTH HEREIN, IN ANY MANNER, THE MUNICIPALITY SHALL HAVE THE RIGHT OF ENTRY UPON AND WITHIN THE AREA OF THE DEVICES TO UNDERTAKE SUCH INSPECTION, MAINTENANCE OR CORRECTIVE MEASURES. THE COST OF SUCH, AS WELL AS ADMINISTRATIVE, ENGINEERING AND LEGAL COSTS FOR ENFORCEMENT, MAY BE IMPOSED UPON THE RESPONSIBLE PARTY, AS DETERMINED AND ASSESSED BY THE MUNICIPALITY. FAILURE TO REMEDY ANY ASSOCIATED COSTS DESCRIBED, MAY BE SUBJECT TO THE IMPOSITION OF A LIEN BY THE MUNICIPALITY AGAINST THE OWNER/OWNERS OF THE CONTROLS OR LOTS IN QUESTION, IN THE SAME MANNER AS THE MUNICIPALITY MIGHT OTHERWISE BE EMPOWERED BY LAW TO ASSESS OR IMPOSE A LIEN AGAINST A PROPERTY FOR MUNICIPAL IMPROVEMENTS.

DURING INSPECTION AND REPAIR WORK, LIMIT VEHICULAR OPERATION ON THE CONTROL. USE LOW GROUND PRESSURE EQUIPMENT AS MUCH AS POSSIBLE WHEN PERFORMING MAINTENANCE ACTIVITIES.

PCSM LONG TERM OPERATIONS & MAINTENANCE REQUIREMENTS:

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER 102.7(b)(5) RELATING TO PERMIT TERMINATION.

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPs OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEPARATELY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.

MAINTENANCE REQUIREMENTS:

CLASS I MAINTENANCE: THE FOLLOWING ITEMS ARE THE MINIMUM REQUIRED MAINTENANCE ITEMS FOR CLASS I MAINTENANCE ACTIVITY IN ADDITION TO ANY AND ALL ITEMS LISTED FOR THE SPECIFIC DEVICE ON THE APPROVED PCSM PLANS.

- * CLEANING OF DEBRIS FROM ALL FACILITIES TO ENSURE THEY FUNCTION AS INTENDED
- * WEEDING AND PRUNING OF VEGETATION
- * MOWING AS INDICATED FOR THE SPECIFIC DEVICE
- * WATERING OF VEGETATION AS NEEDED

CLASS II MAINTENANCE: THE TASKS AND PROCEDURES FOR CLASS II MAINTENANCE WILL BE DETERMINED FROM THE CLASS II INSPECTION REPORT. ALL CLASS II MAINTENANCE WILL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER. A CERTIFICATE OF THE COMPLETION OF CLASS II MAINTENANCE WILL BE PROVIDED TO THE MUNICIPALITY AND THE COUNTY CONSERVATION DISTRICT.

MAINTENANCE PROCEDURES:

RAINGARDEN/BIORETENTION BASIN MAINTENANCE

- * CLEAN AND REPAIR ALL FEATURES AS NECESSARY
- * REMOVE ACCUMULATED SEDIMENT WHEN CONTROL IS PRIMARILY DRY AND DISPOSE OF IN AN APPROVED MANNER.
- * STRUCTURES SHALL BE CLEARED IMMEDIATELY OF ALL DEBRIS THAT PREVENTS PROPER OPERATION
- * EVALUATE VEGETATIVE GROWTH AND MAINTAIN. TRIM AWAY DEAD OR DYING VEGETATION. REPLANT OR RESEED AREAS TO MAINTAIN STABILIZED GROUND COVER CONDITIONS.
- * ENSURE THE FACILITY DEWATERS WITHIN 72 HOURS AFTER A STORM EVENT. IF THE FACILITY FAILS TO DEWATER, CONSULT A QUALIFIED INDIVIDUAL SUCH AS A CIVIL ENGINEER TO DETERMINE THE CAUSE OF FAILURE AND DEVELOP A REMEDIATION PLAN, AS APPLICABLE.

STORM SEWER PIPE MAINTENANCE
SHALL BE INSPECTED FOR DEBRIS THAT MAY INHIBIT THE FLOW OF STORMWATER THROUGH THE CULVERT. SHOULD ANY SIGNIFICANT DEBRIS BE FOUND DURING THESE INSPECTIONS, IT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

STORM SEWER INLETS, STRUCTURES AND ENDWALL MAINTENANCE
REMOVE ACCUMULATED TRASH AND SEDIMENT FROM THE ABOVE GROUND PORTION OF THE STRUCTURE. FOR WATER QUALITY STRUCTURES WITH A SUMP AND SNOUT, REMOVE DEBRIS AND SEDIMENT FROM THE SUMP IF GREATER THAN HALF FULL. IF SUMP REQUIRES CLEANING, INSPECT SNOUT/DEVICE FOR CLOGGING AND DETERIORATION; CLEAN AND REPAIR AS NECESSARY ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

REMOVE ALL GRATES AND/OR LIDS AND INSPECT STRUCTURAL STABILITY, PROPER ANCHORAGE, AND APPLICABLE SECURITY CONTROLS. INSPECT STRUCTURE FOR STABILITY AND DETERIORATION. FULLY OPEN AND CLOSE ANY VALVES OR SHUTOFFS IN THE DEVICE. INSPECT ANY ADJACENT SLOPE AND/OR CHANNEL LINING FOR CLOGGING, EROSION, DETERIORATION AND UNWANTED VEGETATION. CLEAN AND REPAIR AS NECESSARY. DISPOSE OF ALL MATERIALS IN AN APPROVED MANNER.

LANDSCAPING OPERATION AND MAINTENANCE
IT SHALL BE THE ULTIMATE RESPONSIBILITY OF SUCCESSIVE LANDOWNERS TO INSURE THAT THE REQUIRED PLANTINGS ARE PROPERLY MAINTAINED. DEAD OR DISEASED PLANT MATERIALS SHALL BE REMOVED OR TREATED PROPERLY BY THE LANDOWNER(S) AND REPLACED DURING THE NEXT GROWING SEASON.

ALL SIGHT DISTANCES SHALL REMAIN CLEAR, AND ANY PLANT MATERIALS THAT COULD ENDANGER SAFETY SUCH AS UNSTABLE LIMBS SHALL BE REMOVED AND THE PLANT MATERIALS SHALL BE REPLACED IF NECESSARY. IT SHALL BE THE RESPONSIBILITY OF ALL PROPERTY OWNERS TO MAINTAIN ALL PLANTINGS AND ARCHITECTURAL ELEMENTS TO INSURE A SAFE ENVIRONMENT.

PERMANENT SEEDING SPECIFICATIONS:

PERMANENT SEEDING APPROVED BY THE MUNICIPALITY SHALL BE PERFORMED ON ALL DISTURBED SOIL AREAS. SEEDING TO BE AS FOLLOWS OR WITH AN APPROVED EQUIVALENT.

- 20% PERENNIAL RYE GRASS MIXTURE (98% PURITY, APPLIED AT 20 LBS/ACRE)
- 30% PENNLAWN RED FESCUE (98% PURITY, APPLIED AT 30 LBS/ACRE)
- 50% KENTUCKY BLUEGRASS (98% PURITY, APPLIED AT 55 LBS/ACRE)

AMENDED SOILS

1. CONTRACTOR SHOULD BECOME AWARE OF SOIL AMENDMENT AREAS PRIOR TO THE START OF CONSTRUCTION AND DEVELOP A COMPREHENSIVE CONSTRUCTION STRATEGY TO PREVENT COMPACTION OF AMENDMENT AREAS UPON COMPLETION OF FINAL CONSTRUCTION ACTIVITIES.
2. RIPPING SHOULD BE DONE WITH A SOLID SHANK RIP TEETH ON A REAR TRACK MACHINE. DO NOT RIP WHEN SOILS ARE WET. AVOID RIPPING EXISTING TREE ROOTS. SPACE RIP CHANNELS 12" TO 36" APART. TILLING AND BLENDING MAY BE DONE WITH A ROTOTILLER, DISK HARROW, CHISEL PLOW, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT.
3. SOIL AMENDMENTS SHAL LBE COMPRISED OF THE FOLLOWING MINIMUM STANDARDS:
   - 3.1. 20%-30% ORGANIC COMPOST
   - 3.2. 70%-80% TOPSOIL/BASE SOIL
   - 3.3. OR EQUIVALENT APPROVED BY THE COUNTY CONSERVATION DISTRICT OR PADEP.

CONSTRUCTION SEQUENCE (FOR IMPORT OF SOILS MEETING REQUIREMENT)

1. STABILIZE ALL CONTRIBUTING AREAS BEFORE INSTALLING AMENDED SOILS.
2. FOR AREAS OF FILL IN EXCESS OF 18 INCHES: ROUGH GRADE THESE AREAS TO 18" BELOW FINISHED GRADE, INSTALL 18" OF AMENDED SOIL
3. FOR AREAS OF FILL LESS THAN 18 INCHES: RIP/SCARIFY EXISTING SUBGRADE TO A DEPTH OF 12" BELOW FINISHED GRADE, BACKFILL WITH AMENDED SOIL TO FINISHED GRADE.
4. 4. FOR AREAS OF CUT: OVER EXCAVATE A MINIMUM OF 12" BELOW FINISHED GRADE; RIP/SCARIFY THE SOIL TO A DEPTH OF 12". BACKFILL WITH AMENDED SOIL TO FINISHED GRADE.
5. SEED AREA WITH SEED SPECIFICATIONS

CONSTRUCTION SEQUENCE (AMENDMENT OF EXISTING SOILS)

1. REMOVE EXISTING TOPSOIL TO A MINIMUM DEPTH OF 12".
2. RIIP/SCARIFY SUBSOIL TO A MINIMUM DEPTH OF 8"
3. ADD 4" COMPOST; TILL AND BLEND INTO SUBSOIL.
4. ADD 4"-6" OF TOPSOIL.
5. ADD 4"-6" OF COMPOST. TILL & BLEND INTO TOPSOIL AT A RATIO OF 2 PARTS TOPSOIL TO 1 PART COMPOST.
6. ESTABLISH PERMANENT STABILIZATION (GRASS/SEEDING).

E&S PLAN AND PCSM PLAN CONSISTENCY

THE EROSION & SEDIMENT CONTROL PLAN AND THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN HAVE BEEN PROVIDED SEPARATELY; HOWEVER, THEY HAVE BEEN PLANNED, DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH ONE ANOTHER.

DISPOSAL AND RECYCLING:

THE CONTRACTOR / DEVELOPER SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OR RECYCLING OF ALL WASTE PRODUCED BY CONSTRUCTION ACTIVITIES. THE OWNER SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OR RECYCLING OF ALL WASTE PRODUCED BY THE MAINTENANCE OF PCSM BMPS.

ANTICIPATED POST-CONSTRUCTION WASTES INCLUDE: DEBRIS/TRASH (PLASTIC BAGS, CANS, BOTTLES, ETC.), YARD WASTE (LEAVES, BRANCHES, ETC.), AND PAVEMENT DE-ICING MAATERIALS (SALT, SAND, ETC.).

REMOVAL, RECYCLING, AND DISPOSAL OF ALL POST-CONSTRUCTION MATERIALS SHALL BE IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ. AND 287.1 ET SEQ. NO MATERIALS SHALL BE ILLEGALLY BURIED, DUMPED, OR DISCHARGED AT THIS SITE.

NO SOLID MATERIALS ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORMWATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS, MUST BE COLLECTED AND PLACED IN CONTAINERS FOR PROCESSING BY AN AUTHORIZED TRASH OR RECYCLING COMPANY. MATERIALS SUCH AS YARD WASTE OR OTHER NATURAL/ORGANIC MATERIALS MAY BE COMPOSTED AND USED TO BENEFIT THE ON-SITE LANDSCAPING AT THE DISCRETION OF A LICENSED LANDSCAPE ARCHITECT, ARBORIST, OR OTHER QUALIFIED INDIVIDUAL.

CHAPTER 93 CLASSIFICATION NOTE:

THE SITE DRAINS TO THE TOOKANY CREEK WHICH HAS A CHAPTER 93 USE DESIGNATION OF WARM WATER FISHERY (WWF) AND MIGRATORY FISHES (MF).

STORMWATER MANAGEMENT NOTES:

1. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS PREPARED BY ROBERT E. BLUE CONSULTING ENGINEERS P.C., THE CURRENT REQUIREMENTS OF THE MUNICIPALITY & MONTGOMERY COUNTY, THE APPLICABLE SECTIONS OF THE PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL AND STATE LAWS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF BMP'S PER MANUFACTURER'S SPECIFICATIONS AND FINAL SHOP DRAWINGS / DESIGN.
3. THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH.
4. 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.
5. BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL AT 1-800-242-1776. THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION, DEPTH AND SIZE OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY AND INSTALL ALL REQUIRED PARTS OF THE BMP'S, AS APPLICABLE, INCLUDING HDPE PIPE (OR APPROVED ALTERNATE), PRECASE CONCRETE STRUCTURES, MONITORING WELLS, STONE BED AND BACK FILL, SPECIFIED GEOTEXTILE WRAP, GEOGRID (IF REQUIRED FOR LOADING), OUTLET STRUCTURES, PIPE STUBS, OBSERVATION PORTS, CLEANOUTS, AND ANY EXCAVATION OR INSTALLATION MATERIALS REQUIRED.
7. CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS OF ALL STORM SEWER STRUCTURES. THE SIGNED AND SEALED SHOP DRAWINGS SHALL BE PROVIDED TO THE MUNICIPALITY FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION.
8. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
9. ALL STORM PIPE SHALL BE AS NOTED. ALL JOINTS SHALL BE WATERTIGHT.
10. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.

SOIL LIMITATION RESOLUTIONS:

SHOULD SOIL LIMITATIONS BE ENCOUNTERED, A QUALIFIED GEOTECHNICAL ENGINEER WILL BE CONSULTED PRIOR TO PROCEEDING WITH CONSTRUCTION IN THE AREA WITH THE LIMITATIONS. APPROPRIATE EARTHWORK CONSTRUCTION TECHNIQUES, INCLUDING IMPORTING SUITABLE SOILS AND UTILIZING LOCAL SUMPS AND PUMPS (TO APPROVED SEDIMENT REMOVAL FACILITIES) TO KEEP EXCAVATIONS DRY, AS RECOMMENDED BY A QUALIFIED GEOTECHNICAL ENGINEER, SHOULD BE IMPLEMENTED IF SOIL LIMITATIONS ARE ENCOUNTERED.

1. CUTBANKS CAVE – AREAS OF CUT SHALL BE STABILIZED AS SOON AS POSSIBLE DURING EARTH MOVING OPERATIONS IN ACCORDANCE WITH THE NOTES FOUND ON THE E&S PLANS. AT NO POINT SHOULD SLOPES EXCEED 2H:1V EXCEPT WHERE PROPER SHORING MEASURES ARE UTILIZED TO PREVENT CAVE IN.
2. CORROSIVE TO CONCRETE/STEEL – A MAJORITY OF STORM DRAINAGE PIPING ARE PROPOSED TO BE HDPE TO MINIMIZE RISK OF CORROSION.
3. DROUGHTY – DURING CONSTRUCTION, A WATER SOURCE SUCH AS A HOSE CONNECTION TO PUBLIC WATER SUPPLY OR A WATER TANKER TRUCK MAY BE UTILIZED AS NEEDED TO MAINTAIN SUFFICIENT SOIL MOISTURE LEVELS.
4. EASILY ERODIBLE – EARTH DISTURBANCE AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE DURING EARTH MOVING OPERATIONS IN ACCORDANCE WITH THE NOTES FOUND ON THE E&S PLANS.
5. DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE – ANY GROUNDWATER ENCOUNTERED DURING CONSTRUCTION SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG PRIOR TO DISCHARGING FROM THE SITE.
6. HYDRIC/HYDRIC INCLUSIONS – NO WETLANDS ARE PRESENT ON THE DEVELOPMENT PROPERTY.
7. LOW STRENGTH/LANDSLIDE PRONE – EARTH DISTURBANCE AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE DURING EARTH MOVING OPERATIONS IN ACCORDANCE WITH THE NOTES FOUND ON THE E&S PLANS. AT NO POINT SHOULD SLOPES EXCEED 2H:1V EXCEPT WHERE PROPER SHORING MEASURES ARE UTILIZED.
8. SLOW PERCOLATION – AREAS OF PONDED WATER SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG PRIOR TO DISCHARGING FROM THE SITE.
9. PIPING – AREAS OF PONDED WATER SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG, AS APPLICABLE. BASIN OUTLET PIPES WILL BE INSTALLED WITH ANTI-SEEP COLLARS. UTILITY PIPES AND CONDUITS SHALL BE INSTALLED WITH APPROPRIATE BEDDING MATERIALS.
10. POOR SOURCE OF TOPSOIL – SOIL TESTS SHOULD BE PERFORMED BY A QUALIFIED INDIVIDUAL SUCH AS A GEOTECHNICAL ENGINEER OR SOIL SCIENTIST TO DETERMINE SUITABILITY FOR TOPSOIL. IF SOIL IS DETERMINED TO BE UNSUITABLE THEN TOPSOIL SHALL BE IMPORTED AND DISTRIBUTED AMONGST LANDSCAPE AREAS AS NECESSARY.
11. FROST ACTION – DUE TO GRADING LIMITATIONS OF SOILS DURING WINTER MONTHS, THE CONTRACTOR SHALL NOT GRADE THESE SOILS DURING FROSTING OR ICING CONDITIONS.
12. WETNESS – AREAS OF PONDED WATER SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG PRIOR TO DISCHARGING FROM THE SITE. LIME APPLICATION MAY BE UTILIZED AS A LAST RESORT AND ONLY UNDER THE DIRECTION OF A QUALIFIED INDIVIDUAL SUCH AS A GEOTECHNICAL ENGINEER OR SOIL SCIENTIST.

SOILS TABLE PER USDA NRCS

MAP SYMBOL	SOIL NAME	SLOPES	HYDROLOGIC GROUP	DEPTH TO WATER TABLE	DRAINAGE CHARACTERISTICS	HYDRIC SOIL
Ha	HATBORO SILT LOAM	0 – 3	B / D	0" – 6"	POORLY DRAINED	YES
UugB	URBAN LAND – URDORTHENTS	0 – 8	C	> 60"	WELL DRAINED	NO
UugD	URBAN LAND – UDORTHENTS	8 – 25	C	> 60"	WELL DRAINED	NO
W	WATER	–	–	–	–	–

RESPONSIBILITIES FOR FILL MATERIAL:

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH LANDOWNER.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

POTENTIAL POLLUTION IDENTIFICATION

THE SITE DOES NOT CONTAIN ANY GEOLOGICAL FORMATIONS WITH POLLUTION POTENTIAL DURING CONSTRUCTION OR IN THE POST-CONSTRUCTION CONDITIONS.

BMP AMENDED SOIL & STONE SPECIFICATION:

1. TEXTURE OF AMENDED SOIL SHOULD CONFORM TO THE CLASSIFICATION WITHIN THE USDA TRIANGLE FOR SANDY LOAM OR LOAMY SAND. AMENDED SOIL SHOULD BE A MIXTURE OF SAND, SILT, AND CLAY PARTICLES AS REQUIRED TO MEET THE CLASSIFICATION. RANGES OF PARTICLE SIZE DISTRIBUTION, AS DETERMINED BY PIPETTE METHOD IN COMPLIANCE WITH ASTM F-1632.
2. AMENDED SOIL SHOULD BE SCREENED AND FREE OF STONES LARGER THAN A HALF-INCH (½"; 12.7 mm) IN ANY DIMENSION. NO MORE THAN TEN PERCENT (10%) OF THE SOIL VOLUME SHOULD BE COMPOSED OF SOIL PEDS GREATER THAN ONE INCH (1").
3. CLODS, OR NATURAL CLUMPS OF SOILS, GREATER THAN THREE INCHES (3") IN ANY DIMENSION SHOULD BE ABSENT FROM THE AMENDED SOIL. SMALL CLODS RANGING FROM ONE TO THREE INCHES (1-3") AND PEDS, NATURAL SOIL CLUMPS UNDER ONE INCH (1") IN ANY DIMENSION, MAY BE PRESENT BUT SHOULD NOT MAKE UP MORE THAN TEN PERCENT (10%) OF THE SOIL BY VOLUME.
4. THE pH OF THE AMENDED SOIL SHOULD HAVE A RANGE OF 5.8-7.1.
5. SOLUBLE SALTS SHOULD BE LESS THAN 2.0 mmhos/cm (dS/m), TYPICALLY AS MEASURED BY 1:2 SOIL-WATER RATIO BASIC SOIL SALINITY TESTING. SODIC SOILS (EXCHANGEABLE SODIUM PERCENTAGE (ESP) GREATER THAN 15 AND/OR SODIUM ADSORPTION RATIO (SAR) GREATER THAN 13) SHALL NOT BE ACCEPTABLE FOR USE REGARDLESS OF AMENDMENT.
6. ORGANIC CONTENT OF AMENDED SOIL SHOULD HAVE A RANGE OF THREE TO FIFTEEN PERCENT (3-15%) BY WEIGHT AS DETERMINED BY LOSS ON IGNITION (ASTM D2974). TO ADJUST ORGANIC CONTENT, ORGANIC COMPOST MAY BE ADDED TO AMENDED SOIL PRIOR TO PLACING AND FINAL GRADING.
7. ALL AGGREGATE WITHIN THE STONE STORAGE BED SHALL BE CLEAN-WASHED, DEFINED AS HAVING LESS THAN 0.5% WASH LOSS, BY MASS, WHEN TESTED PER THE AASHTO T-11 WASH LOST TEST.
8. IF A PORTION OF THE BASIN BOTTOM AREA IS TO BE CONSTRUCTED IN FILL. IN THESE AREAS, DURING BASIN CONVERSION, THE CONTRACTOR SHALL OVEREXCAVATE TO NATIVE SOIL BEFORE SCARIFYING AND TILLING. ADDITIONAL AMENDED SOILS WILL BE REQUIRED IN THESE AREAS.

NOTICE OF TERMINATION NOTE:

UPON THE PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER 102.22(a)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPs IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:

(1) THE FACILITY NAME, ADDRESS AND LOCATION
(2) THE OPERATOR NAME AND ADDRESS
(3) THE PERMIT NUMBER
(4) THE REASON FOR PERMIT TERMINATION
(5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH 102.8(m)(2).

PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.

OWNER ACKNOWLEDGEMENT STATEMENT

AS THE OWNER, I AM ACKNOWLEDGING THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE MUNICIPALITY AND COUNTY CONSERVATION DISTRICT, AND APPROVED BY, THE CONSERVATION DISTRICT OR MUNICIPALITY (AS APPLICABLE) FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES.

OWNER ____________ DATE ____________

REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BLUE, JR. ENGINEER No. PE26169-E

9/12/2023

ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

REVISIONS
5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

ALL DOCUMENTS PREPARED BY ROBERT E. BLUE CONSULTING ENGINEERS, P.C. ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY ROBERT E. BLUE CONSULTING ENGINEERS, P.C. FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO ROBERT E. BLUE CONSULTING ENGINEERS, P.C. AND OWNER'S USE OF PLANS SHALL BE DEEMED AN AGREEMENT TO INDEMNIFY AND HOLD HARMLESS ROBERT E. BLUE CONSULTING ENGINEERS, P.C. FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

robert e. blue
consulting engineers, p.c.
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FINAL PLAN
RECORD PLAN (2 OF 6) – PCSM NOTES

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	N.T.S.
DATE: 2021-09-30	JOB NUMBER: 2154-10E	SHEET NUMBER: 20 of 31

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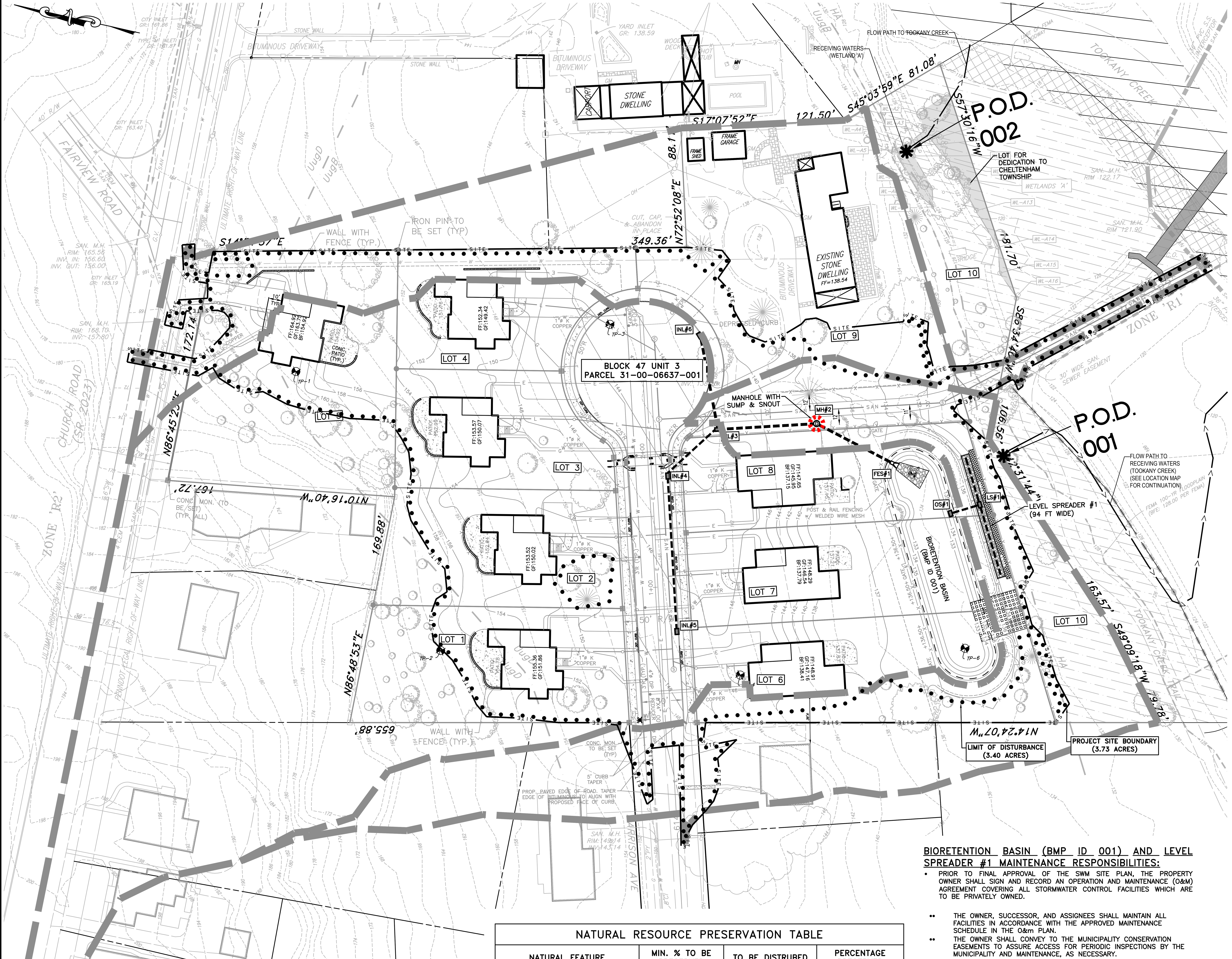
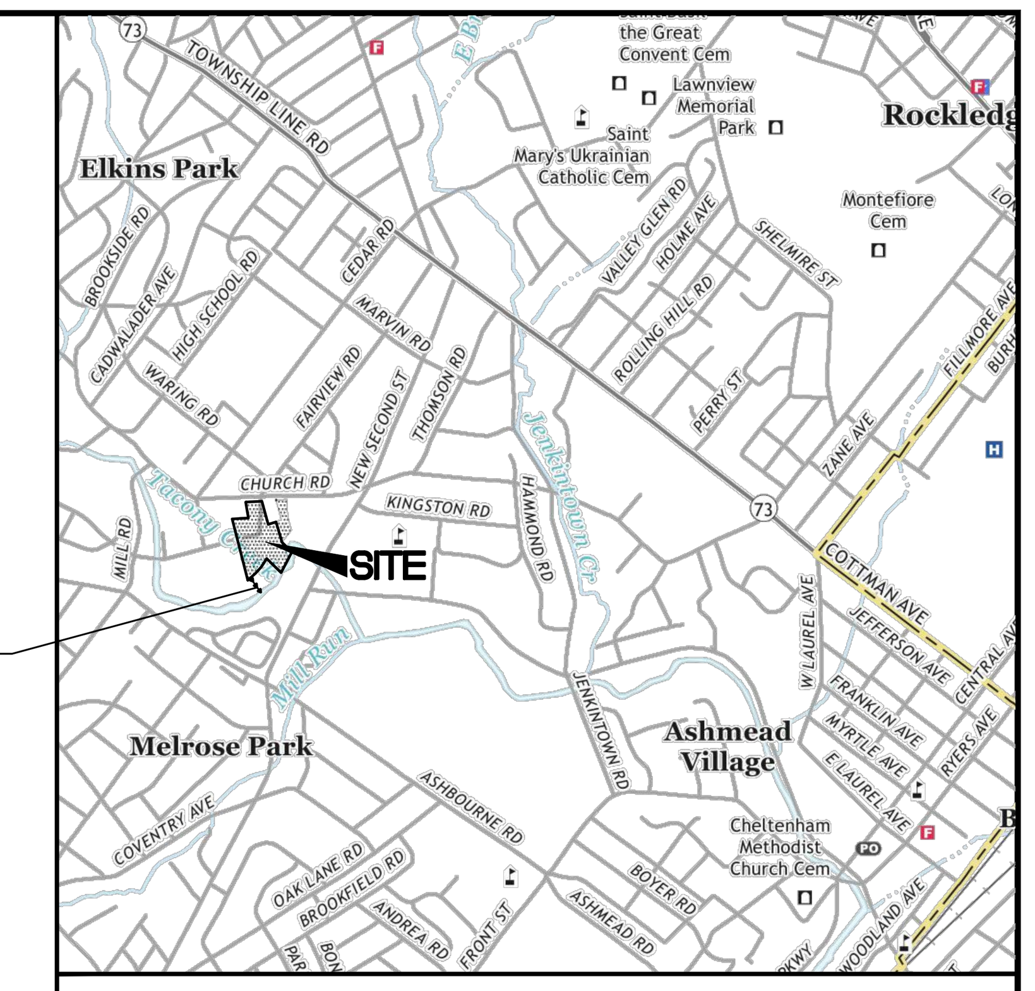
LAST SAVED: M:\Proj\2154-10\dwg\Sets\LD\2154-10 PCSM PLAN.dwg ON 9/12/2023 3:14 PM



GENERAL NOTES:

1. CONTRACTOR TO COORDINATE WITH UTILITY SERVICE PROVIDERS TO ENSURE PROPER COVERAGE OVER EXISTING AND PROPOSED UNDERGROUND UTILITIES, AND PROPER CLEARANCE PROVIDED UNDER EXISTING OVERHEAD UTILITIES.
2. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE UNDERGROUND UTILITIES SHOWN ARE PLOTTED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. CONTRACTOR SHALL RELOCATE ANY EXISTING UTILITIES FOUND TO BE IN CONFLICT WITH PROPOSED IMPROVEMENTS.
3. ALL IMPROVEMENTS IN STATE RIGHTS OF WAYS NOT LIMITED TO DRIVEWAY ACCESS, CROSSWALKS, CURBING, AND ADA RAMPS ARE SHOWN SCHEMATICALLY. STATE RIGHT OF WAY IMPROVEMENTS SHALL BE DESIGNED AND SUBMITTED BY TRAFFIC PLANNING & DESIGN, INC. ALL CONSTRUCTION WORK AND MATERIALS SHALL COMPLY WITH PADOT SPECIFICATIONS (PUB. 408/2007) AS AMENDED AND STANDARD DETAILS, WITH APPLICABLE FEDERAL, STATE AND MUNICIPAL CODES AND WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS. IN THE CASE OF CONFLICTING CONSTRUCTION STANDARDS THE GREATER OR MORE STRINGENT STANDARD SHALL APPLY.
4. ALL IMPROVEMENTS OUTSIDE STATE RIGHTS OF WAYS NOT LIMITED TO DRIVEWAY ACCESS, CROSSWALKS, CURBING, AND ADA RAMPS ARE SHOWN SCHEMATICALLY. ALL IMPROVEMENTS, CONSTRUCTION WORKS, AND MATERIALS SHALL BE ACCORDANCE TO MUNICIPAL SPECIFICATIONS AND DESIGN STANDARDS AND/OR PADOT SPECIFICATIONS (PUB. 408/2007) AS AMENDED AND STANDARD DETAILS, WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS. IN THE CASE OF CONFLICTING CONSTRUCTION STANDARDS THE GREATER OR MORE STRINGENT STANDARD SHALL APPLY.
5. CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY SITE CONSTRUCTION ACTIVITIES.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, INVERTS, ELEVATIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK. VARIATIONS BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK.
7. IN ALL CASES, WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL NOT USE SCALED DIMENSION FOR CONSTRUCTION WITHOUT CONFIRMATION BY THE DESIGN ENGINEER.
8. ALL ENDWALLS, STORM SEWER MANHOLES AND STORM SEWER INLETS SHALL CONFORM TO PADOT SPECIFICATIONS (PUB. 408 – SECTION 605) AND STANDARD DETAILS.
9. ALL STORM SEWER PIPING SHALL BE REINFORCED CONCRETE PIPE, CLASS 3 (R.C.P.) OR HIGH-DENSITY CORRUGATED POLYETHYLENE (H.D.P.E.) TYPE-S (SMOOTH INTERIOR) AND CONFORM TO PADOT SPECIFICATIONS (PUB. 408 – SECTION 601) AND STANDARD DETAILS. ALL STORMWATER BASIN OUTFALL PIPING SHALL BE R.C.P. CLASS 3 WITH WATERTIGHT "O-RING" GASKET JOINTS. ALL UNDERGROUND ROOF DRAINS SHALL BE HIGH-DENSITY CORRUGATED POLYETHYLENE (H.D.P.E.) OR S.D.R. 35 PVC WITH A MINIMUM SLOPE OF 0.005 FT/FT, A MINIMUM DIAMETER OF 6 INCHES AND INSTALLED WITH A MINIMUM OF 18 INCHES OF COVER. WATER TIGHT JOINTS SHALL BE PROVIDED ON ALL STORM SEWER RUNS.
10. THE TOP OF GRATE ELEVATION FOR ALL STORM SEWER INLETS IS FOR THE CENTER OF THE INLET AT THE FACE OF CURB. THE CONTRACTOR IS RESPONSIBLE FOR PROJECTING THE ROADWAY GRADE ALONG THE LENGTH OF THE INLET.
11. ALL INLETS, HEADWALLS AND ENDWALLS SHALL BE STAMPED TO INDICATE "NO DUMPING".
12. ANY SPRING ENCOUNTERED DURING ROADWAY CONSTRUCTION SHALL BE OUT LETTED BY U-DRAIN TO NEAREST STORM SEWER FACILITY OR WATERCOURSE. U-DRAIN PLACEMENT TO BE BY THE DIRECTION OF THE MUNICIPAL ENGINEER.
13. ALL SANITARY SEWER AND WATER FACILITIES SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH MUNICIPAL WATER & SEWER AUTHORITY SPECIFICATIONS. ALL SANITARY SEWER MAIN/LATERAL CROSSINGS WITH THE WATER LINES SHALL BE INSTALLED WITH A MINIMUM 18 INCHES VERTICAL CLEARANCE OR, IF THE CLEARANCE CANNOT BE OBTAINED, A CONCRETE ENCASEMENT SHALL BE INSTALLED ON THE SANITARY SEWER MAIN/LATERAL. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN SANITARY SEWER MAIN/LATERALS, WATER LINES AND PROPOSED/EXISTING TREES.
14. ALL SANITARY SEWER LATERALS SHALL BE SCH 40 P.V.C., A MINIMUM OF 6" IN DIAMETER AND LAID ON A SLOPE OF NOT LESS THAN 1/4 INCH PER FOOT. FORCEMAIN PIPING SHALL BE SDR-11. SUBJECT TO THE REVIEW AND APPROVAL BY THE TOWNSHIP CODE ENFORCEMENT OFFICER.
15. A VIDEO INSPECTION OF THE EXISTING SANITARY SEWER LATERAL, WHERE THE PROPOSED LATERAL IS CONNECTING, IS REQUIRED TO CONFIRM WATER-TIGHT CONDITIONS.
16. ALL EXISTING UTILITY VALVES SHALL BE ADJUSTED TO FINISH GRADE.
17. THE LOCATION OF THE CLEANOUTS/ACCESS POINTS OF THE UNDERGROUND STORMWATER FACILITIES NEED TO BE VERIFIED IN THE FIELD BY THE APPLICANT'S SURVEY CREW.
18. STORM SEWER FACILITIES SHALL BE INSTALLED IN ACCORDANCE WITH MUNICIPAL'S SPECIFICATIONS.
19. MUNICIPAL INSPECTION OF THE MATERIALS AND CONSTRUCTION PRACTICES FOR ALL UTILITIES IS REQUIRED DURING CONSTRUCTION.
20. CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND PARALLEL WITH UNDERGROUND TELEPHONE AND ELECTRIC LINE. CABLE TELEVISION LINES HAVE NOT BEEN SHOWN FOR CLARITY.
21. RELOCATED OVERHEAD SERVICE CONDUCTORS MUST MAINTAIN A VERTICAL CLEARANCE TO FINAL GRADE OF 18 FEET OVER PUBLIC STREETS, ALLEYS, ROADS, PARKING AREAS SUBJECT TO TRUCK TRAFFIC, DRIVEWAYS ON OTHER THAN RESIDENTIAL PROPERTIES, AND OTHER AREAS TRAVERSED BY VEHICLES. (IN ACCORDANCE WITH NEC ARTICLE 230.24(B)(4)).
22. CONTRACTOR TO VERIFY FUNCTIONALITY OF EXISTING STORM SEWER FACILITIES, AND CLEAN OUT AND/OR REPAIR AS NECESSARY TO RESTORE FUNCTIONALITY OF THE SYSTEM.
23. HORIZONTAL SEPARATION – WHENEVER POSSIBLE, SEWERS SHOULD BE LAID AT LEAST 10 FEET, HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER MAINS. SHOULD LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET, A SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER MAIN IF:
   23.1 IT IS LAID IN A SEPARATE TRENCH; OR IF
   23.2 IT IS LAID IN THE SAME TRENCH, WITH THE WATER MAIN LOCATED AT ONE SIDE OF A BENCH OF UNDISTURBED EARTH; AND IF
   23.3 IN EITHER CASE THE ELEVATION OF THE TOP (CROWN) OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM (INVERT) OF THE WATER MAIN.
24. VERTICAL SEPARATION – WHENEVER SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE VERIFIED TO MEET THE ABOVE REQUIREMENTS, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION, FOR A DISTANCE OF 10 FEET EXTENDING ON EACH SIDE OF THE SEWER. IF POSSIBLE, ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. THE WATER MAIN SHOULD BE CONSTRUCTED OF SLIP-ON OR MECHANICAL-JOINT CAST IRON PIPE, PVC PIPE, OR PRE-STRESSED CONCRETE CYLINDER PIPE AND THE SEWER CONSTRUCTED OF MECHANICAL-JOINT CAST-IRON PIPE FOR ANY PORTION WITHIN 10 FEET OF THE WATER MAIN. BOTH SERVICES SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING. WHERE LESS THAN AN 18" VERTICAL SEPARATION EXISTS BETWEEN THE WATER AND SEWER LINE, THE SEWER LINE MAY BE CONCRETE ENCASED 10 FEET ON EITHER SIDE OF THE WATER MAIN. IF POSSIBLE, SEWERS CROSSING WATER MAINS SHALL BE CONSTRUCTED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.



LOCATION MAP
SCALE: 1"=2,000'

THE NATIONAL MAP BY U.S.G.S.
FRANKFORD PA 2019 QUADRANGLE

MONTGOMERY COUNTY RECORDER OF DEEDS

RECORDED ON THIS ____________ DAY OF ______________ , ________

IN THE OFFICE FOR THE RECORDING OF DEEDS, IN AND FOR THE COUNTY OF MONTGOMERY IN NORRISTOWN, PENNSYLVANIA IN

PLAN FILE CASE ______________ , DEED BOOK ______________ ,

PAGE ________,

____

RECORDER

OWNER AND DEVELOPER'S ACKNOWLEDGEMENT:

COMMONWEALTH OF PENNSYLVANIA :

COUNTY OF MONTGOMERY :

ON THIS ________ DAY OF ______________ , ______ , BEFORE ME, THE SUBSCRIBED, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA RESIDING IN ______________ ,

PERSONALLY APPEARED RABBI ZVI BLOOM, THE MANAGER OF 222 CHURCH RD, LLC, BEING THE OWNER AND DEVELOPER OF THIS PROPERTY, AND WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF THE HIGHWAYS AND PROPERTY SHOWN HEREON SITUATE IN THE TOWNSHIP OF WHITPAIN, MONTGOMERY COUNTY, PENNSYLVANIA AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THE DAY AND YEAR AFORESAID.

______________ NOTARY PUBLIC

MY COMMISSION EXPIRES:

______________ DATE

OWNER AND DEVELOPER'S CERTIFICATION:

RABBI ZVI BLOOM ACKNOWLEDGED HIMSELF TO BE THE MANAGER OF 222 CHURCH RD, LLC, A LIMITED LIABILITY COMPANY, AND THAT AS SUCH OFFICER, BEING AUTHORIZED TO DO SO, AS OWNER AND DEVELOPER, HE EXECUTED THIS PLAN BY SIGNING THE NAME OF THE LIMITED LIABILITY COMPANY IN HIS CAPACITY AS MANAGER.

222 CHURCH RD, LLC

BY: ______________________ DATE: __________

RABBI ZVI BLOOM, MANAGER

ENGINEERS'S CERTIFICATION:

I, ROBERT E. BLUE JR., ON THIS DATE: ______________, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DRAINAGE PLAN MEETS ALL REQUIREMENTS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (DEP'S) REGULATIONS AND THIS CHAPTER.

____

ROBERT E. BLUE JR., P.E.

MUNICIPAL ACKNOWLEDGEMENT STATEMENT:

______________________________ , A TOWNSHIP OFFICIAL (OR DESIGNEE), HAS REVIEWED AND HEREBY CONCLUDES THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE TOWNSHIP STORMWATER MANAGEMENT ORDINANCE NO.______________.

______________________ TOWNSHIP OFFICIAL SIGNATURE ______________ DATE

BLANKET EASEMENT:

LOTS 6, 7, 8, & 9 GRANT A BLANKET EASEMENT TO THE MUNICIPALITY OR THEIR ASSIGNEES FOR INGRESS AND EGRESS FROM A PUBLIC RIGHT-OF-WAY FOR THE PURPOSE OF INSPECTION OF THE STORMWATER MANAGEMENT BMPS.

BIORETENTION BASIN (BMP ID 001) AND LEVEL SPREADER #1 MAINTENANCE RESPONSIBILITIES:

- PRIOR TO FINAL APPROVAL OF THE SWM SITE PLAN, THE PROPERTY OWNER SHALL SIGN AND RECORD AN OPERATION AND MAINTENANCE (O&M) AGREEMENT COVERING ALL STORMWATER CONTROL FACILITIES WHICH ARE TO BE PRIVATELY OWNED.
  - THE OWNER, SUCCESSOR, AND ASSIGNEES SHALL MAINTAIN ALL FACILITIES IN ACCORDANCE WITH THE APPROVED MAINTENANCE SCHEDULE IN THE O&m PLAN.
  - THE OWNER SHALL CONVEY TO THE MUNICIPALITY CONSERVATION EASEMENTS TO ASSURE ACCESS FOR PERIODIC INSPECTIONS BY THE MUNICIPALITY AND MAINTENANCE, AS NECESSARY.
- THE OWNER OF LOTS 6, 7, & 8 ARE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE (O&M) OF THE SWM BMPS. IF THE OWNER FAILS TO ADHERE TO THE O&M AGREEMENT, THE MUNICIPALITY MAY PERFORM THE SERVICES REQUIRED AND CHARGE THE OWNER APPROPRIATE FEES. NONPAYMENT OF FEES MAY RESULT IN A LIEN AGAINST THE PROPERTY.
- THE OWNERS OF LOT 1–9 SHALL HAVE A $\frac{1}{9}$ RESPONSIBILITY FOR THE COSTS OF THE MAINTENANCE AND REPAIR OF THE STORMWATER BMPS.

INFILTRATION TEST PIT SUMMARY TABLE

TEST PIT ID	EXIST. GROUND ELEV.	BOTTOM OF TEST PIT ELEV.	LIMITING ZONE (LZ) DATA: GROUND WATER LZ ELEV.	LIMITING ZONE (LZ) DATA: ROCK LZ ELEV.	INFILTRATION TEST ELEV.	INFILTRATION TEST RATE (IN/HR)
1	161.2	152.9	–	–	155.2	2.59
2	159.9	151.5	–	–	153.9	0.12
3	144.8	136.6	–	–	138.8	0.00
4	143.1	134.9	–	–	137.1	0.15
5	134.8	126.4	–	–	129.0	0.43
6	134.6	126.2	–	–	128.2	4.11

NATURAL RESOURCE PRESERVATION TABLE

NATURAL FEATURE	MIN. % TO BE PRESERVED	TO BE DISTRUBED	PERCENTAGE PRESERVED
FLOODPLAINS AND WATERCOURSE:	100%	0%	100%
WETLANDS:	100%	0%	100%
PONDS, BOTH NATURAL AND MAN-MADE:	100%	0%	100%
STEEP SLOPES OF 15–25%:	70%	0%	100%
STEEP SLOPES OVER 25%:	80%	0%	100%
WOODLANDS*:	50%	44.79% (1,891" DBH REMOVED*)	55.21% (2,331" DBH)

*DOES NOT INCLUDE EXISTING DEAD TREES

SOILS TABLE PER USDA NRCS

MAP SYMBOL	SOIL NAME	SLOPES	HYDROLOGIC GROUP	DEPTH TO WATER TABLE	DRAINAGE CHARACTERISTICS	HYDRIC SOIL
Ha	HATBORO SILT LOAM	0 – 3	B / D	0" – 6"	POORLY DRAINED	YES
UugB	URBAN LAND – URDORTHENTS	0 – 8	C	> 60"	WELL DRAINED	NO
UugD	URBAN LAND – UDORTHENTS	8 – 25	C	> 60"	WELL DRAINED	NO
W	WATER	–	–	–	–	–

Pipe Table

Pipe Name	Size	Length	Slope
INL–5 TO INL–4	18.000	114.985	3.00%
INL–4 TO INL–3	18.000	50.444	1.11%
INL–3 TO MH–2	24.000	73.038	0.75%
MH–2 TO FES–1	24.000	61.445	0.83%
INL–6 TO INL–3	24.000	70.592	0.51%

Structure Table

Structure Name	Structure Details
INL–5	RIM = 146.817 SUMP = 138.970 INL–5 TO INL–4 INV OUT = 138.970
INL–4	RIM = 144.093 SUMP = 135.320 INL–5 TO INL–4 INV IN = 135.520 INL–4 TO INL–3 INV OUT = 135.320
INL–3	RIM = 141.805 SUMP = 133.260 INL–4 TO INL–3 INV IN = 134.760 INL–6 TO INL–3 INV IN = 135.540 INL–3 TO MH–2 INV OUT = 134.260
INL–6	RIM = 139.642 SUMP = 135.900 INL–6 TO INL–3 INV OUT = 135.900
MH–2	RIM = 138.018 SUMP = 132.510 INL–3 TO MH–2 INV IN = 133.710 MH–2 TO FES–1 INV OUT = 133.510
FES–1	RIM = 136.575 SUMP = 133.000 MH–2 TO FES–1 INV IN = 133.000

PENNSYLVANIA ONE CALL
DIAL 8-1-1 or 1-800-242-1776
BEFORE YOU DIG

CALL 811 THREE DAYS TO TEN DAYS BEFORE YOU START ANY DIGGING PROJECT. WHETHER YOU ARE PLANNING TO DO IT YOURSELF OR HIRE A PROFESSIONAL, SOMEONE NEEDS TO CALL 811.

Know what's below. Call before you dig.

SERIAL #20212303507
AUGUST 21, 2021

L E G E N D

- PROP. STORM INLET
- PROP. STORM MANHOLE
- STORM STRUCTURE WITH SUMP & SNOUT
- WATER VALVE
- FIRE HYDRANT
- EXIST. UTILITY POLE
- TEST PIT LOCATION
- MONITORING WELL
- PROP. STORM SEWER
- SAN. SEWER FORCEMAIN
- EXIST. GAS LINE
- WATER LINE
- PROP. ELECTRIC LINE
- EXIST. ELECTRIC LINE
- TELEPHONE LINE
- EXIST. OVERHEAD WIRE
- FENCE
- SOILS TYPE BOUNDARY
- PROJECT SITE BOUNDARY
- LIMIT OF DISTURBANCE
- PROP. WALL
- PROP. CONTOUR
- EXIST. CONTOUR
- CONCRETE
- PCSM BMP DRAINAGE AREA
- POINT OF DISCHARGE — P.O.D.
- STREAM
- FLOODPLAIN
- WETLAND
- RIPARIAN CORRIDOR – ZONE 1 (MUNICIPAL)
- RIPARIAN CORRIDOR – ZONE 2
- TACONY CREEK FLOODWAY
- CONCRETE GRASS PAVE
- TURF REINFORCING MAT
- AASHTO 57 STONE
- RIPRAP APRON

REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ROBERT E. BLUE, JR. — ENGINEER No. PE26169-E

9/12/2023

ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

REVISIONS
5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

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GRAPHIC SCALE: 0 40 80 120 160

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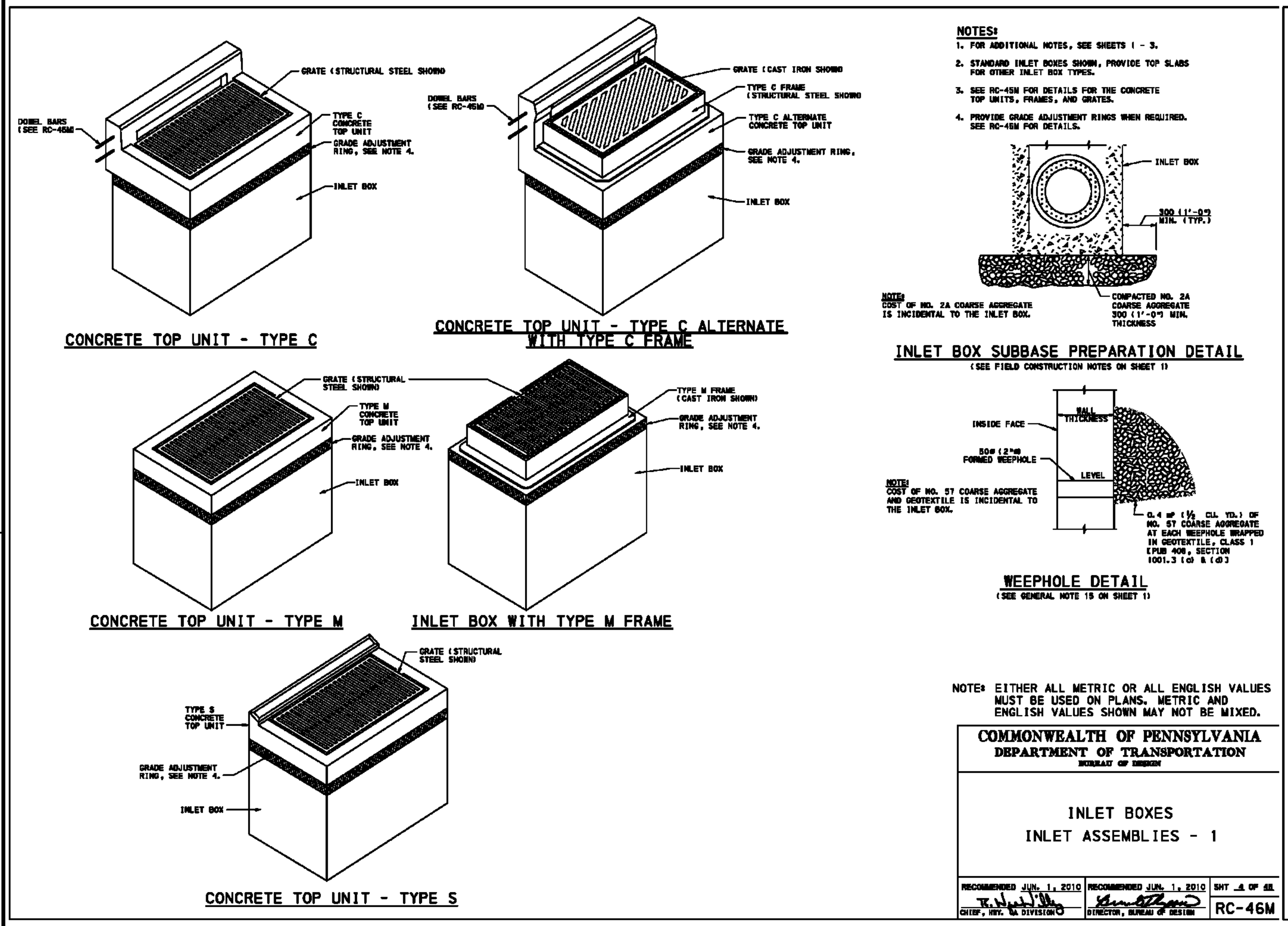
FINAL PLAN
RECORD PLAN (3 OF 6) – PCSM PLAN

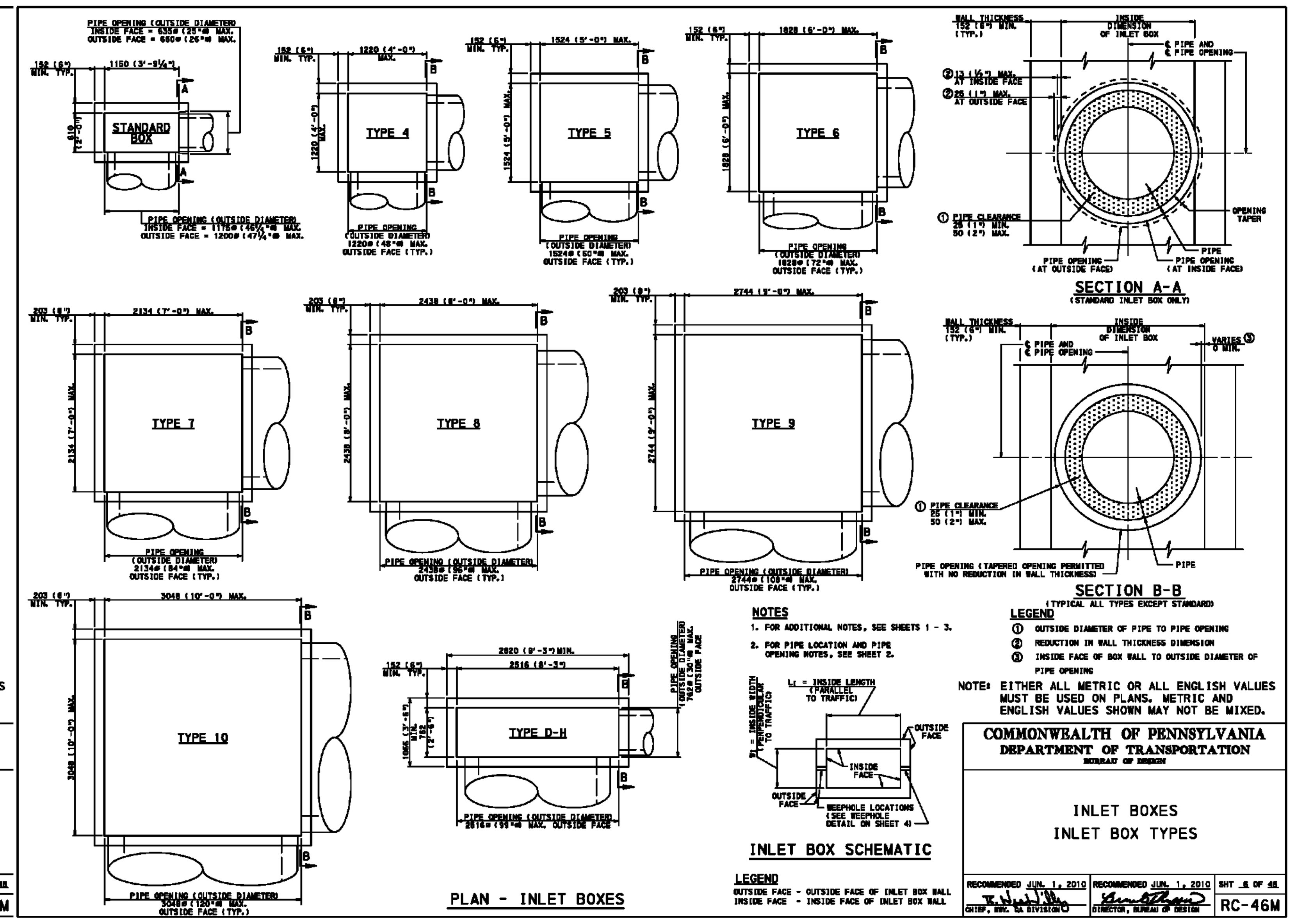
222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

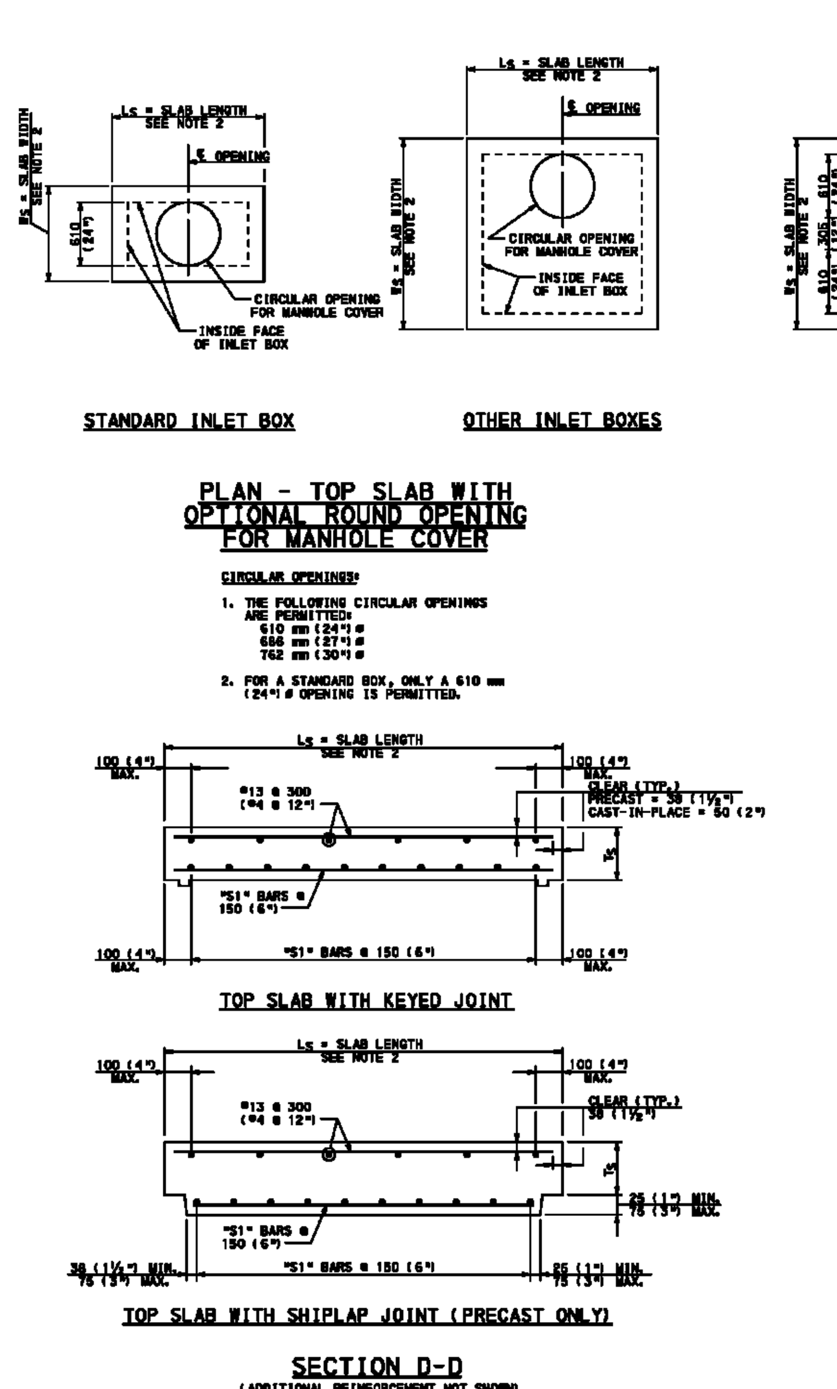
PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

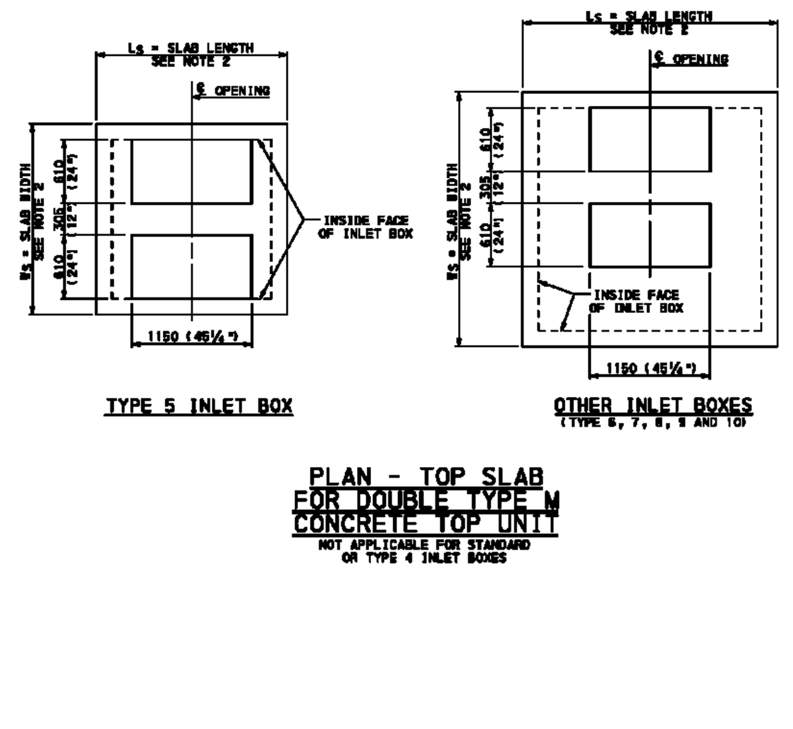
DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=40'
DATE: 2021-09-30	JOB NUMBER: 2154-10E	SHEET NUMBER: 21 of 31

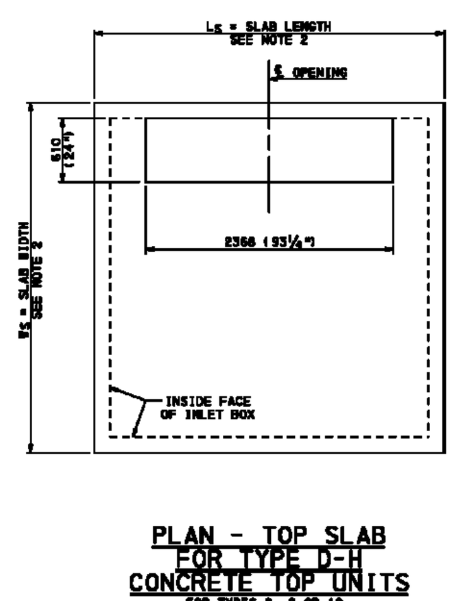
LAST SAVED: M:\Proj\2154-10\dwg\Sets\LD\2154-10 PCSM PLAN.dwg ON 9/12/2023 3:14 PM











TOP SLAB CAST-IN-PLACE CONCRETE U.S. CUSTOMARY UNITS		
INLET BOX TYPE	T_S (IN.)	S1 (BAR SIZE)
STANDARD	8	#6
TYPE 4	12	#7
TYPE 5	14	#8
TYPE 6	14	#8
TYPE 7	14	#9
TYPE 8	14	#9
TYPE 9	14	#9
TYPE 10	14	#9

TOP SLAB CAST-IN-PLACE CONCRETE METRIC UNITS		
INLET BOX TYPE	T_S (mm)	S1 (BAR SIZE)
STANDARD	203	#19
TYPE 4	305	#22
TYPE 5	356	#25
TYPE 6	356	#25
TYPE 7	356	#29
TYPE 8	356	#29
TYPE 9	356	#29
TYPE 10	356	#29

TOP SLAB PRECAST CONCRETE U.S. CUSTOMARY UNITS		
INLET BOX TYPE	T_S (IN.)	S1 (BAR SIZE)
STANDARD	8	#6
TYPE 4	10	#8
TYPE 5	12	#9
TYPE 6	12	#9
TYPE 7	14	#9
TYPE 8	14	#9
TYPE 9	14	#9
TYPE 10	14	#9

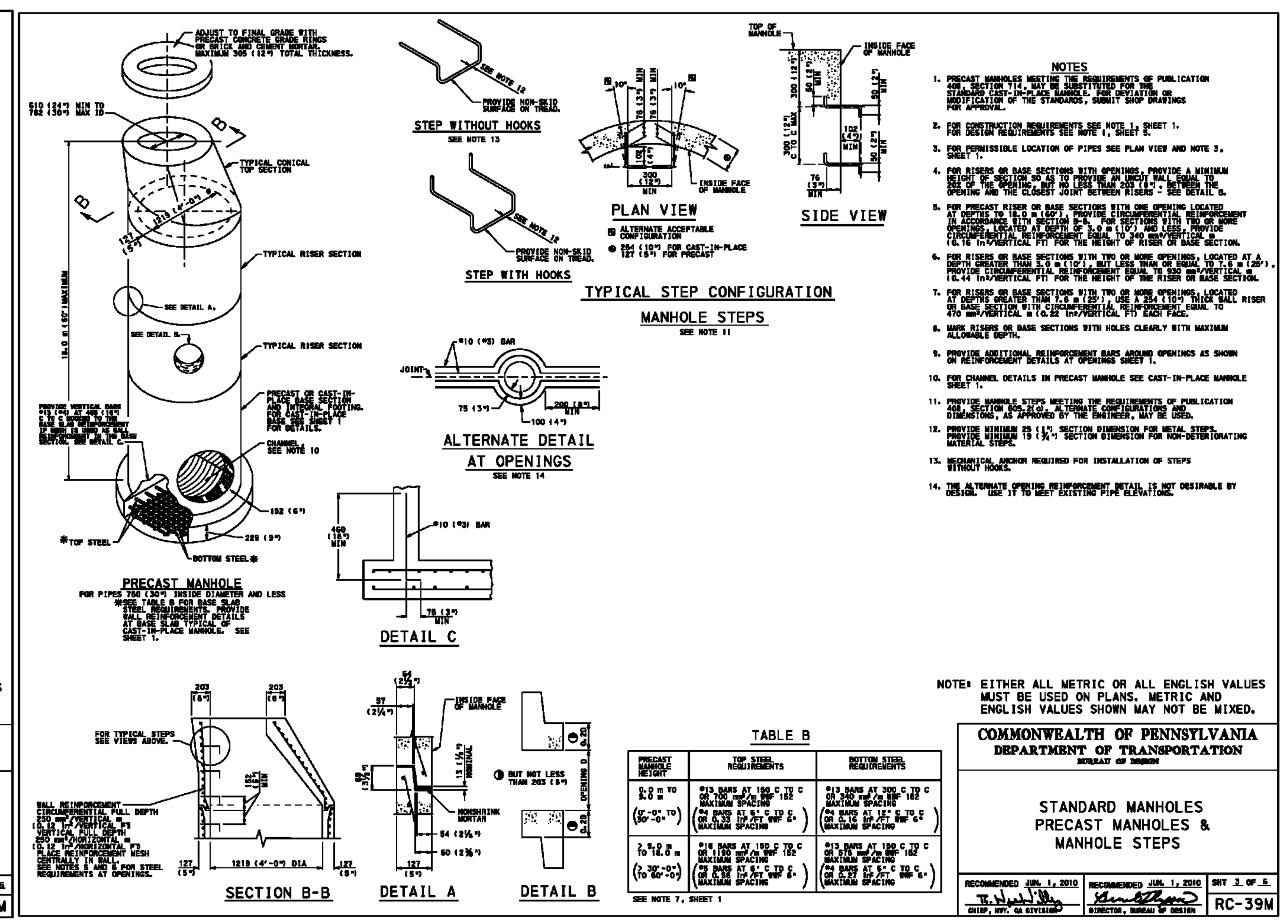
TOP SLAB PRECAST CONCRETE METRIC UNITS		
INLET BOX TYPE	T_S (mm)	S1 (BAR SIZE)
STANDARD	203	#19
TYPE 4	254	#25
TYPE 5	305	#29
TYPE 6	305	#29
TYPE 7	356	#29
TYPE 8	356	#29
TYPE 9	356	#29
TYPE 10	356	#29

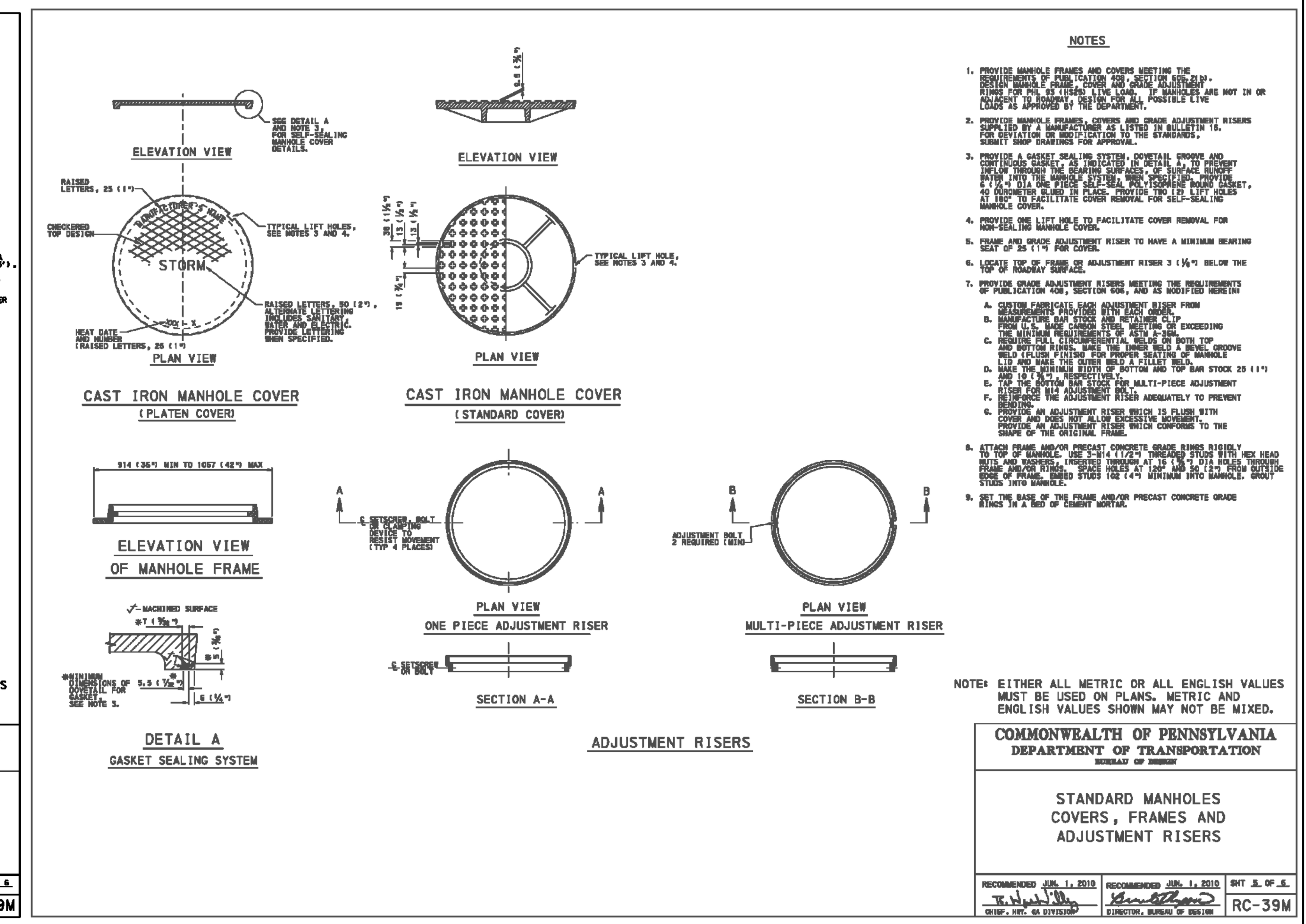
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

INLET BOXES
TOP SLABS - 2

RC-46M





REVISIONS

5) 2022-02-08; REV. PER MCCD COMMENTS
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FINAL PLAN

RECORD PLAN (4 OF 6) - PCSM DETAILS

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BLUE, JR.
ENGINEER
No. PE26169-E

9/12/2023

ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	N.T.S.
DATE:	JOB NUMBER:	SHEET NUMBER:
2021-09-30	2154-10E	22 of 31

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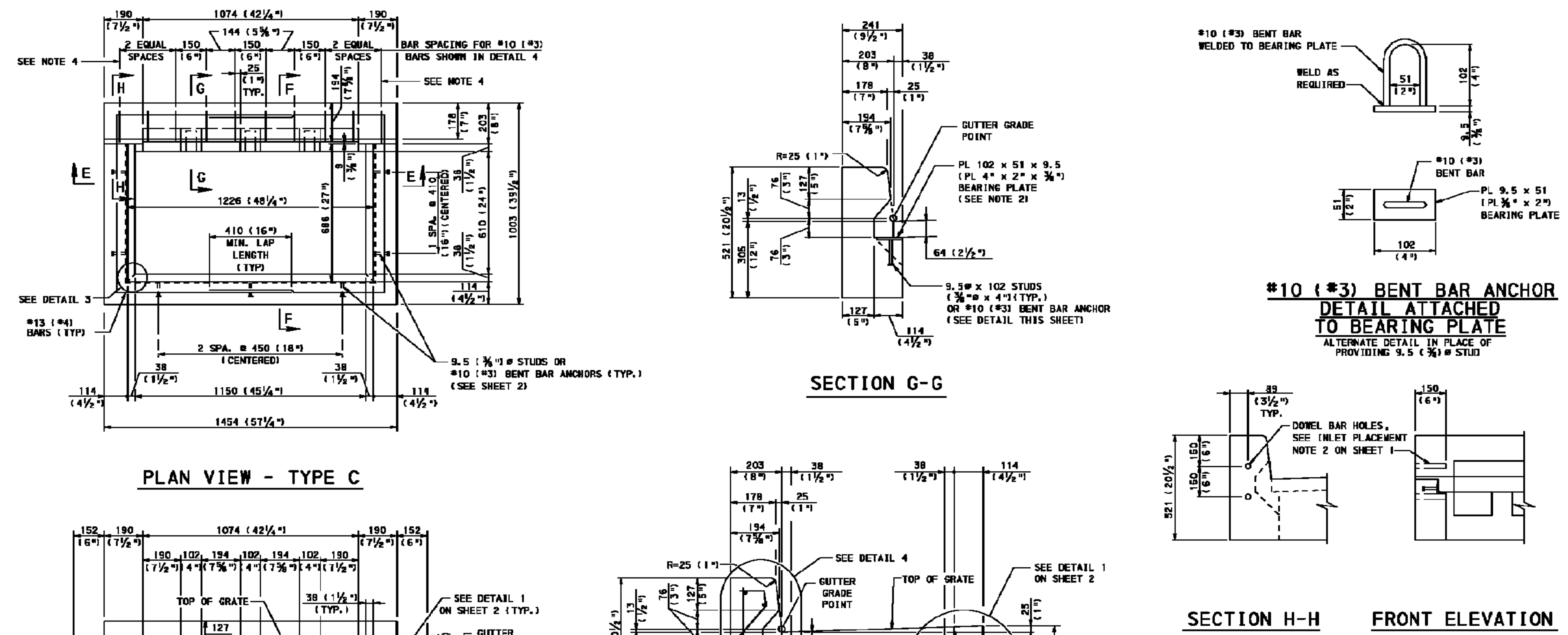
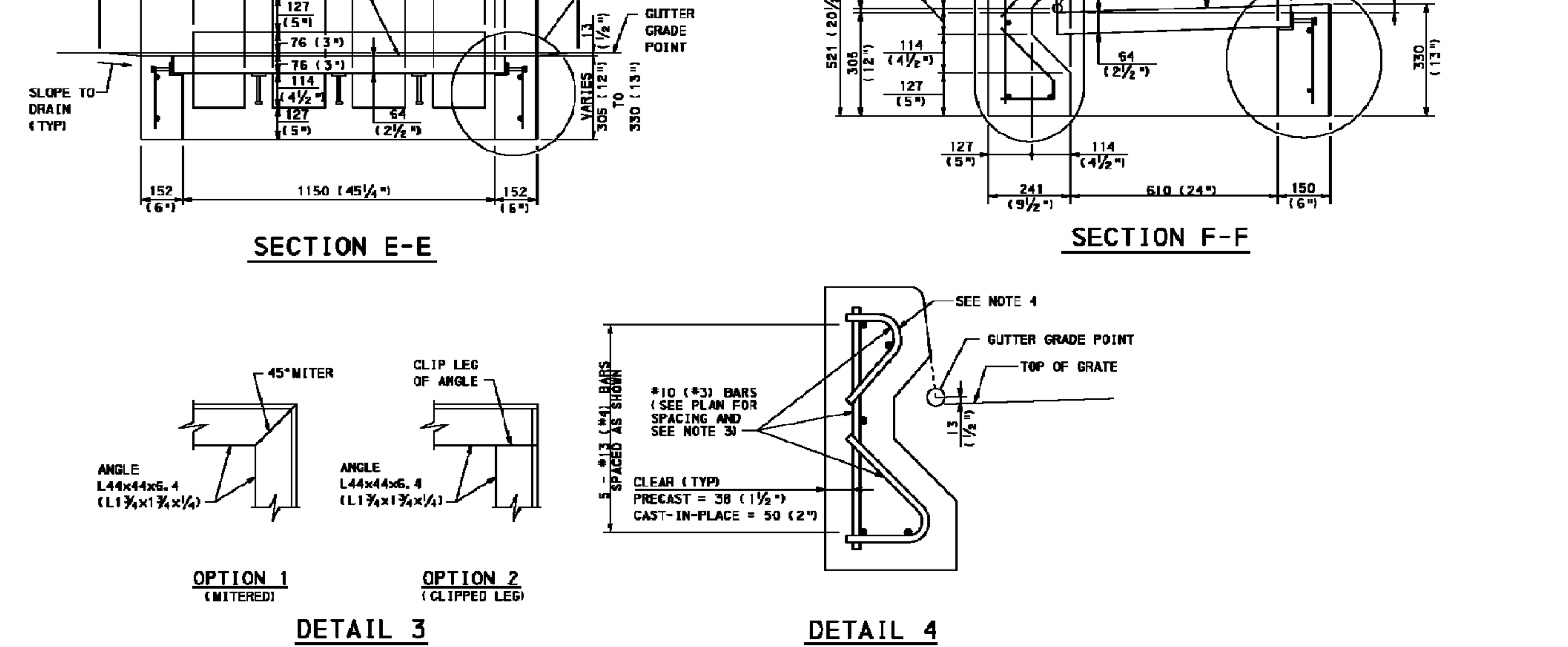




NOTES

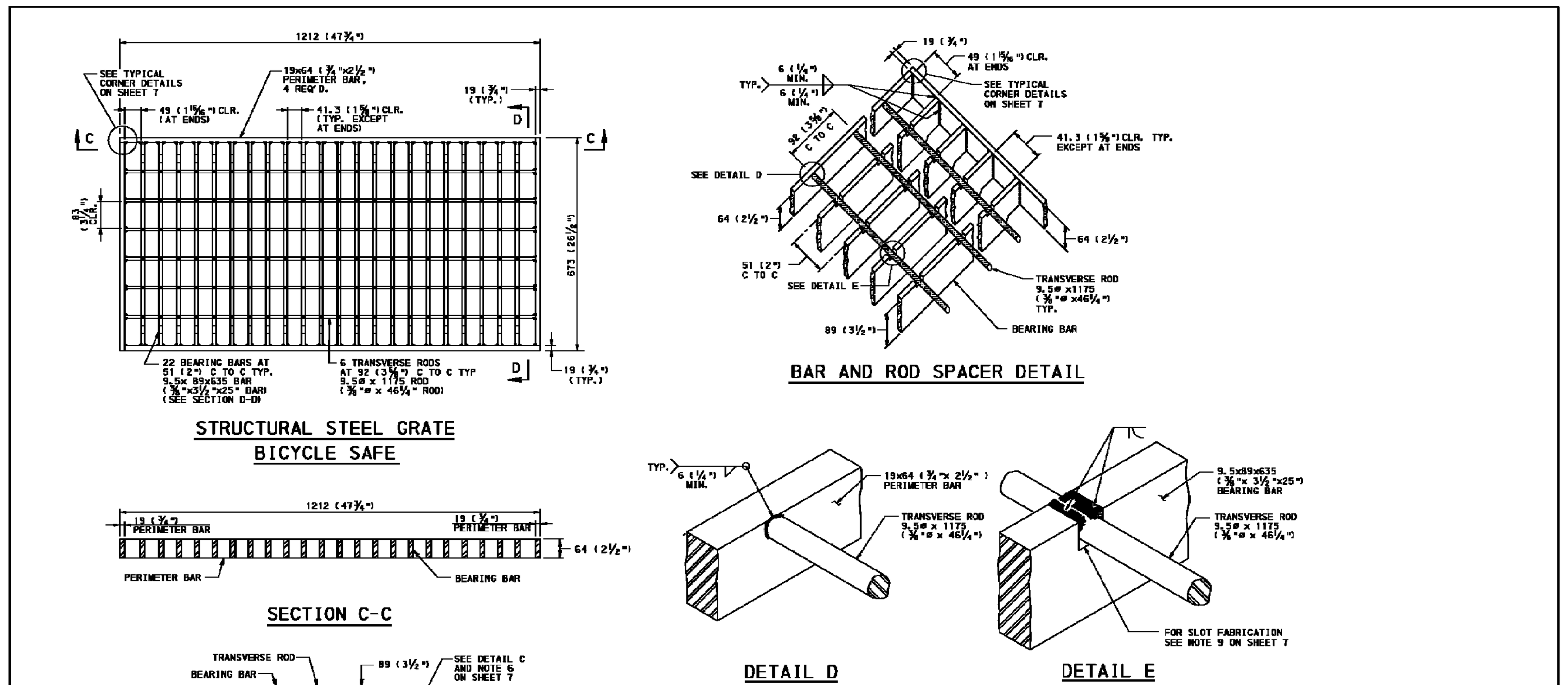
1. FOR ADDITIONAL NOTES, SEE SHEET 1.
2. A MAXIMUM OF TWO HOLES ARE PERMITTED IN THE PLATE TO POSITION AND HOLD THE PLATE IN PLACE DURING FABRICATION. HOLES ARE NOT PERMITTED TO BE GREATER THAN 6 mm (1/4") DIAMETER.
3. FABRICATOR TO DETERMINE NUMBER OF BARS REQUIRED TO MATCH SHAPE INDICATED. PROVIDE ONE, TWO, OR THREE BARS AS REQUIRED.
4. BEND OUTSIDE STIRRUP TO ACCOMMODATE DOWEL BARS AND STILL MAINTAIN CLEARANCE REQUIREMENTS.

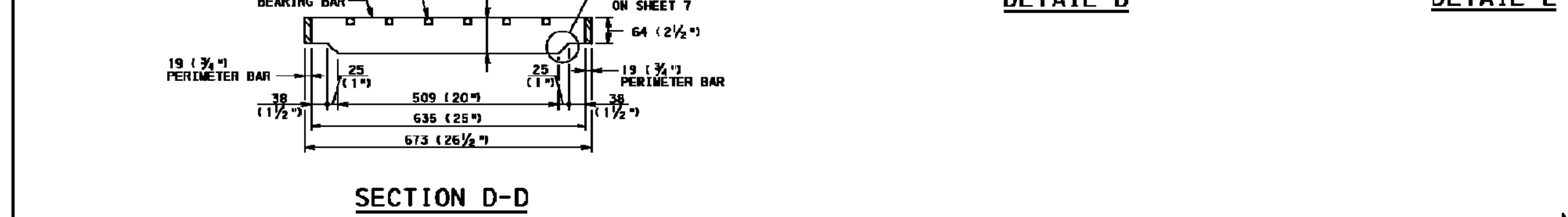
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET TOPS, GRATES, AND FRAMES
CONCRETE TOP UNITS
TYPE C

RECOMMENDED JUN. 1, 2010	RECOMMENDED JUN. 1, 2010	SHT 3 OF 20
CHIEF, HWY. QA DIVISION	DIRECTOR, BUREAU OF DESIGN	RC-45M





NOTES

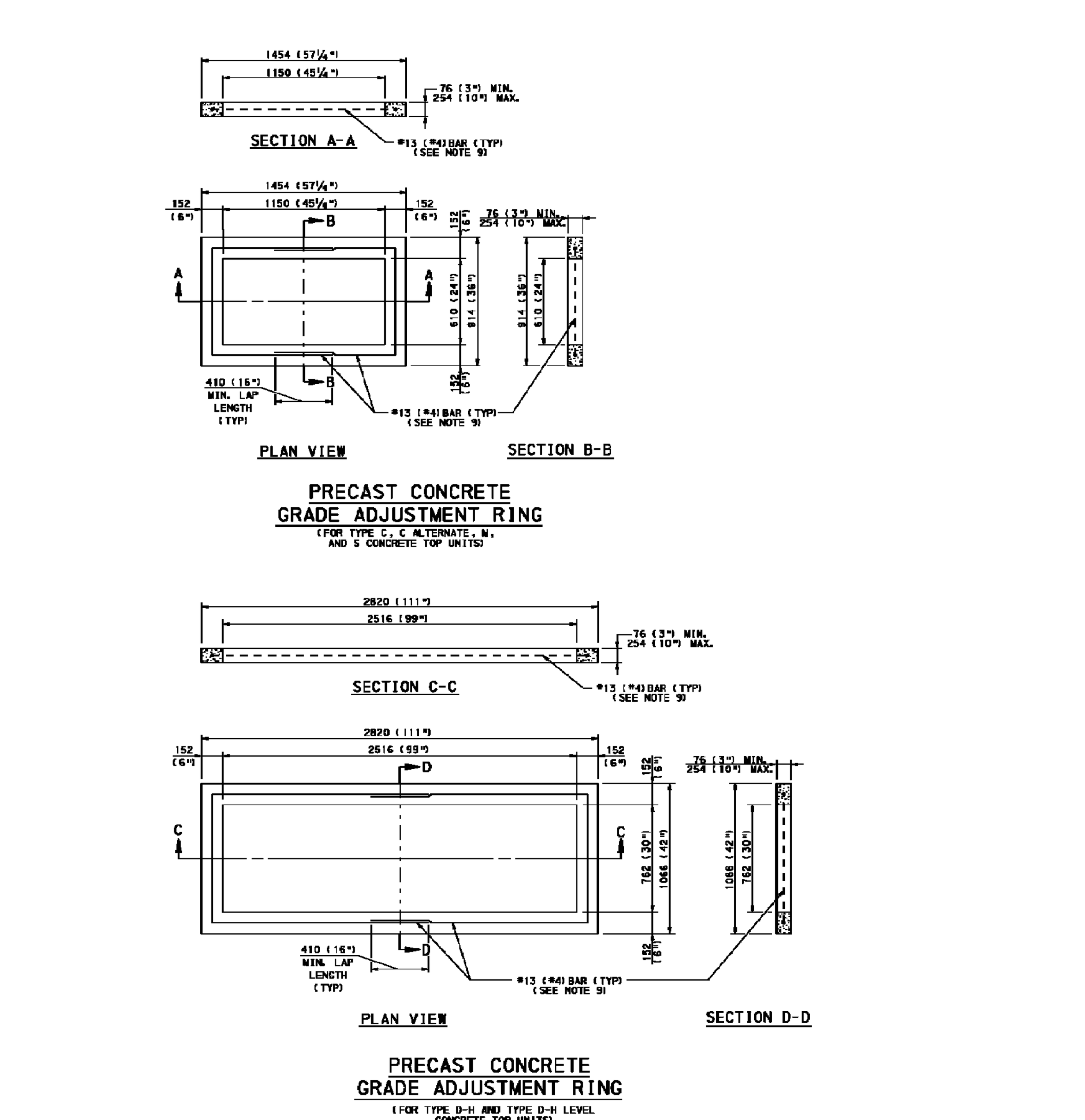
1. FOR ADDITIONAL NOTES, SEE SHEET 1.
2. FOR STRUCTURAL STEEL GRATE NOTES, SEE SHEET 7.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET TOPS, GRATES, AND FRAMES
STRUCTURAL STEEL GRATE
BICYCLE SAFE

RECOMMENDED JUN. 1, 2010	RECOMMENDED JUN. 1, 2010	SHT 8 OF 20
CHIEF, HWY. QA DIVISION	DIRECTOR, BUREAU OF DESIGN	RC-45M



GRADE ADJUSTMENT RING GENERAL NOTES:

1. SHEETS 12 AND 13 DEPICT THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS, SUBMIT SHOP DRAWINGS TO THE BUREAU OF DESIGN HIGHWAY QUALITY ASSURANCE DIVISION CHIEF FOR REVIEW AND ACCEPTANCE.
2. PROVIDE GRADE ADJUSTMENT RINGS/RISERS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
3. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE PUBLICATION 408, AASHTO/AWS BRIDGE WELDING CODE D1.5 AND/OR D1.1 OR D1.3, AS APPROPRIATE AND THE CONTRACT SPECIAL PROVISIONS.
4. BRICK OR BRICK AND MORTAR ARE NOT ALLOWED FOR GRADE ADJUSTMENTS FOR NEW OR REHABILITATION PROJECTS.
5. ALTERNATE ADJUSTMENT RINGS:
   - HDPE OR RUBBER GRADE ADJUSTMENT RINGS ARE PERMITTED FOR GRADE ADJUSTMENTS IF REQUESTED BY THE CONTRACTOR AND ACCEPTED BY PENNDOT PRIOR TO INSTALLATION. PROVIDE HDPE OR RUBBER GRADE ADJUSTMENT RINGS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.

PRECAST CONCRETE GRADE ADJUSTMENT RING NOTES:

1. PRECAST CONCRETE ADJUSTMENT RINGS ARE PERMITTED FOR TYPE C, C ALTERNATE, M, S AND D-H CONCRETE INLET TOPS. DO NOT USE PRECAST CONCRETE ADJUSTMENT RINGS TO RAISE TYPE C FRAMES.
2. ONLY ONE GRADE ADJUSTMENT RING IS PERMITTED FOR NEW CONSTRUCTION PROJECTS. GRADE ADJUSTMENT RINGS ARE INCIDENTAL TO THE COST OF THE TOP UNITS OR FRAMES.
3. PROVIDE ADJUSTMENT RING WHICH IS FLUSH WITH THE INLET TOP AND DOES NOT ALLOW EXCESSIVE MOVEMENT.
4. GRADE ADJUSTMENT RINGS ARE PERMITTED TO BE FABRICATED IN DIFFERENT SHAPES TO FORM A RECTANGLE TO MATCH THE REQUIRED DIMENSIONS. SECTIONS ARE NOT PERMITTED TO BE LESS THAN 457 mm (1'-6") IN LENGTH.
   - PROVIDE 38 mm (1 1/2") CONCRETE COVER FOR REINFORCEMENT AT EACH END.
   - MAXIMUM GAP BETWEEN PIECES = 13 mm (1/2")
5. FABRICATOR IS RESPONSIBLE FOR LIFTING, HANDLING AND TRANSPORTATION STRESSES.
6. PROVIDE CLASS AA CEMENT CONCRETE, MODIFIED [DESIGN COMPRESSIVE STRENGTH = f'c = 28 MPa (4,000 PSI)] IN THE PRECAST CONCRETE ADJUSTMENT RINGS.
7. A HIGHER STRENGTH OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER STRENGTH CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT. SUBMIT MIX DESIGNS TO THE DEPARTMENT FOR REVIEW AND ACCEPTANCE.
8. PROVIDE GRADE 420 (GRADE 60) DEFORMED REINFORCEMENT BARS THAT MEET THE REQUIREMENTS OF ASTM A615M (A615) OR ASTM A706M (A706).
9. REINFORCEMENT REQUIREMENTS:
   - DEPTHS LESS THAN OR EQUAL TO 152 (6"): PROVIDE ONE #13 (#4) BAR PLACED AT CENTER OF THICKNESS.
   - DEPTHS GREATER THAN 152 (6") AND LESS THAN OR EQUAL TO 254 (10"): PROVIDE ONE #13 (#4) BAR PLACED 38 (1 1/2") CLEAR FROM THE TOP AND BOTTOM SURFACES FOR A TOTAL OF TWO BARS.
10. SET PRECAST CONCRETE GRADE ADJUSTMENT RINGS ON A NON-SHRINK GROUT PAD TO PROVIDE FULL BEARING ON THE SUPPORTING SURFACE.
    - PROVIDE NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1001.2(d).
    - MAXIMUM GROUT DEPTH = 13 mm (1/2")
11. TAPERED PRECAST CONCRETE ADJUSTMENT RINGS ARE PERMITTED AS LONG AS THE MINIMUM AND MAXIMUM DIMENSIONS REQUIRED ARE BETWEEN 76 mm (3") AND 254 mm (10").

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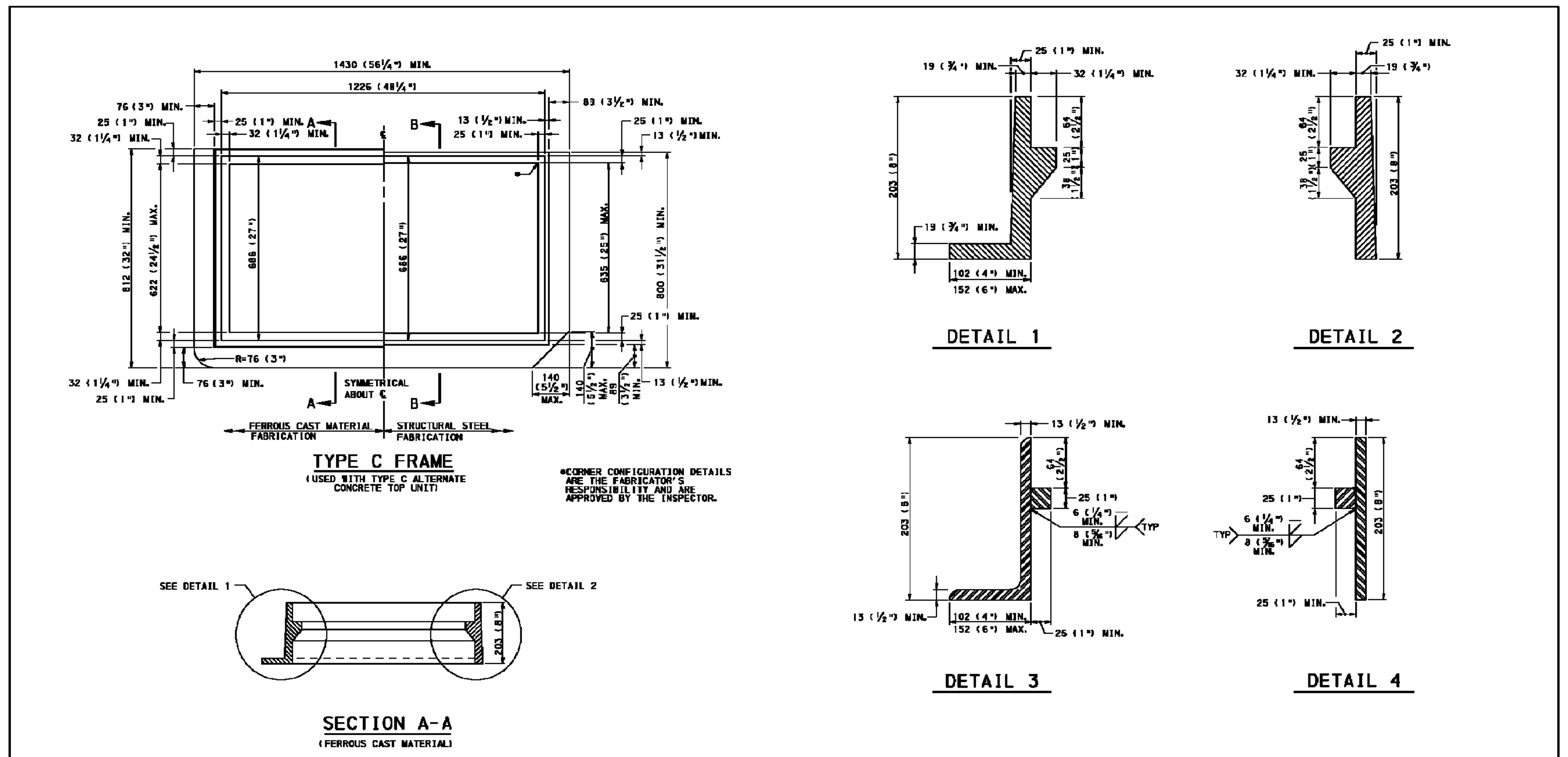
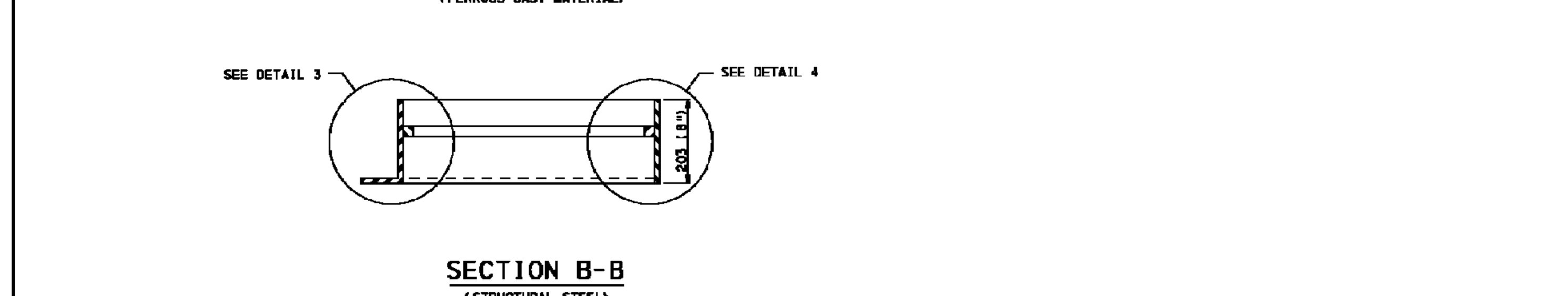
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET TOPS, GRATES, AND FRAMES
GRADE ADJUSTMENT RINGS - 1

RECOMMENDED JUN. 1, 2010	RECOMMENDED JUN. 1, 2010	SHT 12 OF 20
CHIEF, HWY. QA DIVISION	DIRECTOR, BUREAU OF DESIGN	RC-45M





NOTES

1. FOR INLET FRAME NOTES, SEE SHEET 15.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET TOPS, GRATES, AND FRAMES
TYPE C FRAME

RECOMMENDED JUN. 1, 2010	RECOMMENDED JUN. 1, 2010	SHT 14 OF 20
CHIEF, HWY. QA DIVISION	DIRECTOR, BUREAU OF DESIGN	RC-45M

REVISIONS

5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
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FINAL PLAN

RECORD PLAN (5 OF 6) – PCSM DETAILS

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. BLUE, JR.
LICENSE NO. 26169-E
9/12/2023 (DATE)

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	N.T.S.
DATE:	JOB NUMBER:	SHEET NUMBER:
2021-09-30	2154-10E	23 of 31

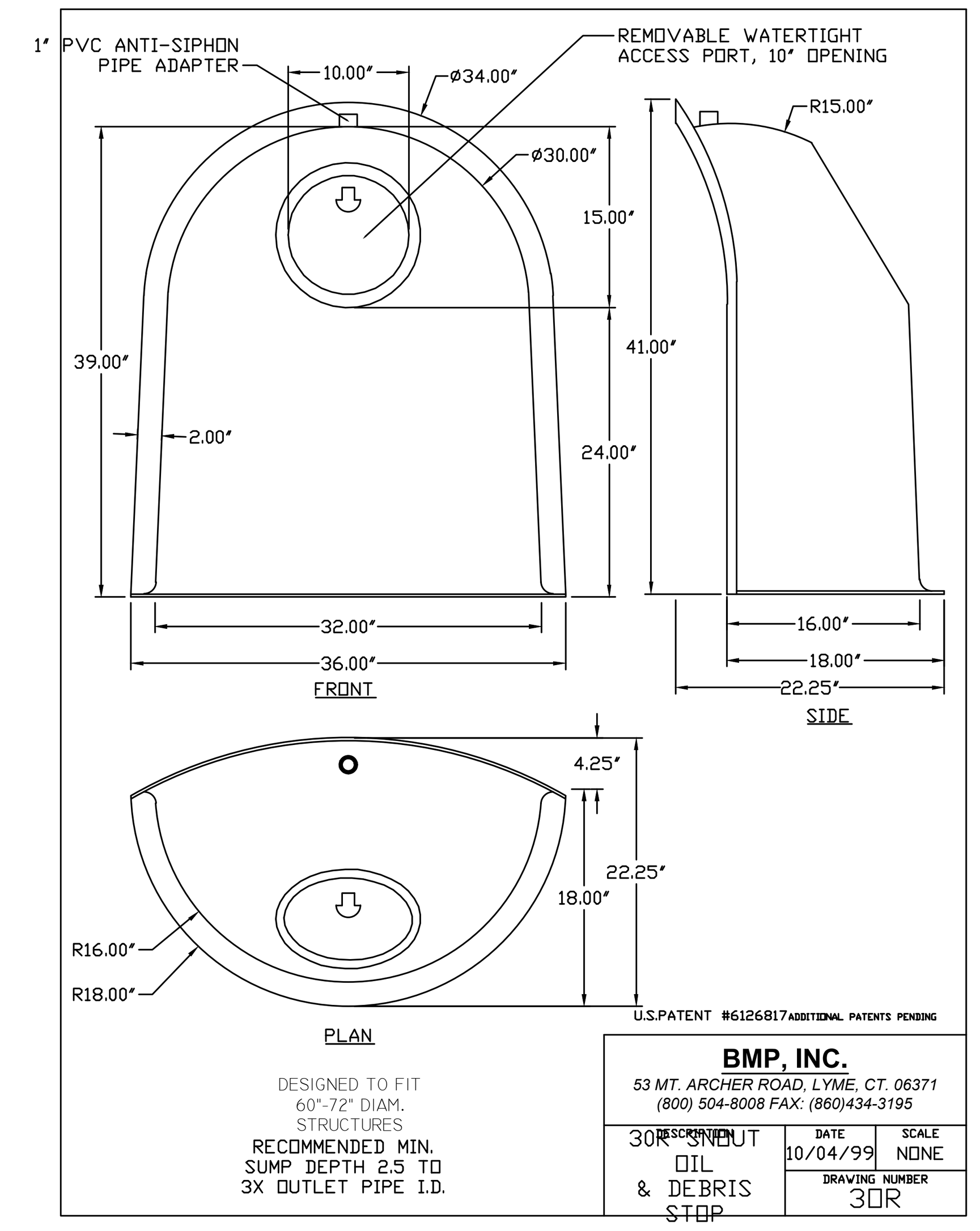
BMP ID 001 & LEVEL SPREADER #1 MAINTENANCE:

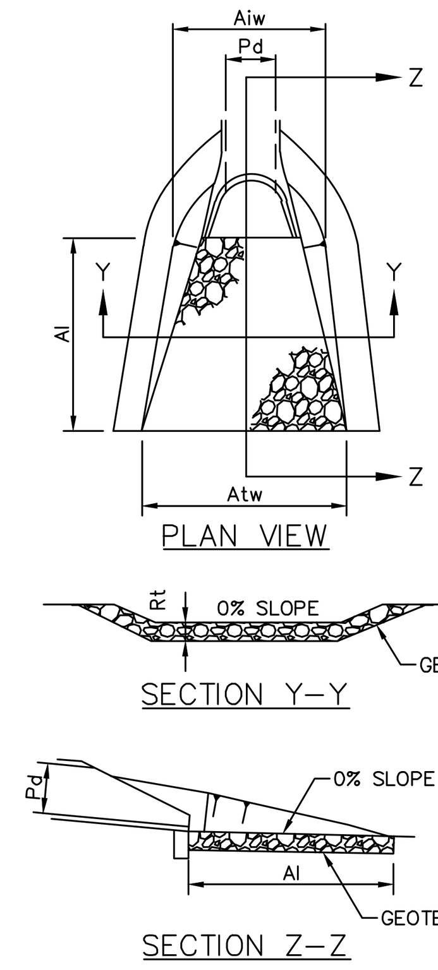
1. THE PERMITTEE SHALL BE REQUIRED TO FOLLOW THE MAINTENANCE PROCEDURES OUTLINED BELOW AND IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE NOTES ON THE PCSM NOTES SHEET OF THIS PLAN SET.

2. MAINTENANCE IS NECESSARY TO ENSURE PROPER FUNCTIONALITY OF THE RAINGARDEN AND LEVEL SPREADER AND SHOULD TAKE PLACE ON A QUARTERLY BASIS AT A MINIMUM, OR MORE FREQUENTLY AS DESCRIBED BELOW. A MAINTENANCE PLAN SHOULD BE DEVELOPED WHICH INCLUDES THE FOLLOWING MEASURES:
   - 2.1. ALL UPSTREAM STORMWATER INLETS AND MANHOLES THAT DRAIN INTO THE RAINGARDEN SHALL BE BE INSPECTED AT LEAST 4 TIMES PER YEAR AND AFTER EACH RAINFALL EVENT EXCEEDING 1 INCH. FES#1 SHALL BE INSPECTED FOR SIGNS OF ACCELERATED EROSION OR ACCUMULATION OF SEDIMENT OR OTHER DEBRIS WITHIN THE RIPRAP APRON. MANHOLE MH#2 CONTAINS A SUMP & SNOUT WHICH MAY RESULT IN ACCUMULATION OF DEBRIS WITHIN THE MANHOLE. MH#2 SHOULD BE INSPECTED AT LEAST 2 TIMES EACH FALL (IN ADDITION TO THE SCHEDULE DESCRIBED ABOVE) FOR ACCUMULATION OF LEAVES OR OTHER DEBRIS. THESE INLETS AND MANHOLES SHOULD BE CLEANED AS NEEDED IMMEDIATELY FOLLOWING EACH INSPECTION OR AT A MINIMUM ONCE PER YEAR. IN PARTICULAR.
   - 2.2. THE OUTLET STRUCTURE (OS#1) SHALL BE INSPECTED AT LEAST 4 TIMES PER YEAR AND AFTER EACH RAINFALL EVENT EXCEEDING 1 INCH. OUTLET STRUCTURE INSPECTIONS INCLUDE CHECKING FOR WATER SEEPAGE THROUGH JOINTS IN THE STRUCTURE, CHECKING FOR ACCUMULATED SEDIMENT OR DEBRIS WITHIN THE OUTLET STRUCTURE AND TRASH RACK, AND CHECKING FOR CLOGGING OR DAMAGE TO THE DISCHARGE PIPE. SEDIMENT OR DEBRIS RESULTING IN CLOGS SHALL BE REMOVED AND DISPOSED OF IMMEDIATELY FOLLOWING INSPECTION. ANY DAMAGE TO THE OUTLET STRUCTURE OR ASSOCIATED COMPONENTS SHALL BE REPAIRED IMMEDIATELY FOLLOWING INSPECTION. MAINTENANCE PERSONNEL SHALL FOLLOW ALL APPLICABLE SAFETY PRECAUTIONS AND OSHA REQUIREMENTS INCLUDING A CONFINED SPACE ENTRY PERMIT, AS NECESSARY.
   - 2.3. THE LEVEL SPREADER (LS#1) SHALL BE INSPECTED AT LEAST 4 TIMES PER YEAR AND AFTER EACH RAINFALL EVENT EXCEEDING 1 INCH. LEVEL SPREADER INSPECTIONS INCLUDE CHECKING FOR WATER SEEPAGE THROUGH JOINTS IN THE PERIMETER CONCRETE WALLS, CHECKING FOR ACCUMULATED SEDIMENT OR DEBRIS WITHIN THE STONE BED AND DISTRIBUTION INLET STRUCTURE, CHECKING FOR CLOGGING OR DAMAGE TO THE PERFORATED DISTRIBUTION PIPES, AND CHECKING FOR SIGNS OF EROSION AROUND THE EDGES OF THE LEVEL SPREADER AND DOWNSLOPE OF THE LEVEL SPREADER. SEDIMENT OR DEBRIS RESULTING IN CLOGS SHALL BE REMOVED AND DISPOSED OF IMMEDIATELY FOLLOWING INSPECTION. ANY DAMAGE TO THE LEVEL SPREADER STRUCTURE, PIPES, OR WALLS SHALL BE REPAIRED IMMEDIATELY FOLLOWING INSPECTION. ANY AREAS OF ACCELERATED EROSION SHALL BE STABILIZED AND RESEEDED IMMEDIATELY FOLLOWING INSPECTION.
   - 2.4. AT LEAST 4 TIMES PER YEAR AND AFTER EACH RAINFALL EVENT EXCEEDING 1 INCH, THE RAINGARDEN SHALL BE INSPECTED FOR DEWATERING TIME. IF DEWATERING CAPABILITY IS DIMINISHED AND THE FACILITY FAILS TO DRAIN WITHIN 72 HOURS AFTER THE DESIGN STORM, THE PERMITTEE SHALL CONSULT A QUALIFIED PROFESSIONAL, SUCH AS AN ENGINEER, TO INVESTIGATE THE FACILITY AND PREPARE A REMEDIATION PLAN.
   - 2.5. AT LEAST 4 TIMES PER YEAR THE VEGETATIVE COVER WITHIN THE FACILITY SHALL BE INSPECTED. DEAD OR DYING PLANT MATERIAL AND ANY INVASIVE SPECIES SHOULD BE REMOVED. BARE SPOTS SHALL BE RE-SEEDED AND COVERED WITH STRAW MAT OR A SUITABLE ALTERNATIVE TO PREVENT SEED FROM WASHING AWAY. DORMANT PERENNIAL PLANTS SHALL BE CUT BACK ANNUALLY. MOWING SHOULD ONLY BE PERFORMED AS APPROPRIATE FOR VEGETATIVE SPECIES. IF MOWING IS APPROPRIATE, CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS. ALL DETRITUS SHALL BE REMOVED FROM THE RAINGARDEN AND PROPERLY DISPOSED OF.
   - 2.6. AT LEAST 4 TIMES PER YEAR AND AFTER RAINFALL EVENTS EXCEEDING 1 INCH THE BASIN STORAGE AREA SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION. SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY AND AS SOON AS POSSIBLE AFTER INSPECTION. SEDIMENT SHOULD BE DISPOSED OF PROPERLY AND ONCE SEDIMENT IS REMOVED DISTURBED AREAS NEED TO BE IMMEDIATELY STABILIZED AND REVEGETATED.
3. FAILURE INDICATORS MAY INCLUDE:
   - 3.1. IF BMP ID 001 DOES NOT DEWATER WITHIN 72 HOURS AFTER THE END OF A STORM EVENT OF 1 INCH OR MORE. DEWATERING FAILURE INDICATORS INCLUDE OBSERVING STANDING WATER WITHIN THE RAINGARDEN BOTTOM FOOTPRINT AND/OR WITHIN THE OUTLET STRUCTURE THAT DOES NOT DISSIPATE WITHIN 72 HOURS AFTER THE END OF A STORM EVENT
   - 3.2. VISIBLE CRACKING, CLOGGING, OR OTHER DAMAGE TO THE OUTLET STRUCTURE, LEVEL SPREADER INLETS, OR LEVEL SPREADER WALLS, PIPE CONNECTIONS, OR PIPING, OR VISIBLE SEEPAGE THROUGH SUCH JOINTS AND CONNECTIONS.
   - 3.3. PATCHES OF DEAD OR DYING PLANT MATERIAL OR AN EXCESSIVE AMOUNT OF INVASIVE PLANTS.
   - 3.4. VISIBLE EROSION OR RUTTING IN THE SOIL AROUND THE EDGES OF THE LEVEL SPREADER OR DOWNSLOPE OF THE LEVEL SPREADER.
4. PROCEDURES FOR REPAIR OR REPLACEMENT
   - 4.1. UPON OBSERVING A FAILURE INDICATOR A QUALIFIED INDIVIDUAL SUCH AS AN ENGINEER OR SOIL SCIENTIST/ENGINEER, OR A LANDSCAPE ARCHITECT FOR FAILURE INDICATORS RELATED TO VEGETATION, SHALL BE CONSULTED TO DETERMINE THE EXACT CAUSE OF FAILURE. UPON FURTHER INVESTIGATION PERFORMED BY THE QUALIFIED INDIVIDUAL, A REMEDIATION PLAN SHALL BE IMPLEMENTED TO RESTORE THE BMP TO ITS ORIGINAL DESIGN CAPACITIES.

ROLLED EROSION CONTROL SPECIFICATIONS

(NOT TO SCALE)





OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE R-_	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
FES#1	24	4	18.0	22.0	6.0	14.8

NOTES:

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

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

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET
WITH FLARED END SECTION OR ENDWALL

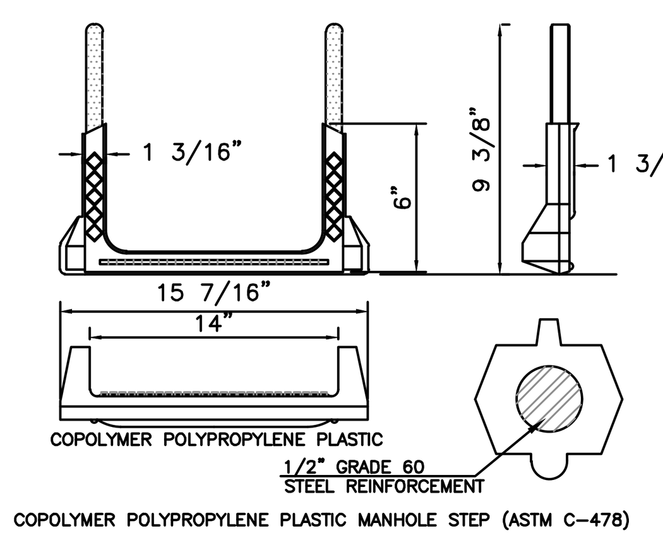
NOT TO SCALE

ERNST ERNMX-180 RAIN GARDEN SEED MIX SPECIFICATION*

COMMON NAME	BOTANICAL NAME	MIX COMPOSITION %
LITTLE BLUESTEM, FORT INDIANTOWN GAP-PA ECOTYPE	SCHIZACHYRIUM SCOPARIUM, FORT INDIANTOWN GAP-PA ECOTYPE	29.00%
VIRGINIA WILDRYE, PA ECOTYPE	ELYMUS VIRGINICUS, PA ECOTYPE	20.00%
PURPLE CONEFLOWER	ECHINACEA PURPUREA	7.50%
FOX SEDGE, PA ECOTYPE	CAREX VULPINOIDEA, PA ECOTYPE	7.00%
REDTOP PANICGRASS, PA ECOTYPE	PANICUM RIGIDULUM, PA ECOTYPE	5.80%
RIVER OATS, WV ECOTYPE	CHASMANTHIUM LATIFOLIUM, WV ECOTYPE	5.00%
PARTRIDGE PEA, PA ECOTYPE	CHAMAECRISTA FASCICULATA, PA ECOTYPE	3.00%
LANCELEAF COREOPSIS	COREOPSIS LANCEOLATA	3.00%
BLACKEYED SUSAN	RUDBECKIA HIRTA	3.00%
BLUE VERVAIN, PA ECOTYPE	VERBENA HASTATA, PA ECOTYPE	2.10%
DEERTONGUE, TIOGA	PANICUM CLANDESTINUM, TIOGA	2.00%
OXEYE SUNFLOWER, PA ECOTYPE	HELIOPSIS HELIANTHOIDES, PA ECOTYPE	1.80%
SWAMP MILKWEED, PA ECOTYPE	ASCLEPIAS INCARNATA, PA ECOTYPE	1.50%
BLUNT BROOM SEDGE, PA ECOTYPE	CAREX SCOPARIA, PA ECOTYPE	1.00%
TALL WHITE BEARDTONGUE, PA ECOTYPE	PENSTEMON DIGITALIS, PA ECOTYPE	1.00%
WILD SENNA, VA & WV ECOTYPE	SENNA HEBECARPA, VA & WV ECOTYPE	1.00%
NARROWLEAF MOUNTAINMINT	PYCNANTHEMUM TENUIFOLIUM	0.90%
GOLDEN ALEXANDERS, PA ECOTYPE	ZIZIA AUREA, PA ECOTYPE	0.90%
BLUE FALSE INDIGO, SOUTHERN WV ECOTYPE	BAPTISIA AUSTRALIS, SOUTHERN WV ECOTYPE	0.50%
WHITE AVENS, PA ECOTYPE	GEUM CANADENSE, PA ECOTYPE	0.50%
SOFT RUSH	JUNCUS EFFUSUS	0.50%
PATH RUSH, PA ECOTYPE	JUNCUS TENUIS, PA ECOTYPE	0.50%
NEW YORK IRONWEED, PA ECOTYPE	VERNONIA NOVEBORACENSIS, PA ECOTYPE	0.50%
WILD BERGAMOT, FORT INDIANTOWN GAP-PA ECOTYPE	MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE	0.40%
NEW ENGLAND ASTER, PA ECOTYPE	ASTER NOVAE-ANGLIAE, PA ECOTYPE	0.30%
LANCE LEAVED ASTER	ASTER LANCEOLATUS	0.20%
ZIGZAG ASTER, PA ECOTYPE	ASTER PRENANTHOIDES, PA ECOTYPE	0.20%
COMMON SNEEZEWEED, PA ECOTYPE	HELENIUM AUTUMNALE, PA ECOTYPE	0.20%
GRAY GOLDENROD, PA ECOTYPE	SOLIDAGO NEMORALIS, PA ECOTYPE	0.20%
CALICO ASTER	ASTER LATERIFLORUS	0.10%
HEATH ASTER, PA ECOTYPE	ASTER PILOSUS, PA ECOTYPE	0.10%
BONESET, PA ECOTYPE	EUPATORIUM PERFOLIATUM, PA ECOTYPE	0.10%
SQUARE STEMMED MONKEYFLOWER, PA ECOTYPE	MIMULUS RINGENS, PA ECOTYPE	0.10%
WRINKLELEAF GOLDENROD, PA ECOTYPE	SOLIDAGO RUGOSA, PA ECOTYPE	0.10%

* ERNST ERNMX-180 RAIN GARDEN SEED MIX SHALL BE PLANTED WITH A COVER CROP. FOR A COVER CROP, USE ONE OF THE FOLLOWING DEPENDING ON TIME OF YEAR:
- OATS @ 30 LBS/ACRE (JANUARY 1 THROUGH JULY 31)
- JAPANESE MILLET @ 10 LBS/ACRE (MAY 1 THROUGH AUGUST 31)
- GRAIN RYE @ 30 LBS/ACRE (AUGUST 1 THROUGH DECEMBER 31)

ERNST ERNMX-180 SEED MIX NOTES:
1. UPON SEEDING, DAILY WATERING SHALL BE PERFORMED UNTIL THE VEGETATION HAS ESTABLISHED AND REACHED AN AVERAGE HEIGHT OF 12 TO 18 INCHES.
2. AFTER THE FIRST GROWING SEASON, THE VEGETATION SHALL BE MOWED ONCE EARLY IN THE SPRING SEASON. AFTER THAT TIME, THE VEGETATION SHALL BE MOWED NO MORE THAN ONCE EVERY THREE YEARS AND ONLY DONE IN THE EARLY SPRING SEASON.



COPOLYMER POLYPROPYLENE PLASTIC MANHOLE STEP (ASTM C-478)

PLASTIC

MANHOLE STEPS ARE TO BE MADE OF COPOLYMER POLYPROPYLENE

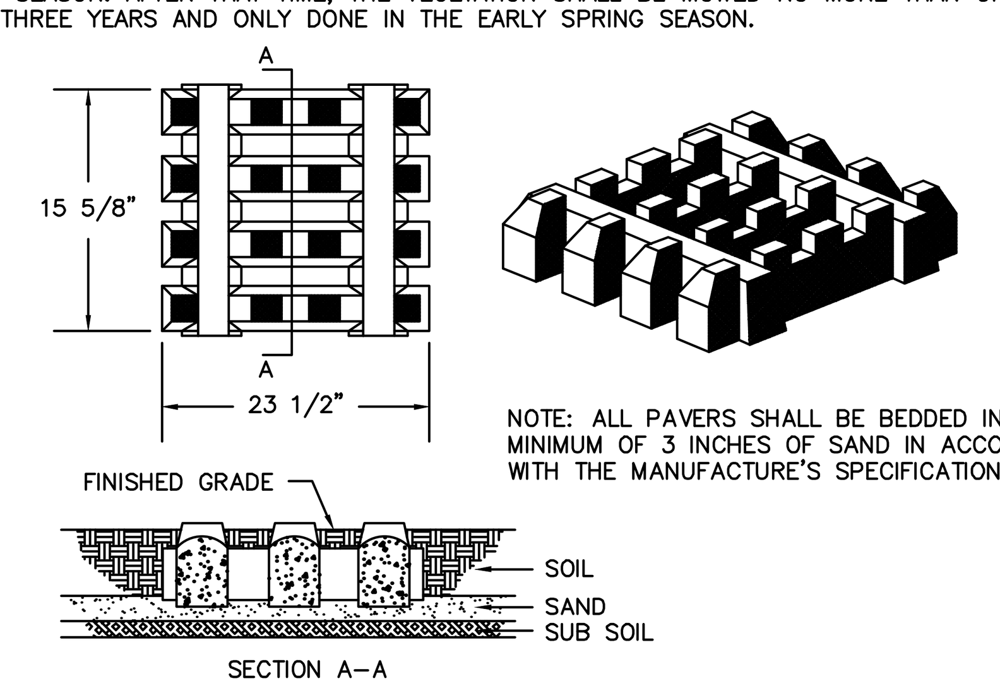
THE COPOLYMER POLYPROPYLENE TO CONFORM TO A.S.T.M. D-4141-95B PP0344B33534Z02 (THE PREVIOUS STANDARD A.S.T.M. D-4101-92B, WAS REPLACED BY D-4101-95B)

STEEL REINFORCEMENT BAR

THE STEEL TO BE USED IN MANUFACTURING OF THIS PRODUCT TO BE DEFORMED 1/2" REINFORCING ROD. THIS MATERIAL TO BE GRADE 60 AND CONFORM TO ALL THE REQUIREMENTS OF ASTM A-615.

POLYPROPYLENE MANHOLE STEP DETAIL

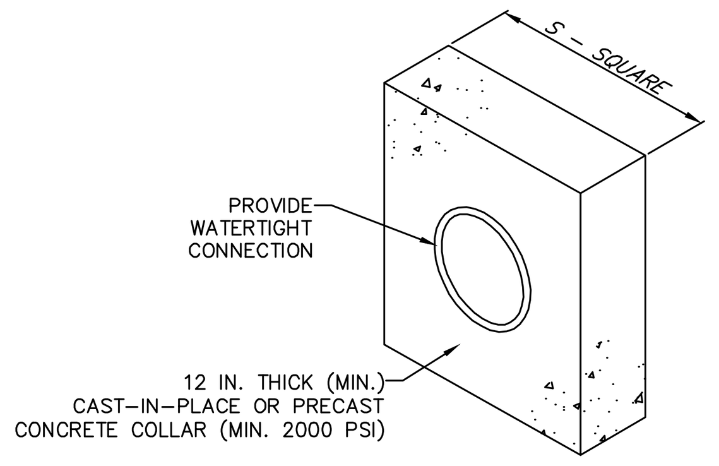
NOT TO SCALE



NOTE: ALL PAVERS SHALL BE BEDDED IN A MINIMUM OF 3 INCHES OF SAND IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS

CONCRETE GRASS PAVER DETAIL

NTS

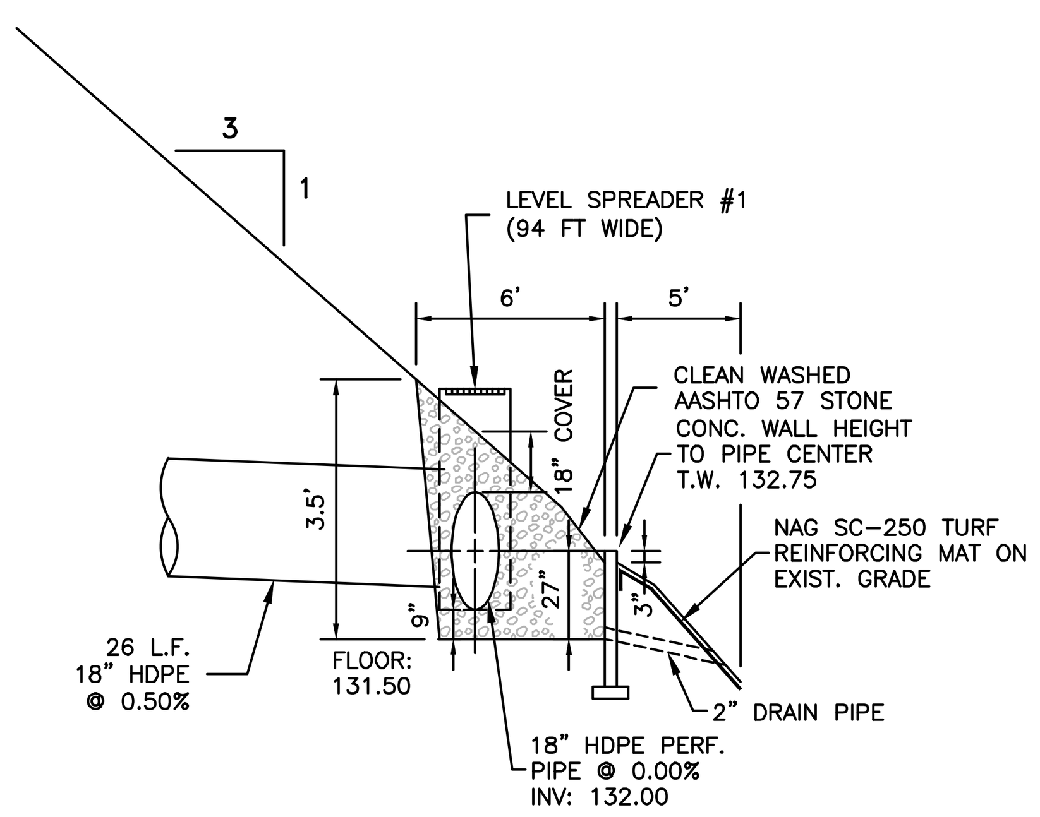


BASIN OR TRAP NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
SEDIMENT TRAP #1 (PCSM BMP ID 001)	18	42	2	7	7

NOTES:
1. ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE PIPE, OR BARREL, SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
2. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.
3. ANTI-SEEP COLLARS SHALL NOT BE LOCATED CLOSER THAN 2 FEET TO A PIPE JOINT.

STANDARD CONSTRUCTION DETAIL #7-16
CONCRETE ANTI-SEEP COLLAR FOR
PERMANENT BASINS OR TRAPS

NOT TO SCALE

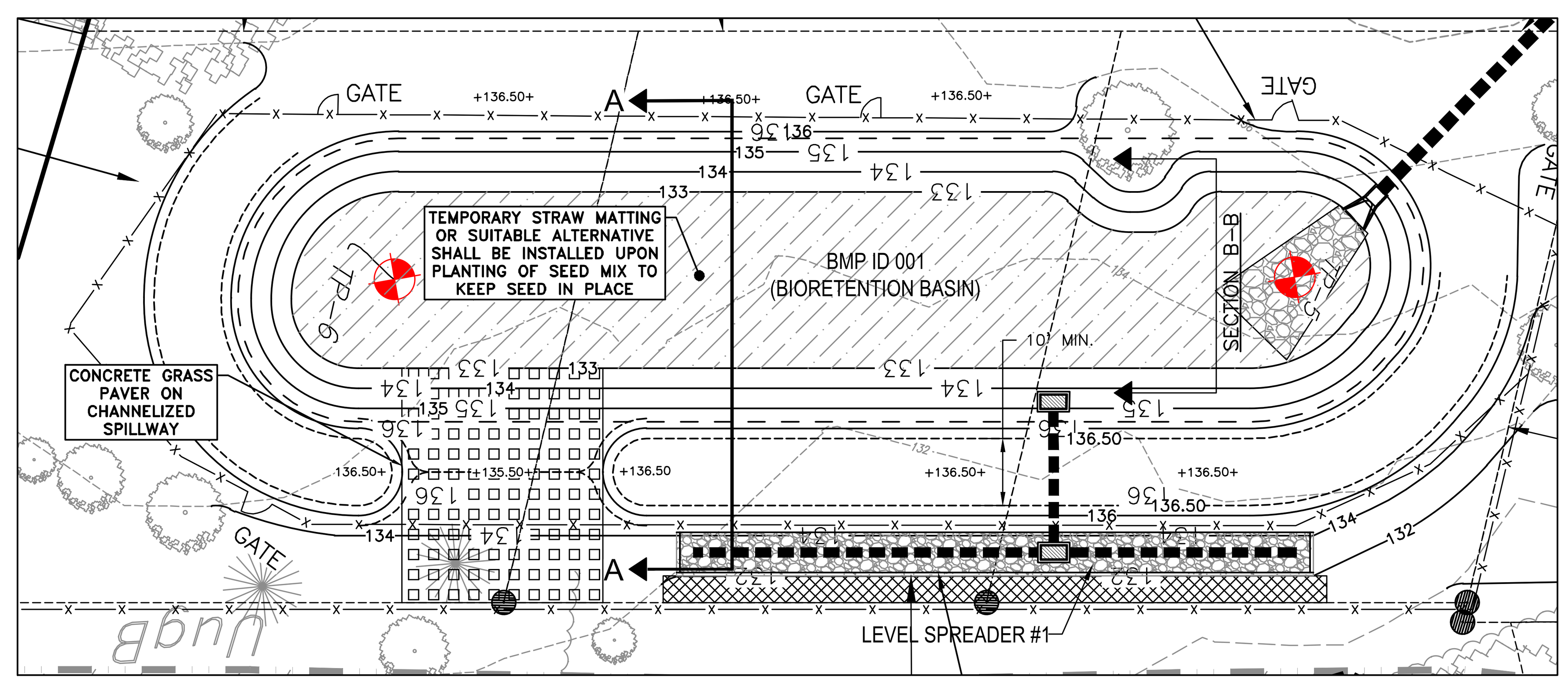


LEVEL SPREADER #1

NOT TO SCALE

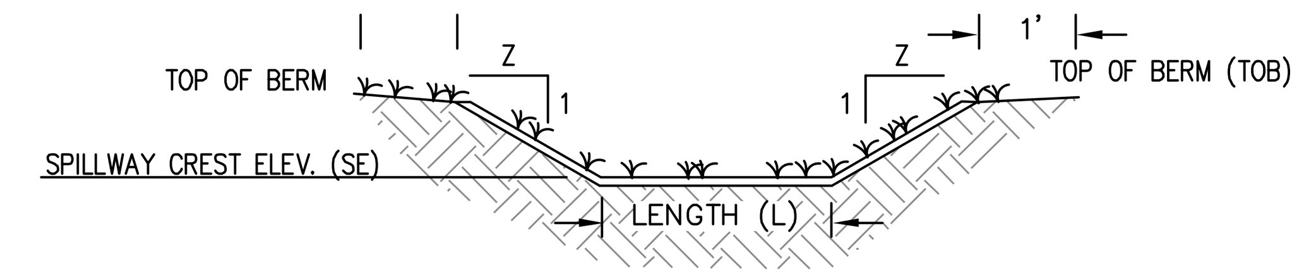
GENERAL NOTES:

1. ALL JOINTS SHALL BE WATERTIGHT. CONSTRUCTION MORTAR IS NOT TO BE USED FOR WATERTIGHT JOINTS. BUTYL MASTIC FOR SEALS IN INLET RISER JOINTS. WATERTIGHT CONCRETE PRODUCTS ARE TO BE USED FOR SEALING PIPE PENETRATIONS IN INLET BOXES AND BMP OUTLET STRUCTURES.
2. SIGNED AND SEALED SHOP DRAWINGS OF ALL STRUCTURES SHALL BE PROVIDED TO THE MUNICIPALITY FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. APPROVED ALTERNATE MATERIALS MAY BE SUBSTITUTED WITH APPROVAL BY MUNICIPALITY AND DESIGN ENGINEER.



BMP ID 001 (BIORETENTION BASIN) - PLAN VIEW

SCALE: 1"=20'



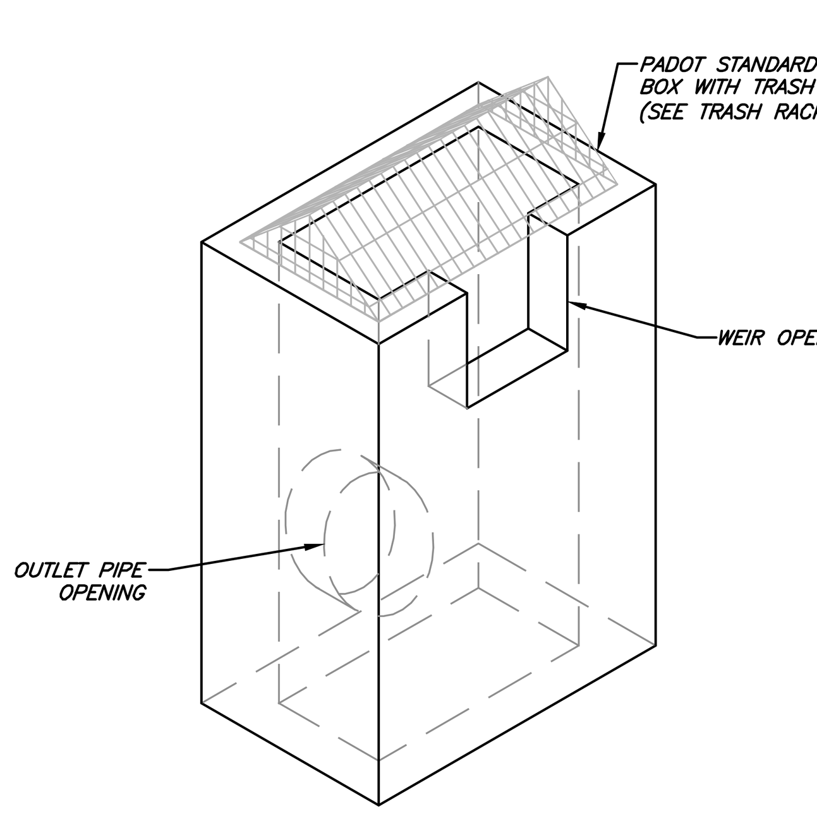
CONSTRUCTION SEQUENCE FOR EMERGENCY SPILLWAY
1. EXCAVATE THE EMERGENCY SPILLWAY TO THE PROPER ELEVATION AND LENGTH WITH SIDE SLOPE. THE EMERGENCY SPILLWAY HAS TO HAVE POSITIVE SLOPE AWAY FROM THE AREA.
2. TOP OF THE BERM TO BE SEEDED WITH SEED SPECIFICATION.

SPILLWAY SCHEDULE				
BASIN	TOP OF BERM (TOB)	SPILLWAY ELEVATION (SE)	SPILLWAY LENGTH (L)	SIDE SLOPE (Z)
BMP ID 001	136.50	135.50	22	3

EMERGENCY SPILLWAY DETAIL

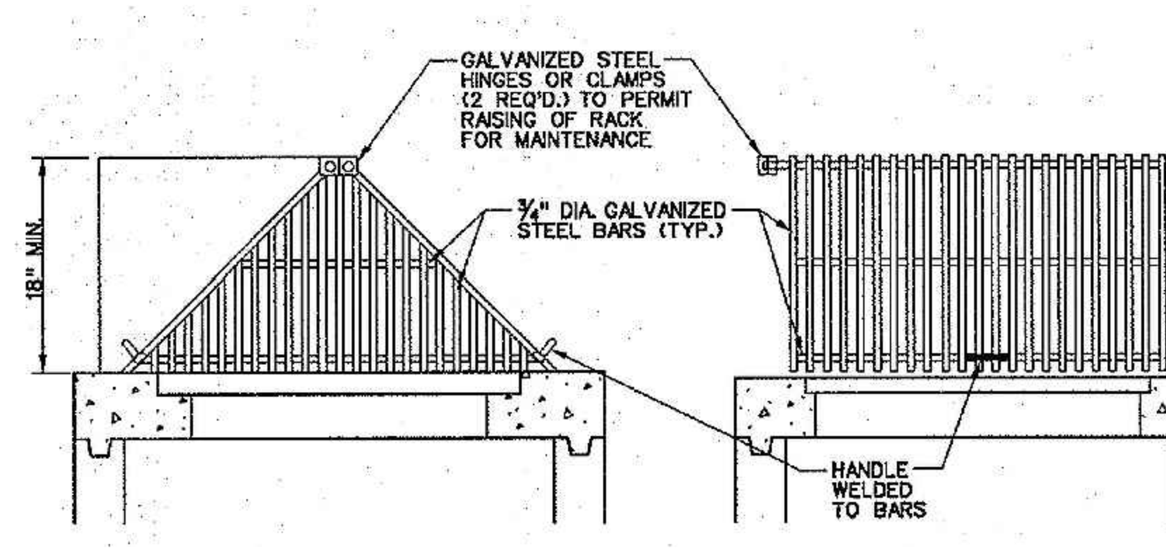
N.T.S.

BASIN DESIGN SCHEDULE								
BASIN NUMBER	FINISHED BOTTOM ELEVATION	PLANTING SOIL DEPTH (FT)	BOTTOM OF PLANTING SOIL ELEVATION	WATER QUALITY ELEV.	INFILTRATION DESIGN RATE (IN/HR)	DEWATERING TIME (HRS)	2-YR DESIGN STORM PONDING ELEVATION / DEPTH (FT)	100-YR DESIGN STORM PONDING ELEVATION / DEPTH (FT)
BMP ID 001	133.00	4.00	129.00	134.00	0.66	43	134.50 / 1.50	135.10 / 2.10



OUTLET STRUCTURE DETAIL

N.T.S.

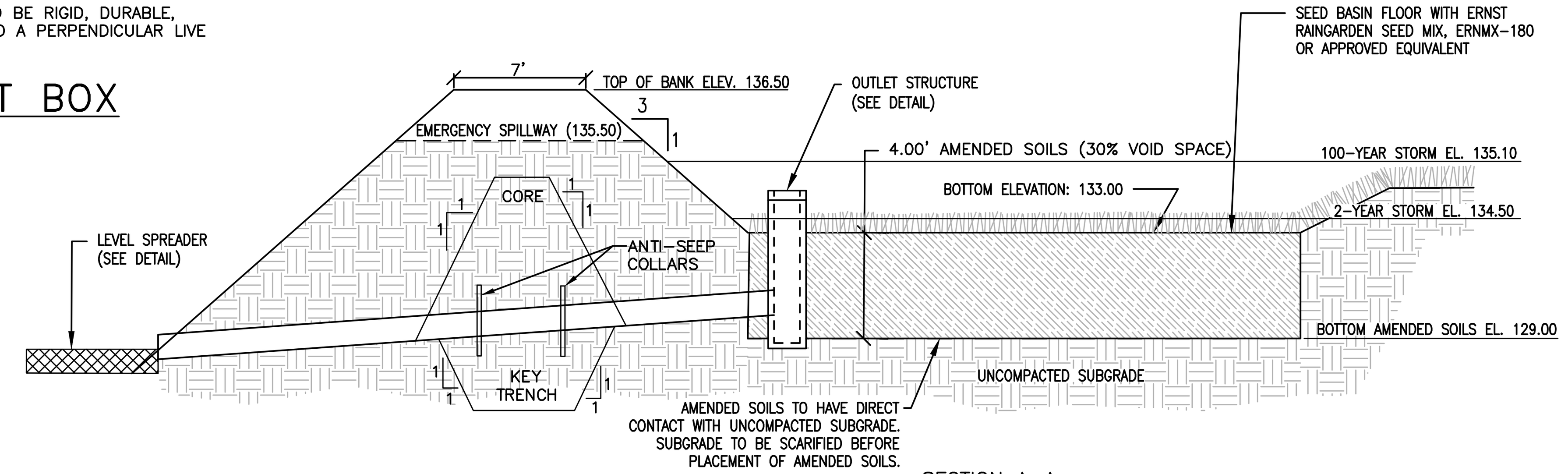


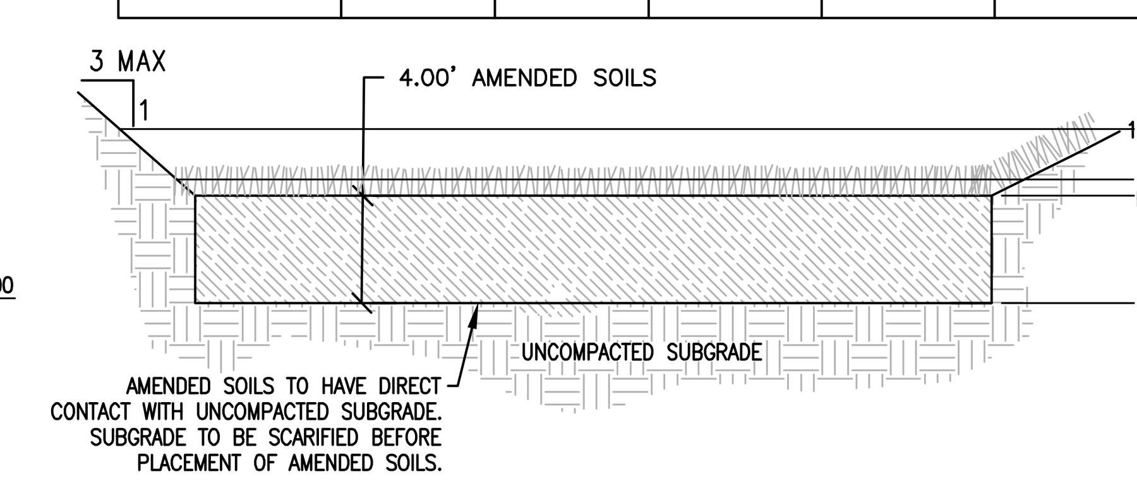
NOTE: THE TRASH RACK SHALL BE CONSTRUCTED AND INSTALLED TO BE RIGID, DURABLE, AND CORROSION RESISTANT, AND SHALL BE DESIGNED TO WITHSTAND A PERPENDICULAR LIVE LOADING OF THREE HUNDRED (300) POUNDS PER SQUARE FOOT

TRASH RACK FOR INLET BOX

NOT TO SCALE

OUTLET STRUCTURE DESIGN SCHEDULE							
BASIN NUMBER / STRUCTURE IDENTIFIER	STRUCTURE INTERIOR LENGTH/WIDTH (FT)	TOP OF GRATE ELEV.	WEIR OPENING WIDTH (FT)	WEIR OPENING INVERT ELEV.	OUTLET PIPE SIZE (IN)	OUTLET PIPE INVERT ELEV.	BOTTOM OF STRUCTURE / SUMP ELEV.
BMP ID 001 / OS1	2.0'W x 4.0'L (PADOT STD. INLET BOX)	135.25	1.75	134.00	18	132.13	131.13

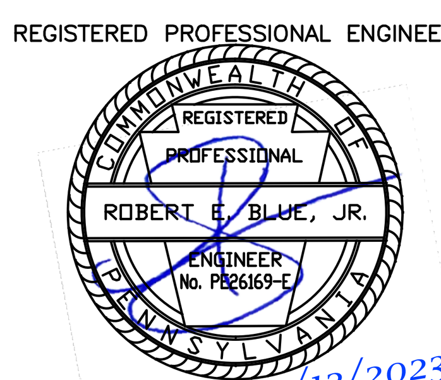




BIORETENTION BASIN - BMP ID 001 DETAIL

N.T.S.

REGISTERED PROFESSIONAL ENGINEER



ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

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RECORD PLAN (6 OF 6) - PCSM DETAILS

FINAL PLAN

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	AS NOTED
DATE:	JOB NUMBER:	SHEET NUMBER:
2021-09-30	2154-10E	24 of 31

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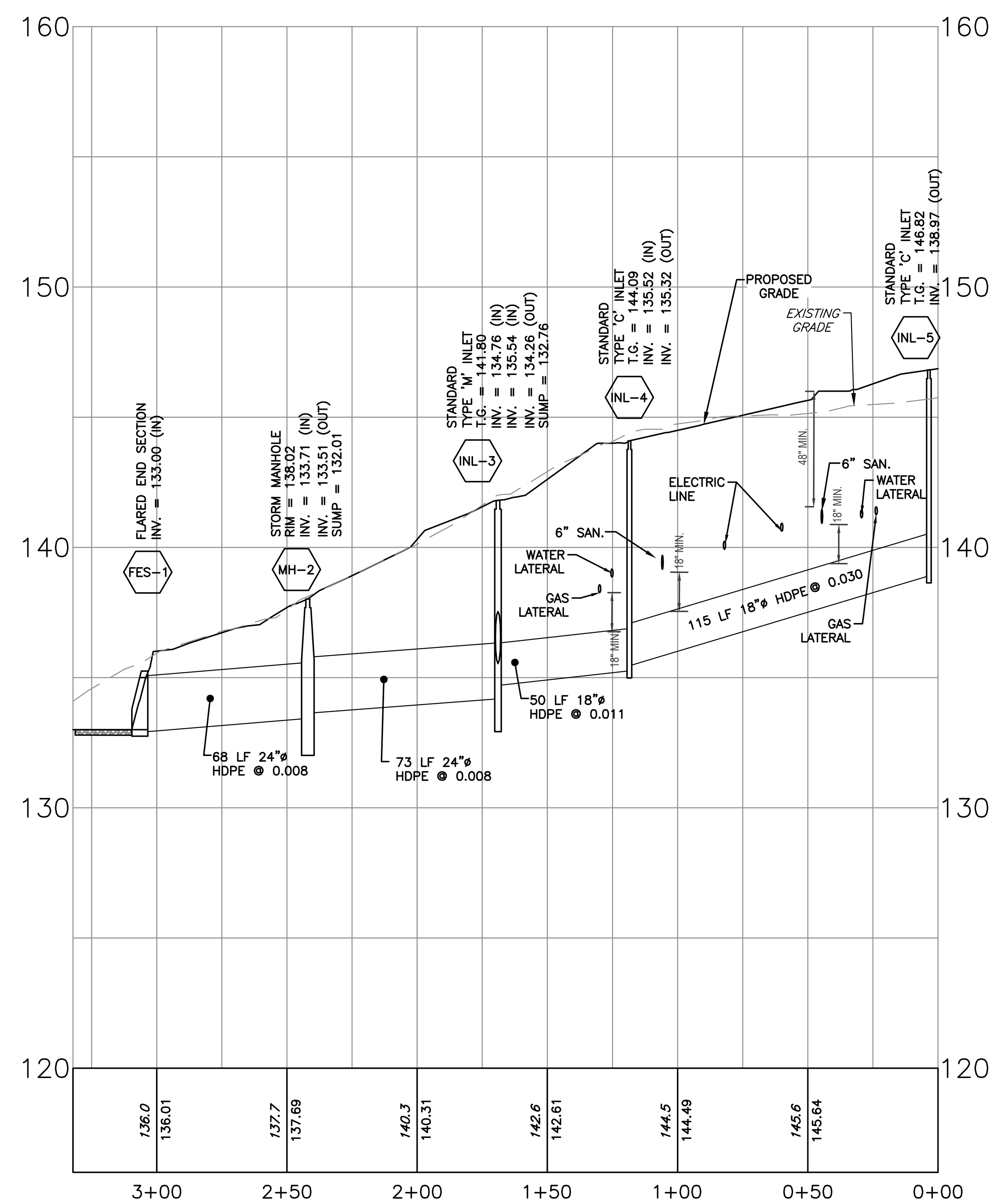
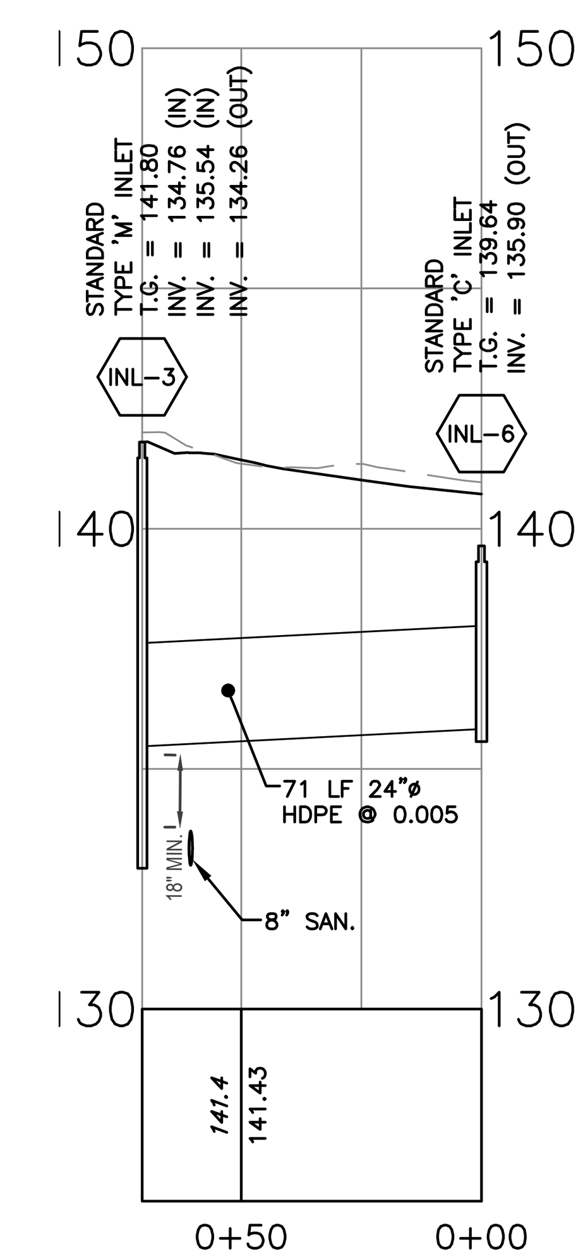


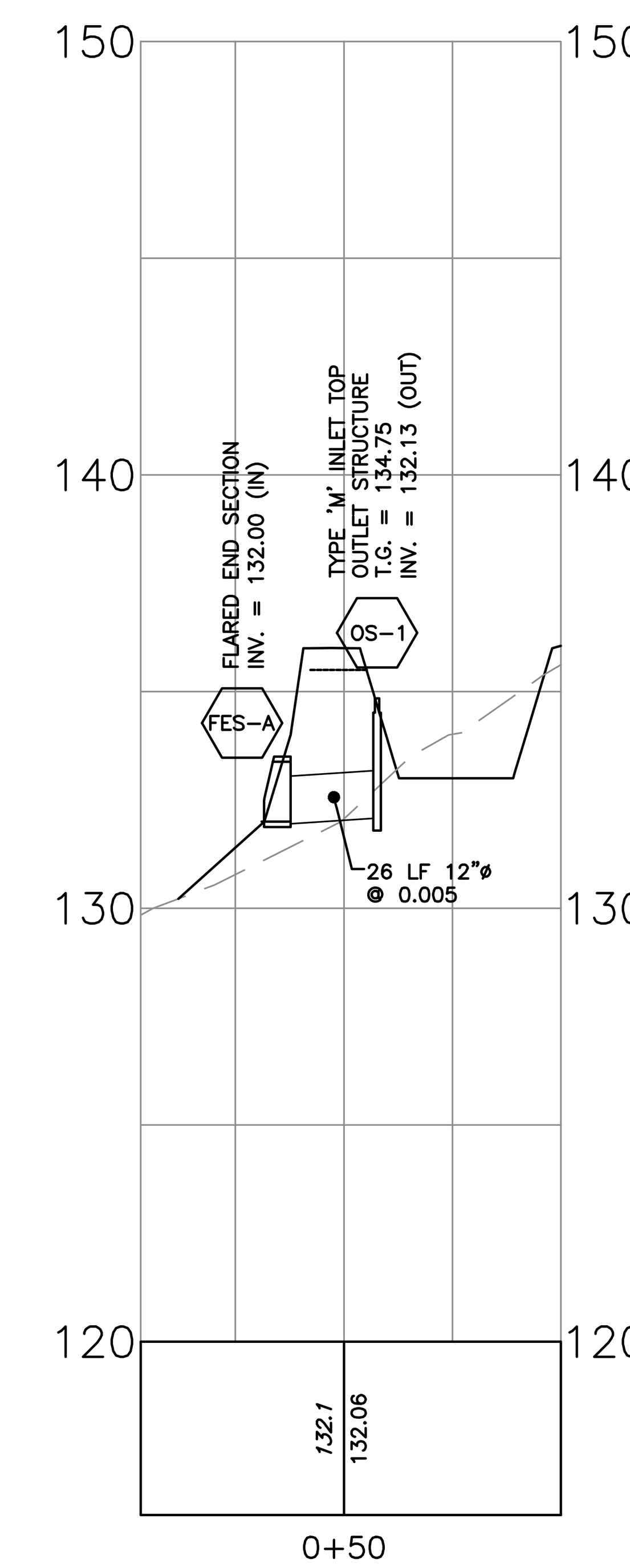
PROFILE VIEW: INLET #5 TO FLARED END SECTION 1

SCALE: (H) 1" = 40' | (V) 1" = 4'



PROFILE VIEW: INLET #6 TO INLET #4

SCALE: (H) 1" = 40' | (V) 1" = 4'



PROFILE VIEW: OS-1 TO FES-A

SCALE: (H) 1" = 40' | (V) 1" = 4'

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E
9/12/2023

FINAL PLAN
STORM PROFILES

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

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GRAPHIC SCALE 0 40 80 120 160

REVISIONS
5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

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DJG	REB	1"=40'
DATE: 2021-09-30	JOB NUMBER: 2154-10E	SHEET NUMBER: 25 of 31

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REGULATORY NOTES:

1. THIS EROSION AND SEDIMENT CONTROL PLAN AND ASSOCIATED REPORT WERE PREPARED BY THE STAFF OF ROBERT E. BLUE CONSULTING ENGINEERS, P.C. (REBPC) UNDER THE DIRECTION OF ROBERT E. BLUE JR., P.E. THE MEASURES SHOWN HAVE BEEN DESIGNED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE COUNTY CONSERVATION DISTRICT. REBPC DOES NOT TAKE RESPONSIBILITY IN OBSERVING AND/OR CERTIFYING THE CONSTRUCTION OF THESE FACILITIES UNLESS REQUESTED SPECIFICALLY BY THE OWNER AND/OR CONTRACTOR. THEREFORE, REBPC DOES NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF IMPROPER CONSTRUCTION AND/OR MAINTENANCE OF FACILITIES DURING CONSTRUCTION.

2. THE OPERATOR/RESPONSIBLE PARTY (O/RP) SHALL BE DEFINED AS FOLLOWS:
   - 2.1. THE CONTRACTOR FOR THE TIME PERIOD OF INITIAL SITE DISTURBANCE UP TO THE POINT THE SITE ACHIEVES FINAL STABILIZATION AS DEFINED HEREIN.
   - 2.2. ALL OTHER TIMES: THE PERMITTEE/CO-PERMITTEE (PERMITTEE) SHALL BE THOSE INDIVIDUALS OR ORGANIZATIONS AS DEFINED ON THE APPROVED EROSION CONTROL PERMIT APPLICATION, THE APPROVED NPDES PERMIT APPLICATION AND/OR THE PROPERTY OWNER.

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

STANDARD E&S PLAN NOTES:

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE SITE ONTO MAIN STREET (A.K.A. SUMNEYTOWN PIKE, A.K.A. SR 0063).
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- 6 TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
29. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
34. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
35. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
36. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
37. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
38. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
39. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
40. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
41. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
42. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

CONSTRUCTION NOTES:

1. VEHICLES AND EQUIPMENT MUST NEITHER ENTER DIRECTLY, NOR EXIT DIRECTLY FROM THE SITE ONTO ROADWAYS WITHOUT PASSING OVER THE CONSTRUCTION ENTRANCE AND REMOVING MUD AND SILT FROM TIRES. SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY, OR AS NEEDED, OR AS DIRECTED BY THE COUNTY CONSERVATION DISTRICT OR THE MUNICIPALITY AND DISPOSED AS A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER OR SURFACE WATER.
2. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER. STOCKPILE TOPSOIL WHERE INDICATED ON THE PLAN FOR USE WITH FINAL GRADING. INSTALL PERIMETER SILT PROTECTION AND IMMEDIATELY APPLY TEMPORARY SEEDING AND MULCHING.
3. SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY, OR AS NEEDED, OR DIRECTED BY THE CONSERVATION DISTRICT OR THE MUNICIPALITY AND DISPOSED OF IN A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEPT INTO ANY ROAD SIDE DITCH, STORM SEWER, OR SURFACE WATER.
4. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
5. ALL SEDIMENT SHALL BE FLUSHED FROM THE ADJACENT STATE, TOWNSHIP AND COUNTY STORM SEWERS AT THE COMPLETION OF CONSTRUCTION. CONTRACTOR SHALL NOT FLUSH SEDIMENT INTO WATERWAYS. TO FLUSH STORM SEWERS, CONTRACTOR SHALL BLOCK THE LOWEST INVERT OF THE SYSTEM AND PUMP SEDIMENT LADEN WATER THROUGH A FILTER BAG OR OTHER APPROVED DEVICE AND DISCHARGE IN AN APPROPRIATE MANNER (I.E. TO STABILIZED GRADE, OR TANKER TRUCK AND DISPOSED OF PROPERLY
6. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOOD PLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
7. AREAS WHICH ARE TO BE TOP-SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES (6 TO 12 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING, I.E. YARDS.
8. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. (PLEASE NOTE THAT HYDROSEED IS NOT CONSIDERED STABILIZATION UNTIL IT GERMINATES)
9. ALL SOILS RELATED WORK (COMPACTION, INSPECTION, ETC.) SHOULD BE PERFORMED UNDER THE SUPERVISION OF, AND CERTIFIED BY, A QUALIFIED GEOTECHNICAL ENGINEER.
10. TOPSOIL (MINIMUM 6 INCHES) SHALL BE PLACED OVER THE FILL AND SEEDING, LIMING, FERTILIZING AND MULCHING DONE IN ACCORDANCE WITH THE SEEDING SPECIFICATIONS OR APPROVED EQUAL.
11. UTILITY LINE TRENCH EXCAVATION NOTES
    - 11.1. LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
    - 11.2. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
    - 11.3. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
    - 11.4. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
    - 11.5. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND / OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
    - 11.6. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.
    - 11.7. SOILS EXCAVATED FROM EXISTING SURFACE LAYER SHOULD BE STOCKPILED SEPARATELY AND RETURNED AS FINAL SURFACE LAYER FOLLOWING TRENCH BACKFILLING.
12. EMBANKMENTS
    - 12.1. THE FILL MATERIAL SHALL BE TAKEN FROM SELECT BORROW AREAS. IT SHALL BE FREE OF ROOTS, STONES, WOODY VEGETATION, BOULDERS, AND OTHER EXTRANEOUS MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, THE SOIL IS TOO WET FOR COMPACTION.
    - 12.2. FILL MATERIAL SHALL BE PLACED IN 6 TO 8 INCH LAYERS AND SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF FILL.
    - 12.3. COMPACTION SHALL BE OBTAINED BY ROUTING THE EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF THE FILL IS TRAVERSED BY AT LEAST ONE TREAD TRACT OF THE EQUIPMENT, OR COMPACTION SHALL BE ACHIEVED BY A COMPACTOR.
    - 12.4. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT IF COMPACTION IS OBTAINED WITH HAULING EQUIPMENT. IF COMPACTORS ARE USED, THE OVERBUILD MAY BE REDUCED BY 5%.
    - 12.5. EMBANKMENT SHALL BE COMPACTED TO NO LESS THAN 98% OF THE DETERMINED DRY WEIGHT DENSITY (STANDARD PROCTOR). SEE SOIL SPECIFICATIONS FOR IMPERVIOUS CLAY CORE MATERIAL.

E&S PLAN AND PCSM PLAN CONSISTENCY

THE EROSION & SEDIMENT CONTROL PLAN AND THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN HAVE BEEN PROVIDED SEPARATELY; HOWEVER, THEY HAVE BEEN PLANNED, DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH ONE ANOTHER.

CHAPTER 93 RECEIVING WATERCOURSE NOTE:

THE SITE DRAINS TO THE TOOKANY CREEK WHICH HAS A CHAPTER 93 USE DESIGNATION OF WARM WATER FISHERY (WWF) AND MIGRATORY FISHES (MF).

POLLUTION CAUSING GEOLOGIC FORMATIONS:

THERE ARE NO KNOWN NATURALLY OCCURRING FORMATIONS OR SOIL CONDITIONS THAT HAVE THE POTENTIAL TO CAUSE POLLUTION DURING EARTH DISTURBANCE ACTIVITIES.

RESPONSIBILITIES FOR FILL MATERIAL:

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH LANDOWNER.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM .

SITE MAINTENANCE:

THE BELOW PROCEDURES SHALL BE REPEATED AFTER EACH SIZEABLE STORM UNTIL NO MORE SIGNS OF EROSION ARE EVIDENT. AT WEEKLY INTERVALS THEREAFTER, INSPECTION AND NECESSARY CLEANING WILL BE DONE. PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE DONE IMMEDIATELY.

THE PERMITTEE IS ULTIMATELY RESPONSIBLE FOR ALL EROSION AND SEDIMENT POLLUTION CONTROL AND SITE STABILIZATION. ALTHOUGH THE PERMITTEE MAY DELEGATE AUTHORITY FOR IMPLEMENTING AND MAINTAINING THE CONTROLS TO THE INDIVIDUAL LANDOWNERS OR CONTRACTORS, THE ULTIMATE RESPONSIBILITY FOR PROPER INSTALLATION AND MAINTENANCE IS THE PERMITTEE'S.

MAINTENANCE OF E&S BMP'S:

ROCK CONSTRUCTION ENTRANCE: ROCK CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE ADJACENT ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND / OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. WHERE ACCUMULATION OF DUST OR SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES.

PUMPED WATER FILTER BAGS: FILTER BAGS SHALL BE INSPECTED EACH DAY THAT THEY ARE IN USE. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

CONCRETE WASHOUT: CONCRETE WASHOUTS SHALL BE INSPECTED WEEKLY WHILE IN USE AND REQUIRED MAINTENANCE PERFORMED IMMEDIATELY. ACCUMULATED MATERIALS SHALL BE REMOVED WHEN THEY REACH 75% CAPACITY OF THE WASHOUT FACILITY. IF A PROPRIETARY WASHOUT DEVICE IS UTILIZED, MAINTENANCE ACTIVITIES SHOULD BE PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

COMPOST FILTER SOCK: FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION. DEGRADABLE FILTER SOCKS SHALL BE REPLACED AT THE PROPER TIME INTERVALS ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED OF.

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

RIPRAP APRONS: APRONS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY DISPLACED RIPRAP SHALL BE REPLACED IMMEDIATELY.

SEDIMENT TRAP: SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. CHECK EMBANKMENTS AND SPILLWAYS FOR EROSION, PIPING AND SETTLEMENT. CHECK OUTLET STRUCTURE AND OUTLET PIPE FOR SIGNS OF CLOGGING OR DAMAGE. RIPRAP APRONS SHOULD BE CHECKED FOR EROSION AND DISPLACEMENT. CLOGGED OR DAMAGED DEVISES SHALL BE REPAIRED IMMEDIATELY. AREAS OF ACCELERATED EROSION SHALL BE RESTORED AND STABILIZED. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS.

GENERAL MAINTENANCE ACTIVITIES:

1. DUST LEVELS MUST BE ADEQUATELY CONTROLLED DURING CONSTRUCTION. WATER STORED IN SEDIMENT BASINS/TRAPS OR A WATER TRUCK SHALL BE USED AS NECESSARY TO REDUCE THE AMOUNT OF DUST GENERATED FROM THE SITE.
2. VEGETATION SHALL BE MOWED WHENEVER NECESSARY TO MAINTAIN A PLEASING APPEARANCE AND DISCOURAGE WEED GROWTH. ALL LOCAL REGULATIONS WILL BE COMPLIED WITH.
3. AREAS THAT CONTAIN SOD SHALL BE CHECKED VERY CAREFULLY TO ENSURE THAT JOINTS BETWEEN THE SOD STRIPS ARE TIGHT AND SECURE. WHERE JOINT SEPARATION IS IN EVIDENCE, A CAREFUL INSPECTION OF EACH STRIP SHALL BE MADE TO DETERMINE WHETHER UNDERMINING OF THE STRIPS IS OCCURRING. IF IT IS, THE STRIPS SHALL BE ROLLED UP, THE SUBSURFACE SHALL BE FILLED AND GRADED AS REQUIRED AND THE SOD STRIPS SHALL BE RE-LAID WITH TIGHT JOINTS AND PEGGING.
4. SEEDED AREAS THAT HAVE WASHED AWAY SHALL BE FILLED AND GRADED AS NECESSARY AND THEN RESEEDED. A BURLAP OR STRAW COVER WILL BE APPLIED AT A RATE OF 3 TONS/ACRE TO RETAIN THE SEED UNTIL IT HAS A CHANCE TO ROOT PROPERLY.
5. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED AT COMPLETION OF THE PROJECT AFTER ALL EXPOSED SOIL SURFACES ARE FINISH-GRADED AND STABILIZED.

MONITORING, INSPECTION, AND REPORTING REQUIREMENTS:

VISUAL INSPECTIONS

THE PERMITTEE AND CO-PERMITTEE(S) MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND WITHIN 24 HOURS AFTER EACH MEASURABLE RAINFALL EVENT THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE RECEIPT AND ACKNOWLEDGEMENT OF THE NOT BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE VISUAL SITE INSPECTIONS AND REPORTS SHALL BE COMPLETED IN A FORMAT PROVIDED BY THE DEPARTMENT, AND CONDUCTED BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT E&S BMPS AND PCSM BMPS ARE PROPERLY CONSTRUCTED AND MAINTAINED TO EFFECTIVELY MINIMIZE POLLUTION TO THE WATERS OF THIS COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE AT A MINIMUM:

(1) A SUMMARY OF SITE CONDITIONS, E&S BMP AND PCSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND

(2) THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

NONCOMPLIANCE REPORTING

WHERE E&S, PCSM OR PPC BMPS ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE AND CO-PERMITTEE(S) SHALL, WITHIN 24 HOURS, CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT, BY PHONE OR PERSONAL CONTACT, FOLLOWED BY THE SUBMISSION OF A WRITTEN REPORT WITHIN 5 DAYS OF THE INITIAL CONTACT. NONCOMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

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

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

(3) STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NONCOMPLIANCE; AND

(4) THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NONCOMPLIANCE CONDITIONS.

REDUCTION, LOSS, OR FAILURE OF THE BMPS

UPON REDUCTION, LOSS, OR FAILURE OF THE BMPS, THE PERMITTEE AND CO-PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPS OR PROVIDE AN ALTERNATIVE METHOD OF TREATMENT. SUCH RESTORED BMPS OR ALTERNATIVE TREATMENT SHALL BE AT LEAST AS EFFECTIVE AS THE ORIGINAL BMPS.

COMPLETION CERTIFICATE AND FINAL PLANS

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

DISPOSAL AND RECYCLING:

THE CONTRACTOR / DEVELOPER SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OR RECYCLING OF ALL WASTE PRODUCED BY CONSTRUCTION ACTIVITIES. ANTICIPATED MATERIALS INCLUDE BUILDING DEBRIS, ASPHALT AND CONCRETE, AND E&S BMP'S SUCH AS COMPOST FILTER SOCKS, EROSION CONTROL MATTING, INLET PROTECTION FILTER BAGS, PUMPED WATER FILTER BAGS, AND BAFFLE WALLS.

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

SOILS TABLE PER USDA NRCS						
MAP SYMBOL	SOIL NAME	SLOPES	HYDROLOGIC GROUP	DEPTH TO WATER TABLE	DRAINAGE CHARACTERISTICS	HYDRIC SOIL
Ha	HATBORO SILT LOAM	0 – 3	B / D	0" – 6"	POORLY DRAINED	YES
UugB	URBAN LAND – URDORTHENTS	0 – 8	C	> 60"	WELL DRAINED	NO
UugD	URBAN LAND – UDORTHENTS	8 – 25	C	> 60"	WELL DRAINED	NO
W	WATER	–	–	–	–	–

SOIL LIMITATION RESOLUTIONS:

SHOULD SOIL LIMITATIONS BE ENCOUNTERED, A QUALIFIED GEOTECHNICAL ENGINEER WILL BE CONSULTED PRIOR TO PROCEEDING WITH CONSTRUCTION IN THE AREA WITH THE LIMITATIONS. APPROPRIATE EARTHWORK CONSTRUCTION TECHNIQUES, INCLUDING IMPORTING SUITABLE SOILS AND UTILIZING LOCAL SUMPS AND PUMPS (TO APPROVED SEDIMENT REMOVAL FACILITIES) TO KEEP EXCAVATIONS DRY, AS RECOMMENDED BY A QUALIFIED GEOTECHNICAL ENGINEER, SHOULD BE IMPLEMENTED IF SOIL LIMITATIONS ARE ENCOUNTERED.

1. CUTBANKS CAVE – AREAS OF CUT SHALL BE STABILIZED AS SOON AS POSSIBLE DURING EARTH MOVING OPERATIONS IN ACCORDANCE WITH THE NOTES FOUND ON THE E&S PLANS. AT NO POINT SHOULD SLOPES EXCEED 2H:1V EXCEPT WHERE PROPER SHORING MEASURES ARE UTILIZED TO PREVENT CAVE IN.
2. CORROSIVE TO CONCRETE/STEEL – A MAJORITY OF STORM DRAINAGE PIPING ARE PROPOSED TO BE HDPE TO MINIMIZE RISK OF CORROSION.
3. DROUGHTY – DURING CONSTRUCTION, A WATER SOURCE SUCH AS A HOSE CONNECTION TO PUBLIC WATER SUPPLY OR A WATER TANKER TRUCK MAY BE UTILIZED AS NEEDED TO MAINTAIN SUFFICIENT SOIL MOISTURE LEVELS.
4. EASILY ERODIBLE – EARTH DISTURBANCE AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE DURING EARTH MOVING OPERATIONS IN ACCORDANCE WITH THE NOTES FOUND ON THE E&S PLANS.
5. DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE – ANY GROUNDWATER ENCOUNTERED DURING CONSTRUCTION SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG PRIOR TO DISCHARGING FROM THE SITE.
6. HYDRIC/HYDRIC INCLUSIONS – NO WETLANDS ARE PRESENT ON THE DEVELOPMENT PROPERTY.
7. LOW STRENGTH/LANDSLIDE PRONE – EARTH DISTURBANCE AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE DURING EARTH MOVING OPERATIONS IN ACCORDANCE WITH THE NOTES FOUND ON THE E&S PLANS. AT NO POINT SHOULD SLOPES EXCEED 2H:1V EXCEPT WHERE PROPER SHORING MEASURES ARE UTILIZED.
8. SLOW PERCOLATION – AREAS OF PONDED WATER SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG PRIOR TO DISCHARGING FROM THE SITE.
9. PIPING – AREAS OF PONDED WATER SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG, AS APPLICABLE. BASIN OUTLET PIPES WILL BE INSTALLED WITH ANTI-SEEP COLLARS. UTILITY PIPES AND CONDUITS SHALL BE INSTALLED WITH APPROPRIATE BEDDING MATERIALS.
10. POOR SOURCE OF TOPSOIL – SOIL TESTS SHOULD BE PERFORMED BY A QUALIFIED INDIVIDUAL SUCH AS A GEOTECHNICAL ENGINEER OR SOIL SCIENTIST TO DETERMINE SUITABILITY FOR TOPSOIL. IF SOIL IS DETERMINED TO BE UNSUITABLE THEN TOPSOIL SHALL BE IMPORTED AND DISTRIBUTED AMONGST LANDSCAPE AREAS AS NECESSARY.
11. FROST ACTION – DUE TO GRADING LIMITATIONS OF SOILS DURING WINTER MONTHS, THE CONTRACTOR SHALL NOT GRADE THESE SOILS DURING FROSTING OR ICING CONDITIONS.
12. WETNESS – AREAS OF PONDED WATER SHALL BE DIRECTED TOWARDS AN APPROPRIATE E&S BMP SUCH AS COMPOST FILTER SOCK OR A SEDIMENT TRAP OR PUMPED THROUGH A FILTER BAG PRIOR TO DISCHARGING FROM THE SITE. LIME APPLICATION MAY BE UTILIZED AS A LAST RESORT AND ONLY UNDER THE DIRECTION OF A QUALIFIED INDIVIDUAL SUCH AS A GEOTECHNICAL ENGINEER OR SOIL SCIENTIST.

REVISIONS

5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

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FINAL PLAN

EROSION AND SEDIMENT CONTROL NOTES

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT E. BLUE, JR.
ENGINEER
No. PE26169-E

9/12/2023

ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	N.T.S.
DATE:	JOB NUMBER:	SHEET NUMBER:
2021-09-30	2154-10E	26 of 31

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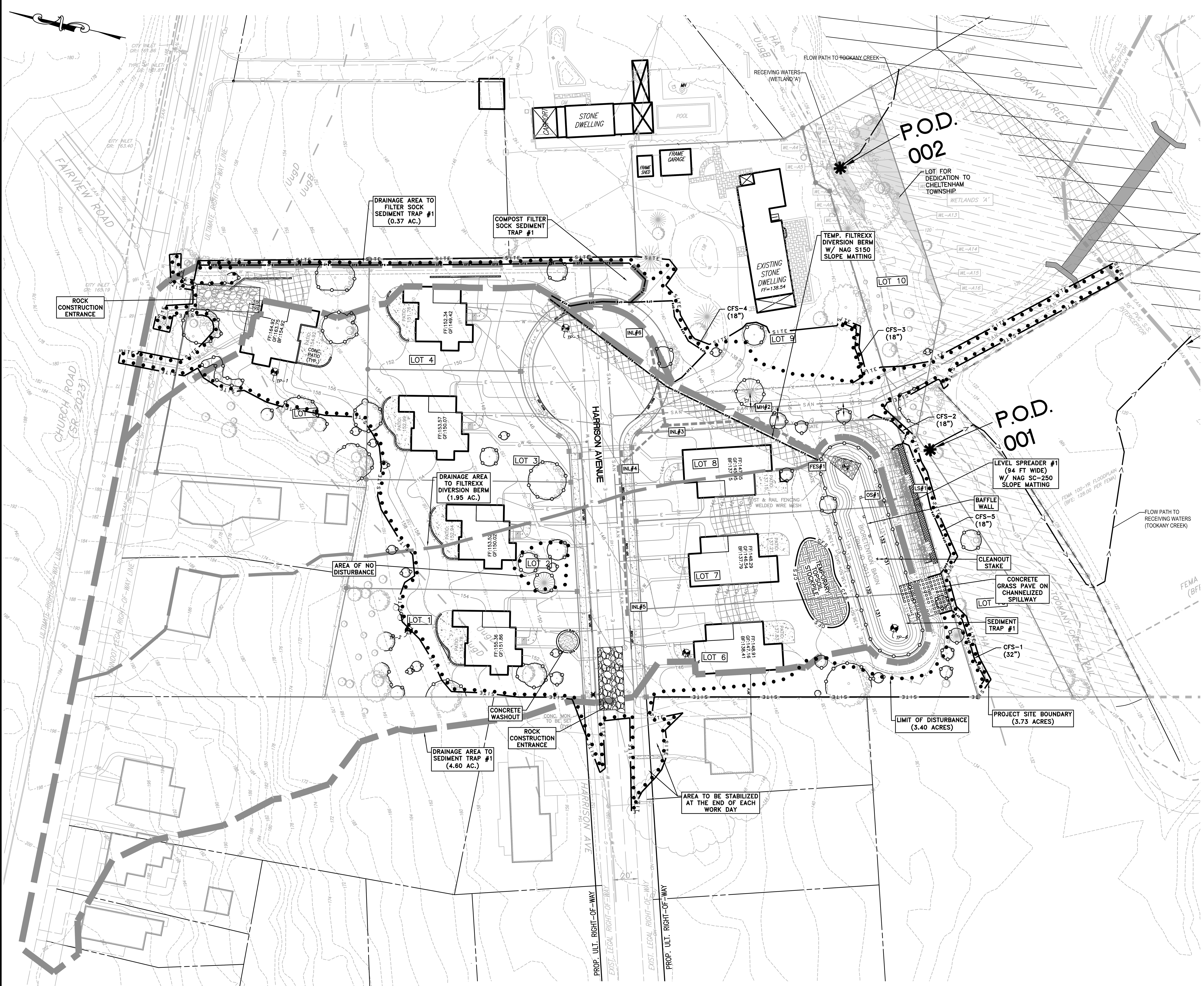


SEQUENCE OF CONSTRUCTION

NOTES:

A. ALL EARTH DISTURBANCE SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF CONSTRUCTION. EACH STAGE/STEP SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE/STEP IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE.
B. EROSION AND SEDIMENT CONTROLS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREA OF THESE CONTROLS. ONLY LIMITED DISTURBANCE IS PERMITTED TO PROVIDE ACCESS TO THE EROSION AND SEDIMENT CONTROL AREAS FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE CONTROLS. THE O/RP MUST INFORM THE MUNICIPALITY THAT THE APPLICABLE E&S CONTROLS ARE INSTALLED, STABILIZED AND FUNCTIONAL BEFORE INITIATING EARTH DISTURBANCE.
C. WORK AREAS SHALL BE DELINEATED AND SURVEY CONTROL POINTS SHALL BE PROTECTED. WETLANDS ARE TO BE FENCED OR STAKED IN THE FIELD. THERE IS TO BE NO EARTH DISTURBANCE OR VEGETATIVE CLEARING IN AREAS PROTECTED BY BARRIER FENCE OR STAKES. EARTH DISTURBANCE WITHIN THESE AREAS WITHOUT REQUIRED PERMITS WILL RESULT IN POTENTIAL VIOLATIONS OF COMMONWEALTH AND FEDERAL REGULATIONS. ALL COSTS ASSOCIATED WITH DISTURBANCE OF THESE AREAS WILL BE INCURRED SOLELY AT CONTRACTOR'S EXPENSE.
D. ALL EARTH DISTURBANCES SHALL BE WITHIN THE DELINEATED LIMITS OF DISTURBANCE. NO FILL SHALL BE TAKEN OR PLACED OUTSIDE THE DESIGNATED LIMITS OF DISTURBANCE.

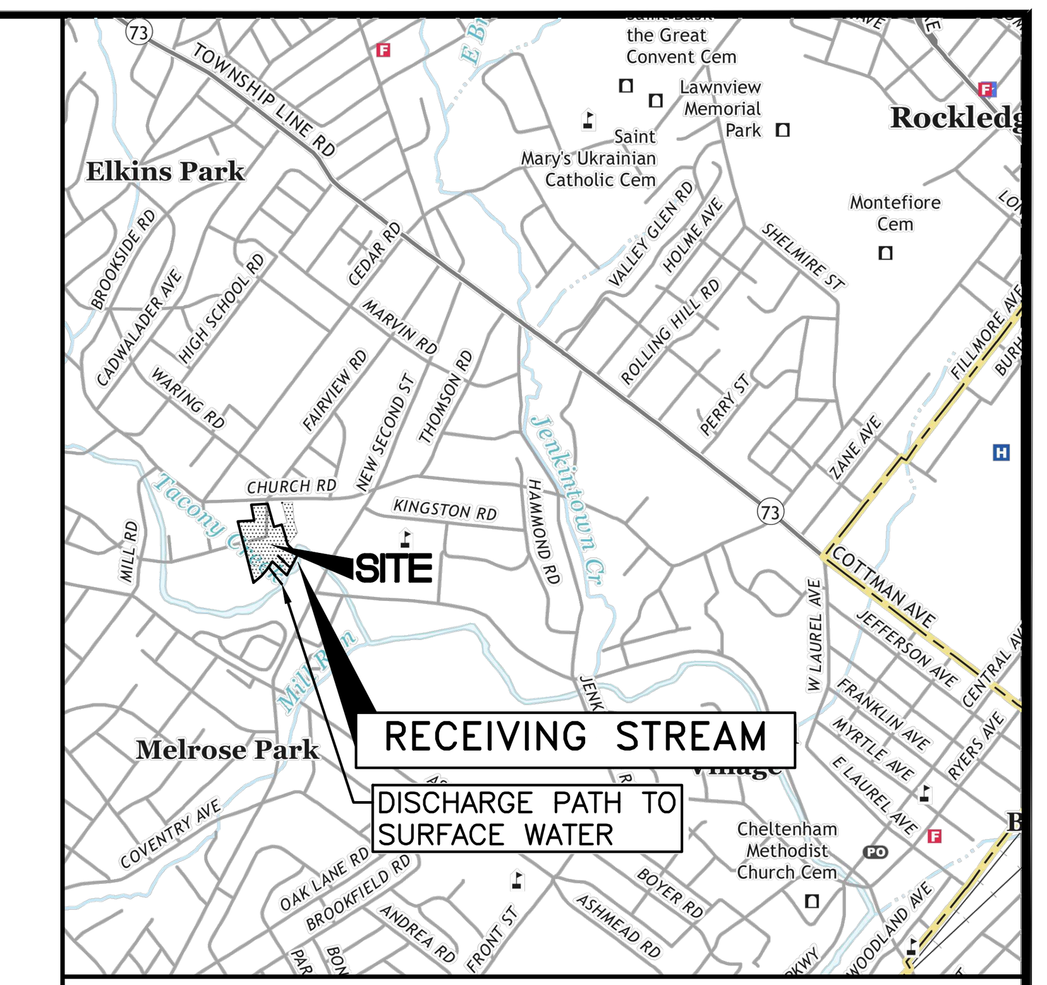
SEQUENCE:

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATION SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER AND THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE MEETING.
2. MARK THE LIMIT OF DISTURBANCE.
3. INSTALL PERIMETER CONTROLS, ROCK CONSTRUCTION ENTRANCE, COMPOST FILTER SOCK, INLET PROTECTION AND TREE PROTECTION FENCING. A CONCRETE WASHOUT SHALL ALSO BE PROVIDED PRIOR TO COMMENCING ANY CONCRETE ACTIVITIES. LIMITED DISTURBANCE IS PERMITTED FOR THE INSTALLATION OF THESE CONTROLS.
4. **(CRITICAL STAGE) INSTALL SEDIMENT TRAP #1.** CONSTRUCTION OF SEDIMENT TRAP #1 SHALL INCLUDE:
   - 4.1. PROVIDE TEMPORARY CONSTRUCTION FENCING AROUND THE FOOTPRINT OF SEDIMENT TRAP #1 (BMP ID 001). HEAVY MACHINERY SHALL BE KEPT OUT OF THE FOOTPRINT AREA OF SEDIMENT TRAP #1 TO THE GREATEST EXTENT FEASIBLE, AND CARE SHOULD BE TAKEN NOT TO COMPACT SOILS WITHIN THE BASIN AREA.
   - 4.2. STRIP TOPSOIL WITHIN THE VICINITY OF SEDIMENT TRAP #1 AND PERFORM EARTHWORK NECESSARY TO CONSTRUCT THE BERM.
   - **4.3. (CRITICAL STAGE): INSTALLATION OF LEVEL SPREADER #1.** INSTALLATION OF LEVEL SPREADER #1 SHALL INCLUDE:
     - 4.3.1. STRIP TOPSOIL IN THE VICINITY OF LEVEL SPREADER #1.
     - 4.3.2. EXCAVATE TO THE BOTTOM OF LEVEL SPREADER.
     - 4.3.3. INSTALL THE FLAT CONCRETE WALL ALONG THE LOW EDGE AND SIDES OF THE LEVEL SPREADER.
     - 4.3.4. INSTALL STONE BEDDING, INLET STRUCTURE (LS#1), AND PERFORATED PIPING ALONG THE LENGTH OF THE SPREADER.
     - 4.3.5. BACKFILL WITH STONE TO THE ELEVATIONS SPECIFIED AND STABILIZE THE AREA AROUND THE LEVEL SPREADER WITH PERMANENT SLOPE MATTING.
   - 4.4. INSTALL THE SEDIMENT TRAP #1 OUTLET STRUCTURE AND PIPE CONNECTION TO LEVEL SPREADER #1, ANTI-SEEP COLLARS SHALL BE INSTALLED ALONG THE OUTLET PIPE IN ACCORDANCE WITH THE DETAIL PROVIDED ON THESE PLANS.
   - 4.5. CONDUCT THE REMAINING EXCAVATION AND EARTHWORK NECESSARY TO INSTALL SEDIMENT TRAP #1, INCLUDING THE EMERGENCY SPILLWAY. THE EMERGENCY SPILLWAY SHALL BE STABILIZED WITH CONCRETE CHECKER BLOCKS AS SPECIFIED ON THESE PLANS.
   - 4.6. INSTALL THE BAFFLE WALLS AND PLACE THE CLEANOUT STAKE.
   - 4.7. INSTALL THE FILTREXX RUNOFF DIVERSION SOCK TO PROVIDE POSITIVE DRAINAGE TO THE SEDIMENT TRAP. THE FILTREXX RUNOFF DIVERSION SOCK SHALL REMAIN IN PLACE UNTIL INLET (INL-6) AND THE ASSOCIATED STORMWATER PIPES CONVEYING RUNOFF TO SEDIMENT TRAP #1.
   - 4.8. COMPOST FILTER SOCK CFS-5 MAY BE REMOVED ONCE LS#1 AND SEDIMENT TRAP #1 ARE FUNCTIONING AND THE AREA DOWNSLOPE OF SEDIMENT TRAP #1 AND LS#1 IS STABILIZED.
5. INSTALL COMPOST FILTER SOCK SEDIMENT TRAP #1.
6. CLEAR AND GRUB WITHIN THE REMAINDER OF THE LIMIT OF DISTURBANCE. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE PLANS. EXISTING FEATURES SHALL BE REMOVED IN ACCORDANCE WITH THE DEMOLITION PLAN.
7. PERFORM EARTHWORK TO REACH SUBGRADE ELEVATIONS FOR THE REMAINDER OF THE SITE. CARE SHOULD BE TAKEN TO PROVIDE POSITIVE DRAINAGE TO THE SEDIMENT TRAP DURING EARTHWORK OPERATIONS.
8. INSTALL REMAINING UTILITIES INCLUDING STORMWATER, SANITARY, WATER, ELECTRIC, LIGHTING POWER CONDUITS, GAS, AND COMMUNICATIONS, AS APPLICABLE. UTILITY INSTALLATION MAY BE PERFORMED CONCURRENTLY WITH THE EARTHWORK OPERATIONS AS NEEDED TO LIMIT EXCAVATION DEPTH. STORMWATER AND SANITARY GRAVITY SYSTEMS SHALL BE INSTALLED STARTING AT THE FARTHEST DOWNSTREAM END AND WORKING UPSTREAM. RIPRAP APRONS SHALL BE INSTALLED IMMEDIATELY FOR ANY STORMWATER OUTFALLS, END WALLS, OR FLARED END SECTIONS.
   - 8.1. SEDIMENT LADEN RUNOFF SHOULD BE DIRECTED TOWARDS NEWLY INSTALLED INLETS (AND ULTIMATELY THE SEDIMENT TRAP) IMMEDIATELY AFTER INSTALLATION THROUGH THE USE OF EARTHEN BERMS OR OTHER EQUIVALENT DIVERSION UNTIL STABILIZATION IS ACHIEVED.
9. UPON INSTALLATION OF INLET (INL-6) AND ASSOCIATED CURBING, TEMPORARY EARTHEN BERM, OR EQUIVALENT MEASURE TO CONVEY SEDIMENT LADEN RUNOFF TO SEDIMENT TRAP #1, THE FILTREXX RUNOFF DIVERSION SOCK MAY BE REMOVED.
10. COMMENCE BUILDING CONSTRUCTION. BUILDING CONSTRUCTION MAY BE PERFORMED CONCURRENTLY WITH UTILITY INSTALLATION AT THE CONTRACTOR'S DISCRETION.
11. INSTALL CURBING AND PAVEMENT AREAS.
12. PERFORM FINAL GRADING AND PLACEMENT OF TOPSOIL IN ALL LANDSCAPE AREAS. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. ANY AREAS WILL NOT BE CONSIDERED STABILIZED UNTIL A MINIMUM UNIFORM 70% VEGETATIVE COVER HAS BEEN ACHIEVED. IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED.
13. INSTALL THE PROPOSED LANDSCAPING, LIGHT FIXTURES, AND SIGNAGE.
14. **(CRITICAL STAGE):** CONVERT SEDIMENT TRAP #1 TO ITS FINAL CONFIGURATION AS PCSM BMP ID 001 (BIORETENTION BASIN). CONVERSION OF THE SEDIMENT TRAP SHALL CONSIST OF THE FOLLOWING:
   - 14.1. CONVERSION OF THE SEDIMENT TRAP MAY COMMENCE ONCE A MINIMUM OF 70% OF THE AREA TRIBUTARY TO THE SEDIMENT TRAP REACHES FINAL STABILIZATION.
   - 14.2. THE STORMWATER DRAINAGE SYSTEM TRIBUTARY TO THE SEDIMENT TRAP, THE OUTLET STRUCTURE, AND THE PIPE SYSTEM WITHIN LEVEL SPREADER #1 SHALL BE FLUSHED CLEAN OF ANY SEDIMENT.
   - 14.3. REMOVE THE BAFFLE WALLS AND CLEANOUT STAKE. ACCUMULATED SEDIMENT SHALL BE EXCAVATED AND REMOVED.
   - 14.4. EXCAVATE TO THE BASIN BOTTOM, SCARIFY THE UNCOMPACTED SUBGRADE SOILS, AND INSTALL THE AMENDED SOIL TO REACH FINISHED GRADE. AMENDED SOILS SHALL BE INSTALLED IN MAXIMUM 18-INCH LIFTS.
   - 14.5. THE TEMPORARY DEWATERING HOLES OF THE OUTLET STRUCTURE (OS#1) FROM THE E&S CONFIGURATION SHALL BE REPAIRED WITH A PERMANENT WATERTIGHT SEAL.
   - 14.6. INSTALL SEED MIX AND COVER CROP PROPOSED WITHIN THE BASIN BOTTOM AND SIDE SLOPES. **TEMPORARY STRAW MATTING OR A SUITABLE ALTERNATIVE SHALL BE INSTALLED IMMEDIATELY UPON PLANTING OF SEED MIX TO KEEP SEED IN PLACE.**
   - 14.7. ANY AREAS DISTURBED BY CONVERSION ACTIVITIES SHALL BE STABILIZED IMMEDIATELY.
15. INSTALL ASPHALT WEARING COURSE AND PAVEMENT STRIPING.
16. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (70% UNIFORM STABILIZATION OF DISTURBED SOIL ON SITE WILL BE COVERED WITH VEGETATION), TEMPORARY EROSION CONTROLS MUST BE REMOVED. SHOULD ANY AREAS BECOME DISTURBED DURING REMOVAL OF THE CONTROLS, THEY MUST BE STABILIZED IMMEDIATELY.
17. ALL SEDIMENT SHALL BE FLUSHED FROM THE ADJACENT STATE, MUNICIPAL AND COUNTY STORM SEWERS. CONTRACTOR SHALL NOT FLUSH SEDIMENT INTO WATERWAYS. TO FLUSH STORM SEWERS, CONTRACTOR SHALL BLOCK THE LOWEST INVERT OF THE SYSTEM AND PUMP SEDIMENT LADEN WATER THROUGH A FILTER BAG OR OTHER APPROVED DEVICE AND DISCHARGE IN AN APPROPRIATE MANNER (I.E. TO STABILIZED GRADE, OR TANKER TRUCK AND DISPOSED OF PROPERLY).
18. AT THE COMPLETION OF CONSTRUCTION AND UPON FINAL SITE STABILIZATION, THE O/RP SHALL SUBMIT THE NOTICE OF TERMINATION (N.O.T.) TO THE COUNTY CONSERVATION DISTRICT.

CRITICAL STAGES:

THE PADEP CHAPTER 102 REGULATIONS REQUIRE A LICENSED PROFESSIONAL OR HIS/HER DESIGNEE BE PRESENT ON-SITE TO OBSERVE, INSPECT AND SIGN-OFF ON THE CRITICAL STAGES OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (PCSM) IMPLEMENTATION AND FACILITY INSTALLATION. THE LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ON-SITE FOR THE FOLLOWING CRITICAL STAGE OF THE PCSM PLAN IMPLEMENTATION:

- INSTALLATION OF SEDIMENT TRAP #1
- INSTALLATION OF LEVEL SPREADER #1
- CONVERSION OF SEDIMENT TRAP #1 INTO PCSM BMP ID 001 (BIORETENTION BASIN)



LOCATION MAP
SCALE: 1"=2,000'

THE NATIONAL MAP BY U.S.G.S.
FRANKFORD PA 2019 QUADRANGLE

LEGEND

- PROJECT SITE AREA
- LIMIT OF DISTURBANCE
- 18" COMPOST FILTER SOCK
- NAG S150 SLOPE PROTECTION MATTING
- ROCK CONSTRUCTION ENTRANCE
- SAFETY FENCE / TREE PROTECTION FENCE
- SEDIMENT TRAP DRAINAGE AREA
- FILTREXX DIVERSION BERM DRAINAGE AREA
- SOIL BOUNDARY
- GeC2 — SOIL TYPE
- WETLAND
- RIPARIAN CORRIDOR – ZONE 1 (MUNICIPAL)
- RIPARIAN CORRIDOR – ZONE 2 (MUNICIPAL)
- TACONY CREEK FLOODWAY
- CFS-7 — COMPOST FILTER SOCK DESIGNATION
- ✱P.O.D. — POINT OF DISCHARGE

PENNSYLVANIA ONE CALL
DIAL 8-1-1 or 1-800-242-1776
BEFORE YOU DIG

Know what's below. Call before you dig.

CALL 811 THREE DAYS TO TEN DAYS BEFORE YOU START ANY DIGGING PROJECT. WHETHER YOU ARE PLANNING TO DO IT YOURSELF OR HIRE A PROFESSIONAL, SOMEONE NEEDS TO CALL 811.

SERIAL #20212303507
AUGUST 21, 2021

REVISIONS

5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

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GRAPHIC SCALE: 0 40 80 120 160

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FINAL PLAN
EROSION AND SEDIMENT CONTROL PLAN

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — ROBERT E. BLUE, JR. — No. PE26169-E
9/12/2023
ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=40'
DATE: 2021-09-30	JOB NUMBER: 2154-10E	SHEET NUMBER: 27 of 31

LAST SAVED: M:\Proj\2154-10\dwg\Sets\LD\2154-10 E&S PLAN.dwg ON 9/13/2023 8:17 AM

SEEDING SPECIFICATIONS:

1. SEEDING (TEMPORARY AND PERMANENT)
1.1. SEE TABLE 11.2 FOR THE SOIL AMENDMENT APPLICATION RATE EQUIVALENTS.

1.2. SEEDING SHALL OCCUR BETWEEN MARCH 1ST AND MAY 15TH OR BETWEEN AUGUST 15TH AND NO LATER THAN OCTOBER 15TH. IF SEEDING CANNOT BE CONDUCTED DURING THE TIMEFRAMES ABOVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL CONSERVATION DISTRICT AND ALL APPROPRIATE AGENCIES TO DETERMINE AN ACCEPTABLE MEANS IN WHICH TO STABILIZE THE SITE THROUGH THE NEXT GROWING SEASON.

1.3. TEMPORARY SEEDING AS APPROVED BY THE MUNICIPALITY AND THE CONSERVATION DISTRICT SHALL BE PERFORMED ON ALL DISTURBED SOIL AREAS THAT ARE AT FINISHED GRADE, AND ALL DISTURBED SOIL AREAS THAT WILL NOT BE DISTURBED WITHIN ONE YEAR. MINIMUM SPECIFICATIONS ARE AS FOLLOWS:

- SPRING AND SUMMER SEEDING: 100% ANNUAL RYEGRASS (LOLIUM MULTIFORUM) [98% PURITY, 90% GERMINATION, APPLIED AT 48 LBS/ACRE]
- FALL SEEDING: WINTER RYE (TETRA PETKUS) [98% PURITY, 90% GERMINATION, APPLIED AT 168 LBS/ACRE]

1.4. PERMANENT SEEDING AS APPROVED BY THE MUNICIPALITY AND THE COUNTY CONSERVATION DISTRICT SHALL BE PERFORMED ON ALL DISTURBED AREAS THAT ARE AT FINISHED GRADE, AND ALL DISTURBED SOIL AREAS THAT WILL NOT BE DISTURBED WITHIN ONE YEAR. MINIMUM SPECIFICATIONS ARE AS FOLLOWS (OR APPROVED EQUIVALENT):

* 20% ANNUAL RYEGRASS (LOLIUM MULTIFORUM) [A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL, 98% PURITY, 90% GERMINATION, APPLIED AT 20 LBS/ACRE]

* 30% PENNLAWN RED FESCUE [98% PURITY, 85% GERMINATION, APPLIED AT 30 LBS/ACRE]

* 50% KENTUCKY BLUEGRASS MIXTURE (POA PRATENSIS) [A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 25% OF THE TOTAL, 98% PURITY, 80% GERMINATION, APPLIED AT 55 LBS/ACRE]

1.5. BASIN AREAS: ERNST CONSERVATION SEEDS RAIN GARDEN MIX (ERNMX-180) [98% PURITY, 85% GERMINATION, APPLIED AT 20 LBS/ACRE WITH A COVER CROP]

1.6. PRIOR TO PERMANENT SEEDING, SOILS TESTING SHALL BE PERFORMED TO DETERMINE THE APPROPRIATE FERTILIZER AND LIMESTONE APPLICATIONS. FERTILIZER AND LIMESTONE SHALL BE APPLIED PER THE RECOMMENDATIONS OF A LICENSED LANDSCAPE PROFESSIONAL. PERMANENT VEGETATION SHOULD BE ESTABLISHED AT THE EARLIEST POSSIBLE DATE. WATERING, MOWING AND FERTILIZING PROGRAMS SHALL BE CONTINUED UNTIL VEGETATIVE COVER IS ADEQUATELY ESTABLISHED.

2. TEMPORARY / PERMANENT STABILIZATION
2.1. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

2.2. MULCH APPLICATION RATES:

2.2.1. STRAW: 3 TONS PER ACRE; 140 LB PER 1,000 SQ.FT.; 1,240 LB. PER 1,000 SQ.YD.; NOTE: EITHER WHEAT OR OAT STRAW FREE OF WEEDS, NOT CHOPPED OR FINELY BROKEN.
2.2.2. HAY: 3 TONS PER ACRE; 140 LB PER 1,000 SQ.FT.; 1,240 LB. PER 1,000 SQ.YD.; NOTE: TIMOTHY, MIXED CLOVER & TIMOTHY OR OTHER NATIVE FORAGE GRASSES.
2.2.3. WOOD CHIPS: 4-6 TONS PER ACRE; 185-275 LB. PER 1,000 SQ.FT.; 1,650-2,500 LB. PER 1,000 SQ.YD.; NOTE: MAY PREVENT GERMINATION OF GRASSES & LEGUMES.
2.2.4. HYDROMULCH: 1 TONS PER ACRE; 47 LB PER 1,000 SQ.FT.; 415 LB. PER 1,000 SQ.YD.; NOTE: SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%; WOOD FIBER HYDOMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED.

2.3. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 OR STEEPER.

2.4. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

2.5. AN E&S PLAN SHALL BE SUBMITTED TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT AND IMPLEMENTED FOR ALL SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATION.

2.6. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (E&S MANUAL), COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION (TECHNICAL GUIDANCE NUMBER 363-2134-008) LAST REVISED MARCH 2012. EROSION AND SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED AND PCSM BMPS ARE OPERATIONAL.

SODDING SPECIFICATIONS:

SOIL PREPARATION

1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. SOIL TESTS SHOULD BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. SOIL TEST MAY BE CONDUCTED BY THE STATE LABORATORY OR A REPUTABLE COMMERCIAL LABORATORY. INFORMATION ON FREE STATE SOIL TESTS IS AVAILABLE FROM COUNTY OR AGRICULTURAL EXTENSION AGENT.
3. PRIOR TO LAYING SOD, THE SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS, ROOTS, BRANCHES, STONES AND CLODS IN EXCESS OF 2 INCHES IN LENGTH OR DIAMETER. SOD SHALL NOT BE APPLIED TO GRAVEL OR OTHER NON-SOIL SURFACES.
4. ANY IRREGULARITIES IN THE SOIL SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE FILLED OR LEVELED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
5. AREAS TO BE TOPSOILED AND TOPSOIL USED SHALL FULFILL THE REQUIREMENTS OF STANDARD SOIL CLASSIFICATION OF THE AP OR A HORIZON. NO SOD SHALL BE SPREAD ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS UNTIL ENOUGH TIME HAS ELAPSED TO PERMIT DISSIPATION OF TOXIC MATERIALS.

CHOOSING APPROPRIATE TYPES OF SOD

THE TYPE OF SOD USED MUST BE COMPOSED OF PLANTS ADAPTED TO THE LOCALITY.

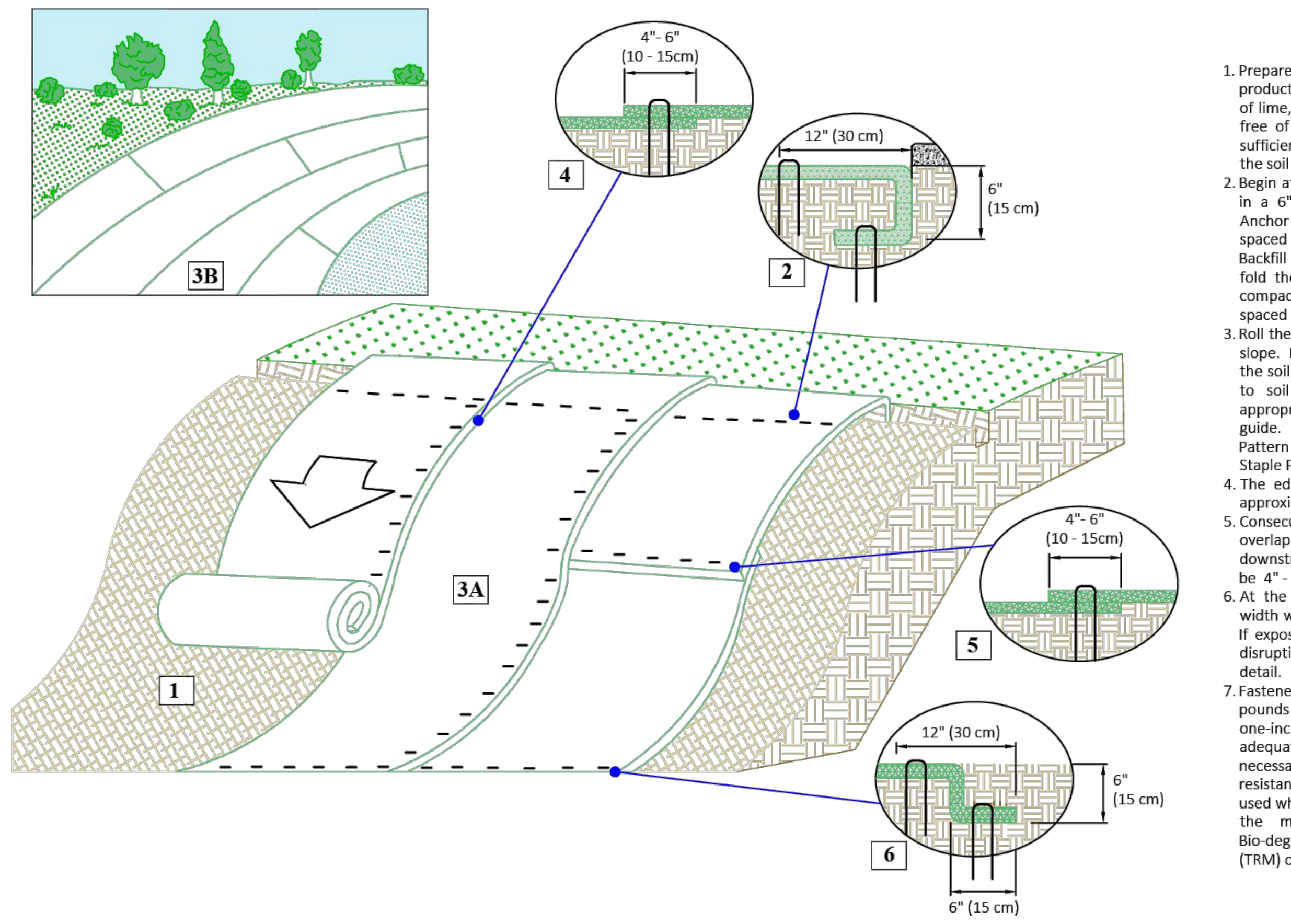
QUALITY OF SOD
1. SOD USED SHALL BE STATE CERTIFIED OR STATE APPROVED. CERTIFIED TURFGRASS SOD IS GROWN FROM CERTIFIED SEED, INSPECTED AND CERTIFIED. THIS INSURES GENETIC PURITY, HIGH QUALITY, FREEDOM FROM NOXIOUS WEEDS AND EXCESSIVE INSECT OR DISEASE PROBLEMS. THE SOD MUST MEET PUBLISHED STATE STANDARDS AND BEAR AN OFFICIAL LABEL ON THE BILL OF LADING.
2. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. THIS THICKNESS SHALL EXCLUDE SHOOT GROWTH AND THATCH.
3. PIECES OF SOD SHALL BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5 PERCENT. TORN OR UNEVEN PADS WILL NOT BE ACCEPTABLE.
4. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.
5. SOD SHALL NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER.
6. SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SOD INSTALLATION

1. SOD SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.
2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.
3. THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHALL BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS.
4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH STAGGERED JOINTS AND SECURED BY PEGGING OR OTHER APPROVED METHODS. SOD SHALL BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON THE CONTOUR).
5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHALL BE ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL.
6. AFTER ROLLING, SOD SHALL BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS THOROUGHLY WET.
7. DURING THE FIRST WEEK, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED AS OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4 INCHES.
8. THE FIRST MOWING SHALL NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2 - 3 WEEKS. NOT MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED AT ANY ONE CUTTING.

MAINTENANCE OF ESTABLISHED SOD

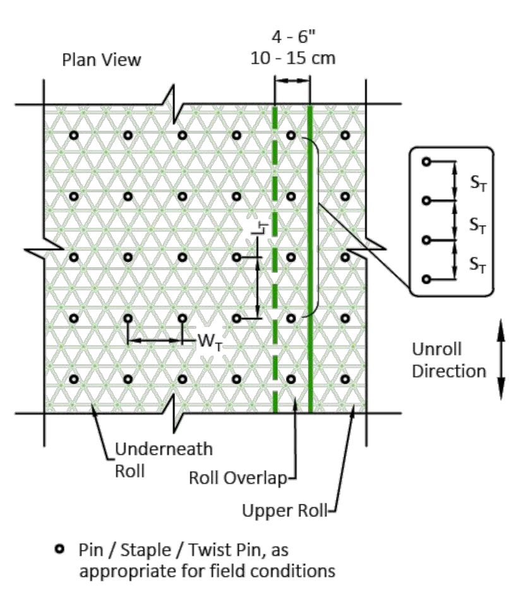
1. AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF SOD.
2. NO MORE THAN 1/3 OF THE SHOOT (GRASS LEAF) SHOULD BE REMOVED IN ANY MOWING. GRASS HEIGHT SHOULD BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
3. AFTER THE FIRST GROWING SEASON, ESTABLISHED SOD WILL REQUIRE FERTILIZATION AND MAY REQUIRE LIME. FOLLOW SOIL TEST RECOMMENDATIONS WHEN POSSIBLE.



Instructions

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
2. Begin at the top of the slope by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench. Anchor the RECPs with a row of staples/stakes/pins spaced at S_T apart in the bottom of the trench. Backfill and compact the trench after stapling and fold the roll over downslope. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced at S_T apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide. RollMax RECPs and ECBs should utilize Staple Pattern C, TRMs and VMax materials should utilize Staple Pattern D.
4. The edges of parallel RECPs must be stapled with approximately 4" - 6" (10 - 15 cm) overlap.
5. Consecutive RECPs spliced down the slope must overlapped with the upstream mat atop the downstream mat (shingle style). The overlap should be 4" - 6" (10 - 15 cm).
6. At the terminal end, secure each mat across the width with a row of staples/stakes/pins spaced at S_T. If exposed to flow, foot traffic, wind uplift or other disruption, trench the terminal end in as shown in detail.
7. Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may by used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.

Staple Pattern Guide



• Pin / Staple / Twist Pin, as appropriate for field conditions

	Staple Pattern	
Dimension	C	D
W_T	30" (75 cm)	24" (60 cm)
L_T	30" (75 cm)	20" (50 cm)
S_T	18" (45 cm)	18" (45 cm)
Nominal Frequency	1.7 / SY	3.0 / SY
Application	ECB (Degradable)	TRM (Permanent)

*Note: Staple Pattern A and B used prior to 8/2019 have been discontinued.

ROLLED EROSION CONTROL INSTALLATION

(NOT TO SCALE)

ROLLMAX™ ROLLED EROSION CONTROL

Specification Sheet
VMax® SC250® Turf Reinforcement Mat

DESCRIPTION

The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 70% straw and 30% coconut fiber matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between a heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, an ultra heavy UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.5 x 0.5 inch (1.27 x 1.27 cm) openings, and covered by an heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50 inch (3.81cm) centers with UV stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with a colored thread stitched along both outer edges as an overlap guide for adjacent mats.

The SC250 shall meet Type 5A, 5B, and 5C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18

Material Content		
Matrix	70% Straw Fiber	0.35 lb/sq yd (0.19 kg/sm)
	30% Coconut Fiber	0.15 lbs/sq yd (0.08 kg/sm)
Netting	Top and Bottom, UV-Stabilized Polypropylene	5 lb/1000 sq ft (2.44 kg/100 sm)
	Middle, Corrugated UV-Stabilized Polypropylene	24 lb/1000 sf (11.7 kg/100 sm)
Thread	Polypropylene, UV Stable	

Standard Roll Sizes		
Width	6.5 ft (2.0 m)	8 ft (2.44m)
Length	55.5 ft (16.9 m)	90 ft (27.4 m)
Weight ± 10%	34 lbs (15.42 kg)	70 lbs (31.8 kg)
Area	40 sq yd (33.4 sm)	80 sq. yd. (66.8 sm)

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.62 in. (15.75 mm)
Resiliency	ASTM 6524	95.2%
Density	ASTM D792	0.891 g/cm³
Mass/Unit Area	ASTM 6566	16.13 oz/sy (548 g/sm)
UV Stability	ASTM D4355/ 1000 HR	80%
Porosity	ECTC Guidelines	99%
Stiffness	ASTM D1388	222.65 oz-in.
Light Penetration	ASTM D6567	4.1%
Tensile Strength - MD	ASTM D6818	709 lbs/ft (10.51 kN/m)
Elongation - MD	ASTM D6818	23.9%
Tensile Strength - TD	ASTM D6818	712 lbs/ft (10.56 kN/m)
Elongation - TD	ASTM D6818	36.9%
Biomass Improvement	ASTM D7322	441%

Design Permissible Shear Stress	Short Duration	Long Duration
Phase 1: Unvegetated	3.0 psf (144 Pa)	2.5 psf (120 Pa)
Phase 2: Partially Veg.	8.0 psf (383 Pa)	8.0 psf (383 Pa)
Phase 3: Fully Veg.	10.0 psf (480 Pa)	8.0 psf (383 Pa)
Unvegetated Velocity	9.5 fps (2.9 m/s)	
Vegetated Velocity	15 fps (4.6 m/s)	

ROLLED EROSION CONTROL SPECIFICATIONS

(NOT TO SCALE)

ROLLMAX™ ROLLED EROSION CONTROL

Specification Sheet – EroNet™ S150® Erosion Control Blanket

DESCRIPTION

The short-term double net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. (*NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation*). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The S150 shall meet Type 2.D specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17

Material Content		
Matrix	100% Straw Fiber	0.5 lbs/sq yd (0.27 kg/sm)
Netting	Top and bottom nets: lightweight photodegradable	1.5 lbs/1000 sq ft (0.73 kg/100 sm)
Thread	Degradable	

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8 ft (2.4 m)	16.0 ft (4.87 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	112 ft (34.14 m)
Weight ± 10%	40 lbs (18.14 kg)	50 lbs (22.68 kg)	100 lbs (45.36 kg)
Area	80 sq yd (66.9 sm)	100 sq yd (83.61 sm)	200 sq yd (167.22 sm)

Roughness Coefficients - Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.055
0.50 - 2.0 ft	0.055-0.021
≥ 2.0 ft (0.60 m)	0.021

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.32 in. (8.13 mm)
Resiliency	ECTC Guidelines	80.5%
Water Absorbency	ASTM D1117	370%
Mass/Unit Area	ASTM D6475	8.15 oz/sy (277.1 g/sm)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.06 oz-in
Light Penetration	ASTM D6567	12.4%
Tensile Strength - MD	ASTM D6818	159.6 lbs/ft (2.37 kN/m)
Elongation - MD	ASTM D6818	31.7%
Tensile Strength - TD	ASTM D6818	93.6 lbs/ft (1.39 kN/m)
Elongation - TD	ASTM D6818	26.7%
Biomass Improvement	ASTM D7322	371%

Design Permissible Shear Stress	
Unvegetated Shear Stress	1.75 psf (84 Pa)
Unvegetated Velocity	6.0 fps (1.83 m/s)

NTPEP ASTM D6460 Large-Scale Channel	
Unvegetated Shear Stress	2.42 psf (115.9 Pa)
Unvegetated Velocity	9.0 fps (2.75 m/s)

Slope Design Data: C Factors			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 - 2:1	≥ 2:1
≤ 20 ft (6 m)	0.004	0.106	N/A
20-50 ft	0.062	0.118	N/A
≥ 50 ft (15.2 m)	0.12	0.180	N/A

NTPEP Large-scale Slope
ASTM D6459 - C-factor = 0.029

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ROLLED EROSION CONTROL SPECIFICATIONS

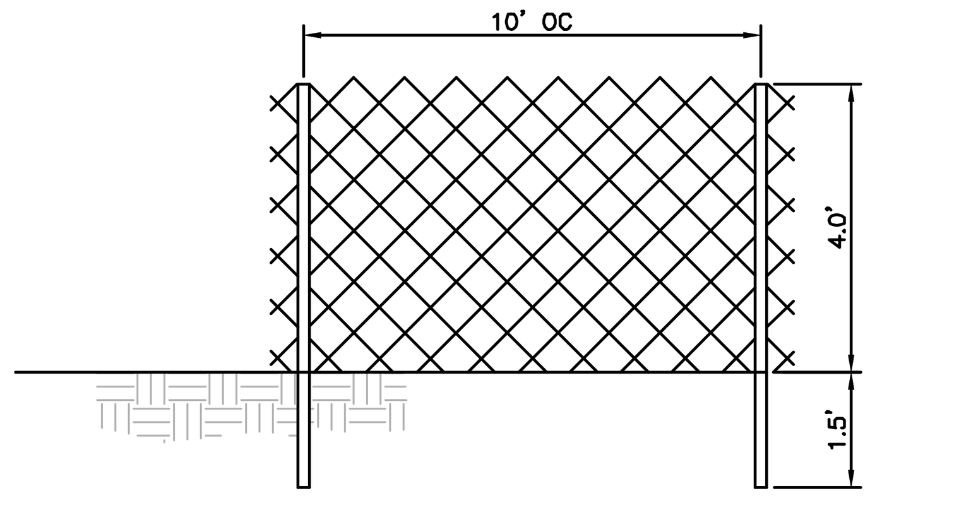
(NOT TO SCALE)

TABLE 11.6 - MULCH APPLICATION RATES

MULCH TYPE	APPLICATION RATE (MIN.) PER ACRE	PER 1,000 SQ.FT.	PER 1,000 SQ.YD.	NOTES
STRAW	3 TONS	140 LB	1,240 LB	EITHER WHEAT OR OAT STRAW, FREE OF WEEDS, NOT CHOPPED OR FINELY BROKEN
HAY	3 TONS	140 LB	1,240 LB	TIMOTHY, MIXED CLOVER AND TIMOTHY OR OTHER NATIVE FORAGE GRASSES
WOOD CHIPS	4-6 TONS	185-275 LB	1,650-2,500 LB	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES
HYDROMULCH	1 TON	47 LB	415 LB	SEE LIMITATIONS ABOVE

NOTES:

1. SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
2. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
3. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.



DIAMOND SAFETY FENCE/OR EQUILALENT

(NOT TO SCALE)

COMPOST SOCK SEDIMENT TRAP DESIGN INFORMATION

COMPOST SOCK SEDIMENT TRAP ID#	BOTTOM ELEVATION OF TRAP	TOP ELEVATION OF TRAP	CLEANOUT ELEVATION	DEPTH OF FILTER SOCK (FT)	DEPTH OF SUMP (FT)	COMPOST SOCK STACKING SIZES: BOTTOM SOCK SIZE (IN)	MIDDLE SOCK SIZE (IN)	TOP SOCK SIZE (IN)
COMPOST SOCK SEDIMENT TRAP #1	140.75	143.25	141.58	2.50	0.00	30	N/A	N/A

SOIL AMENDMENT AND RESTORATION:

SOIL AMENDMENT AND RESTORATION SHALL BE DONE BY MIXING THE STOCKPILED EXISTING ON-SITE TOPSOIL WITH COMPOST BEFORE REDISTRIBUTING THE TOPSOIL. THE RATIO SHALL BE 2 PARTS TOPSOIL AND 1 PART COMPOST. THE COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 - BELOW. ADD STRAW TO TOPSOIL WITHIN 72 HOURS OF GRADING OUTSIDE OF GROWING SEASON. USE TACKIFIER OR CRIMP TO PREVENT STRAW FROM BEING WIND BLOWN.

TABLE 11.2
Soil Amendment Application Rate Equivalents

Soil Amendment	Permanent Seeding Application Rate: Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	Notes
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields
10-20-20 fertilizer	1,000 lb.	25 lb.	210 lb.	Or as per soil test; may not be required in agricultural fields
	Temporary Seeding Application Rate			
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

TOPSOIL APPLICATION

Graded areas should be scarified or otherwise loosened to a depth of 3 to 5 inches to permit bonding of the topsoil to the surface areas and to provide a roughened surface to prevent topsoil from sliding down slope.

Topsoil should be uniformly distributed across the disturbed area to a depth of 4 to 8 inches minimum — 2 inches on fill outslopes. Spreading should be done in such a manner that sodding or seeding can proceed with a minimum of additional preparation or tillage. Irregularities in the surface resulting from topsoil placement should be corrected in order to prevent formation of depressions unless such depressions are part of the PCSM plan.

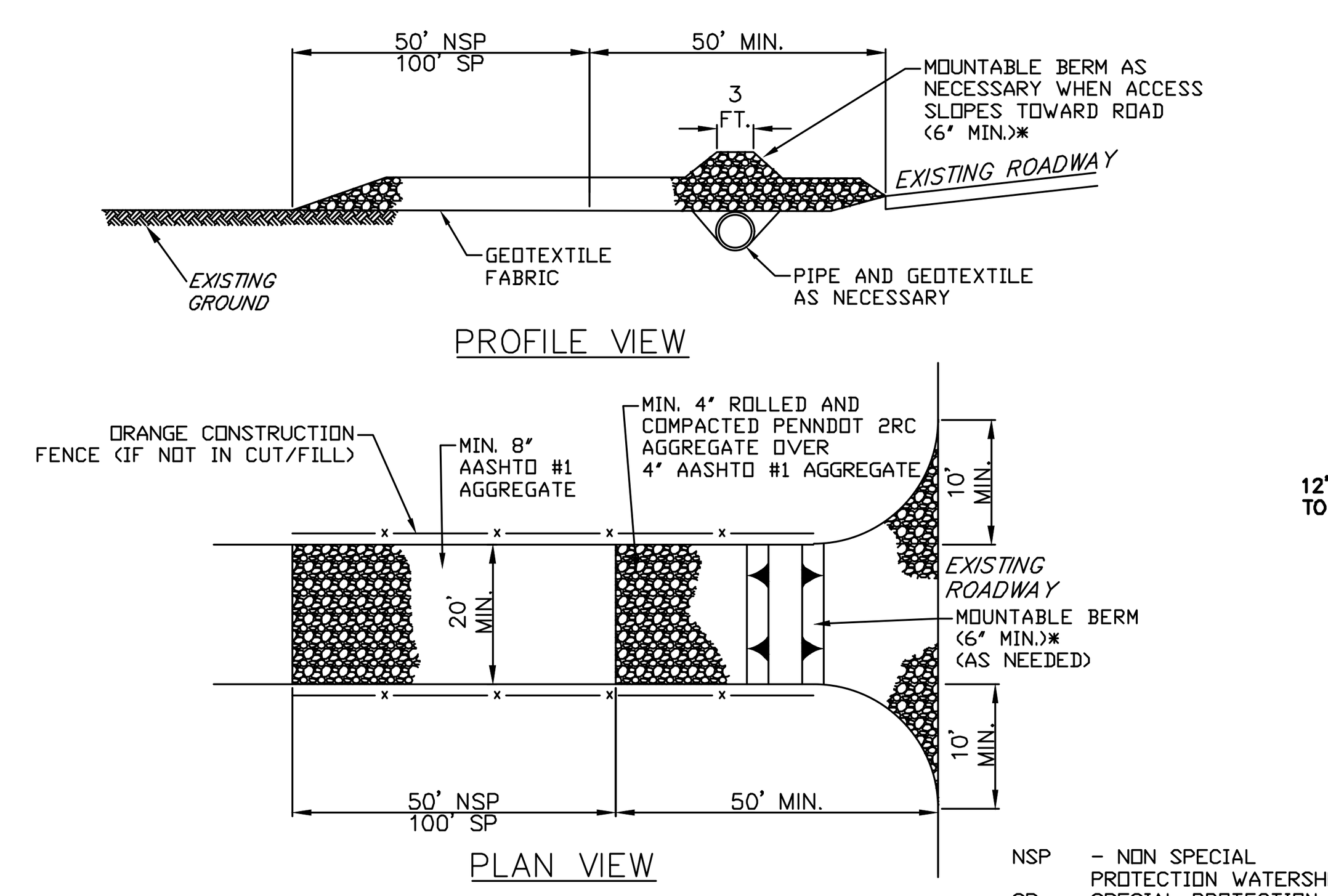
Topsoil should not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. Compacted soils should be scarified 6 to 12 inches along contour wherever possible prior to seeding.

TABLE 11.1
Cubic Yards of Topsoil Required for Application to Various Depths

Depth (in)	Per 1,000 Square Feet	Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1,074

Adapted from VA DSWC

SEEDING - Seed mixtures appropriate for site conditions (e.g. soil pH and fertility, slope, available sunlight, anticipated use, etc.) should be specified. Tables 11.3, 11.4 and 11.5, adapted from the Penn State Erosion Control and Conservation Plantings on Noncropland Manual, should be used for selection of species, seed specifications, mixtures, liming and fertilizing, time of seeding, and seeding methods. Specifications for these items may also be obtained from PennDOT's Publication # 408, Section 804 or from the local conservation district. Other sources can be approved on a case-by-case basis. Upon selection of a reference, that reference should be used to provide all specifications for seeding, mulching, and soil amendments unless otherwise approved. Indicate the reference being used in the plan submittal. Seed mixtures that contain potentially invasive species or species that may be harmful to native plant communities should be avoided. Standard E&S Worksheet #21 should be used to provide seeding, mulching and soil amendment specifications in the E&S plan. This information should be placed on one of the plan drawings.



NSP - NON SPECIAL PROTECTION WATERSHED
SP - SPECIAL PROTECTION WATERSHED

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

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

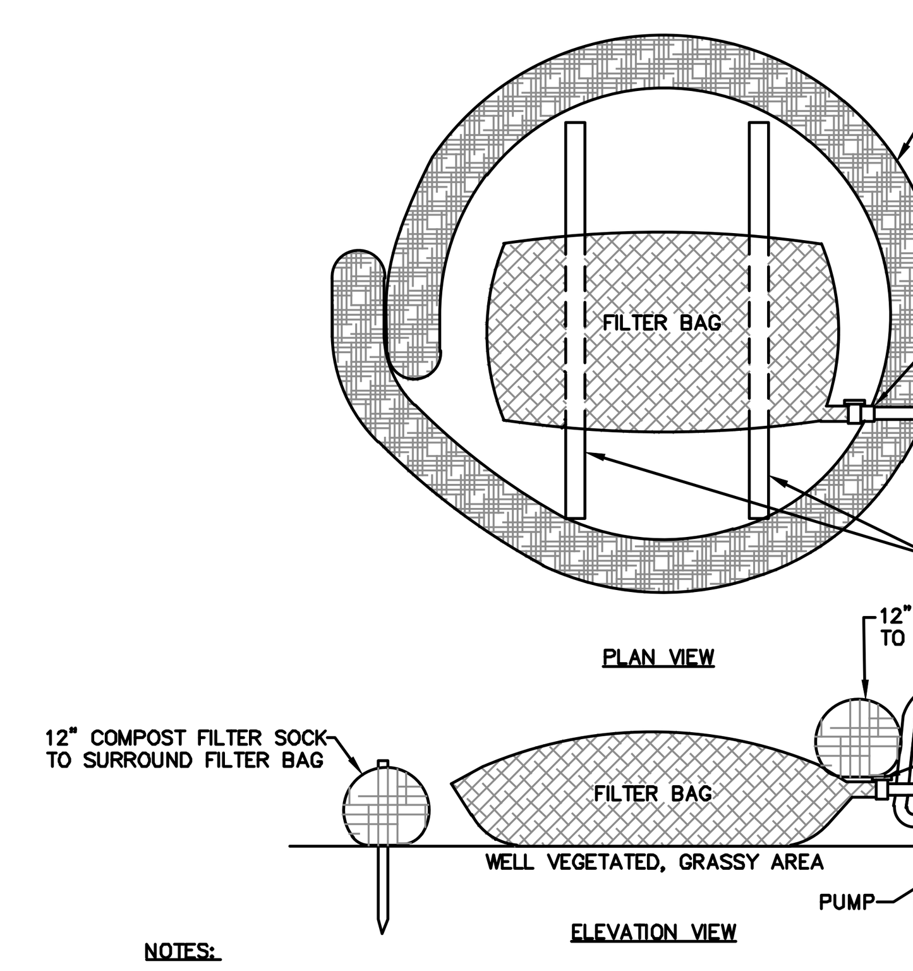
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

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

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

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE (ABACT)

NOT TO SCALE



NOTES:

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

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

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

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

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

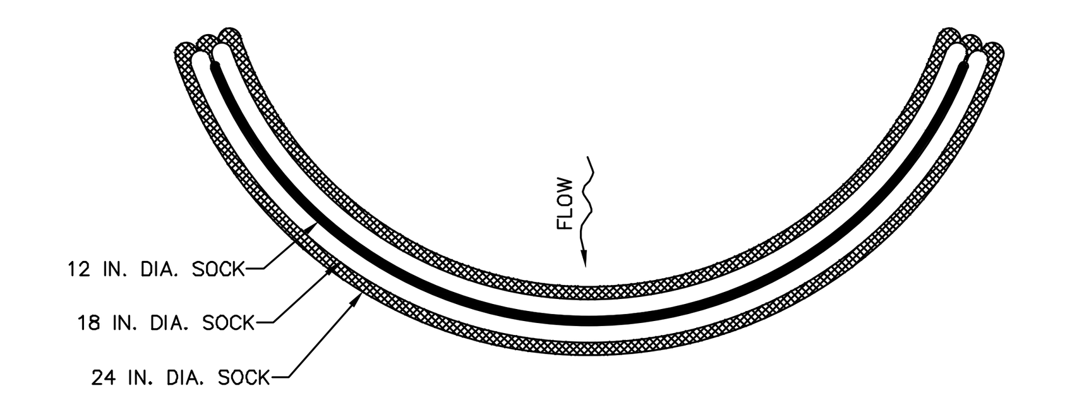
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

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

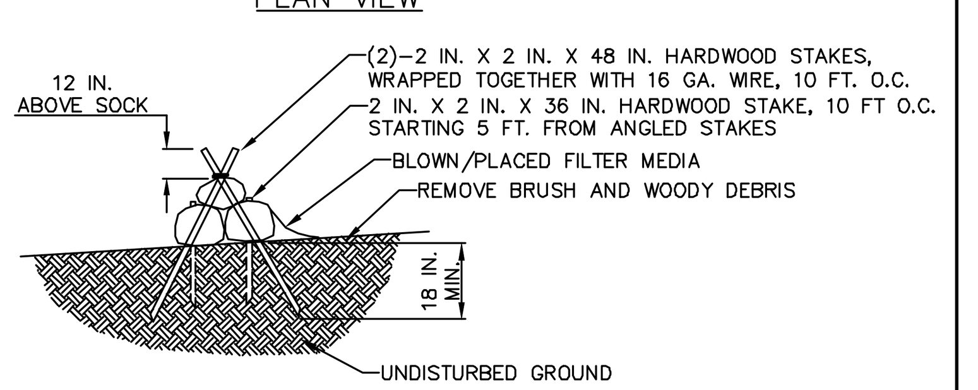
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG

(NOT TO SCALE)



PLAN VIEW



STAKING DETAIL

DESIGN NOTES:

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

NOTES:

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

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

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

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

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

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

STANDARD CONSTRUCTION DETAIL #3-11
COMPOST SOCK SEDIMENT TRAP

NOT TO SCALE

REVISIONS
5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

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FINAL PLAN

EROSION AND SEDIMENT CONTROL DETAILS (1)

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

REGISTERED PROFESSIONAL ENGINEER

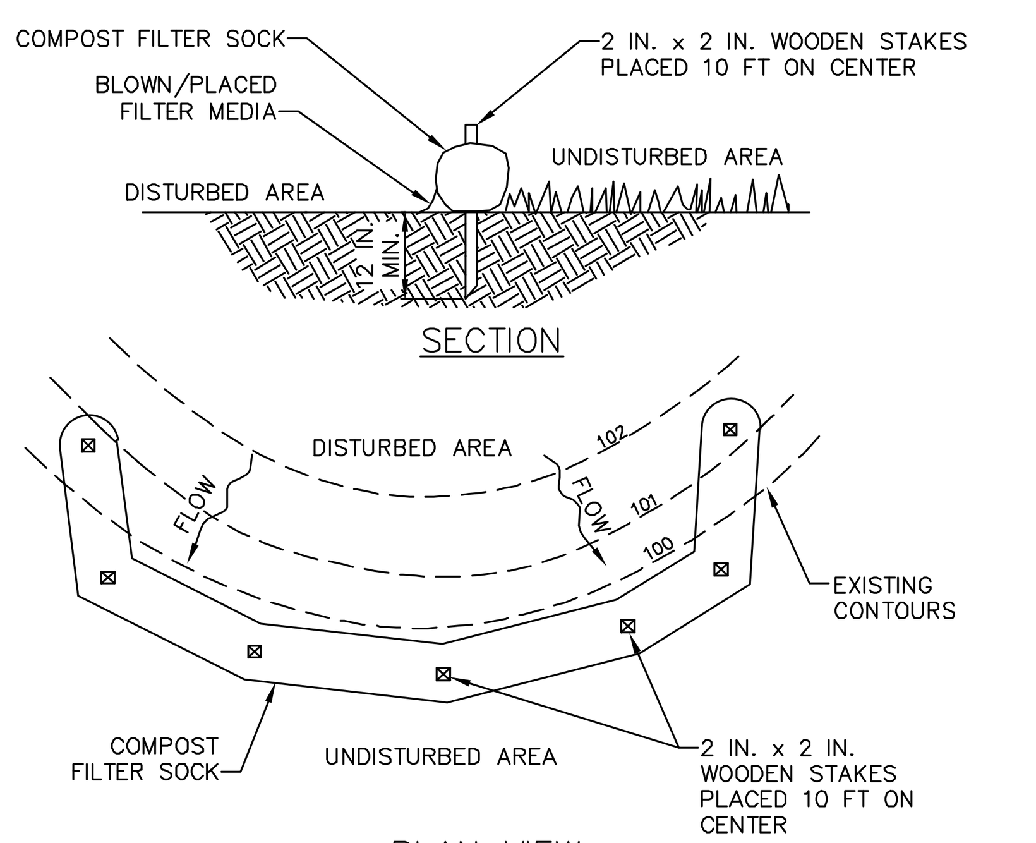
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT E. BLUE, JR. ENGINEER No. PE26169-E

9/12/2023

ROBERT E. BLUE JR. (DATE)
LICENSE NO. 26169-E

DRAWN BY: DJG	CHECKED BY: REB	SCALE: N.T.S.
DATE: 2021-09-30	JOB NUMBER: 2154-10E	SHEET NUMBER: 28 of 31

LAST SAVED: M:\Proj\2154-10\dwg\Sets\LD\2154-10 E&S PLAN.dwg ON 9/12/2023 2:58 PM



NOTES:

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

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

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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

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

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

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

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE

TABLE 4.1
Compost Sock Fabric Minimum Specifications

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

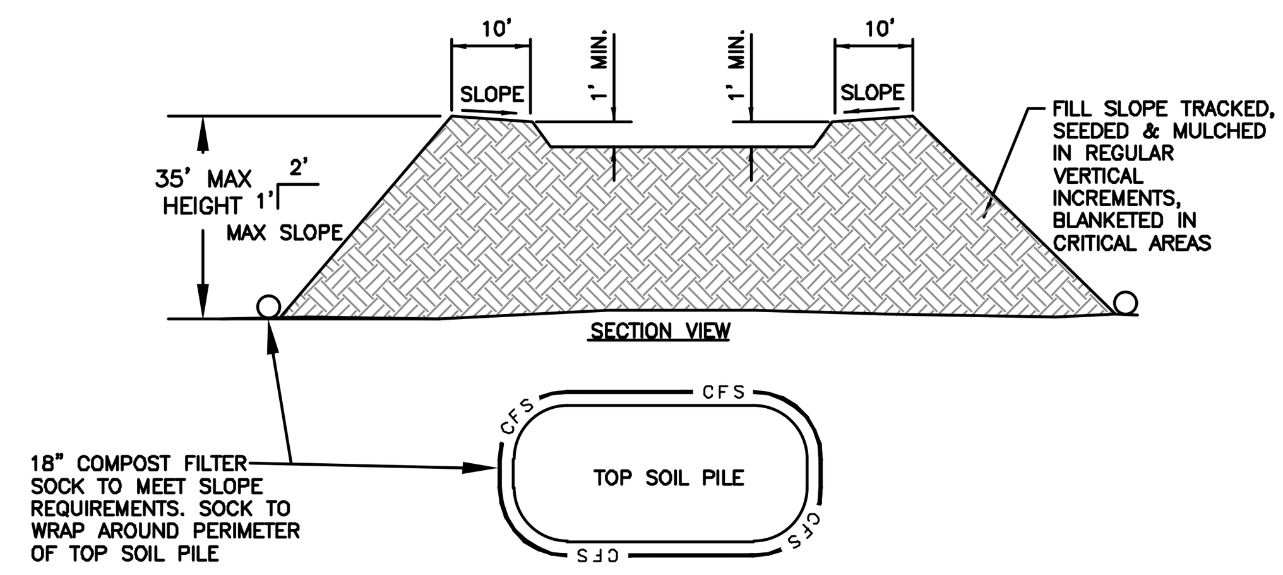
Two-ply systems	
Inner Containment Netting	HDPE biaxial net Continuously wound Fusion-welded junctures 3/4" X 3/4" Max. aperture size
Outer Filtration Mesh	Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch) 3/16" Max. aperture size
Sock fabrics composed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

Filtrexx & JMD

TABLE 4.2
Compost Standards

Organic Matter Content	25%–100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5–8.5
Moisture Content	30%–60%
Particle Size	30%–50% PASS THROUGH 3/8" SIEVE
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

Filtrexx

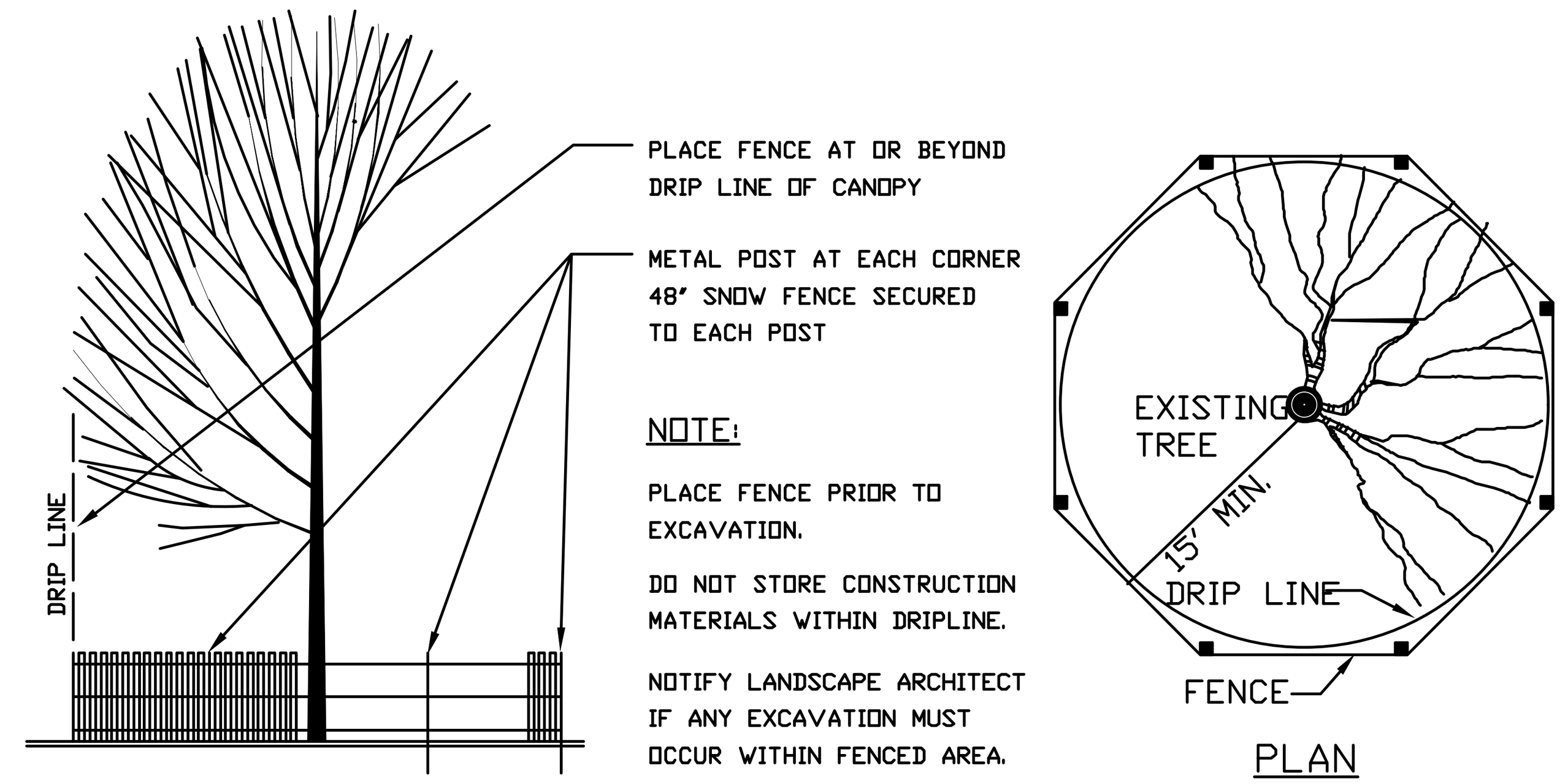


NOTES:
TEMPORARY BERMS TO BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.

BERMS MUST OUTLET TO TEMPORARY SLOPE PIPES, PERMANENT SLOPE PIPES, TEMPORARY CHANNELS, OR PERMANENT CHANNELS.

TOPSOIL STOCKPILE AREA

(NOT TO SCALE)



PLACE FENCE AT OR BEYOND DRIP LINE OF CANOPY

METAL POST AT EACH CORNER 48" SNOW FENCE SECURED TO EACH POST

NOTE:

PLACE FENCE PRIOR TO EXCAVATION.

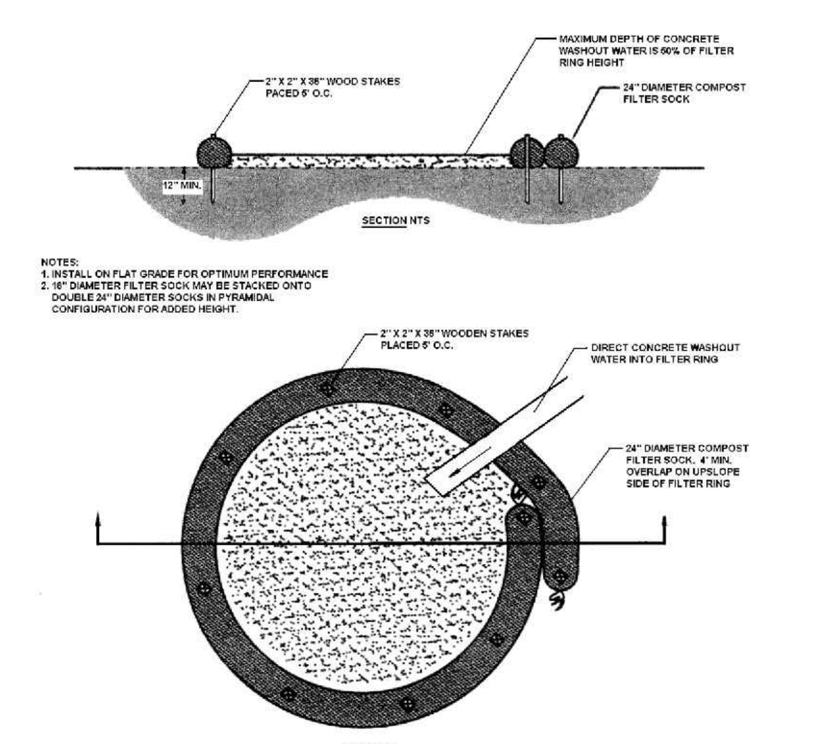
DO NOT STORE CONSTRUCTION MATERIALS WITHIN DRIPLINE.

NOTIFY LANDSCAPE ARCHITECT IF ANY EXCAVATION MUST OCCUR WITHIN FENCED AREA.

FENCE SHALL BE PLACE PLACED A MIN. FROM 15' FROM TRUNK OF TREE OR AT THE DRIP LINE OF THE CANOPY WHICHEVER IS GREATER.

TREE PROTECTION FENCING

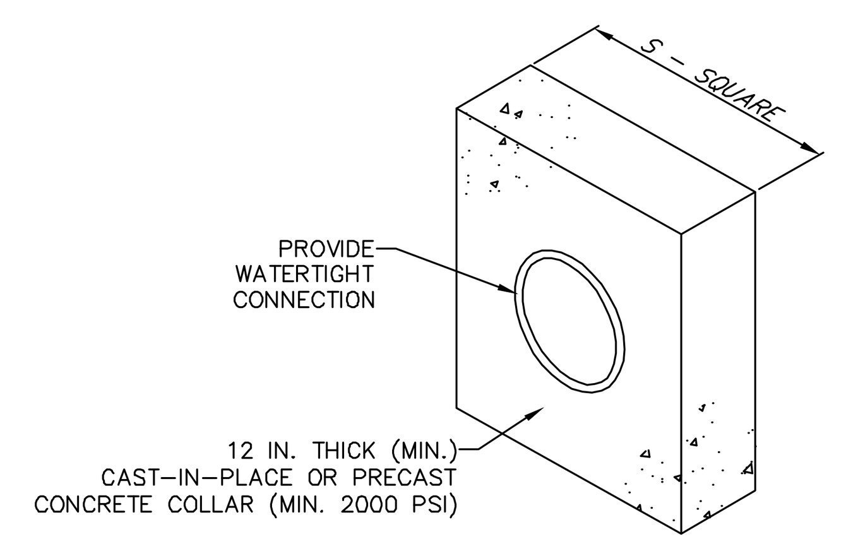
(NOT TO SCALE)



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrexx

COMPOST SOCK CONCRETE WASHOUT

(NOT TO SCALE)

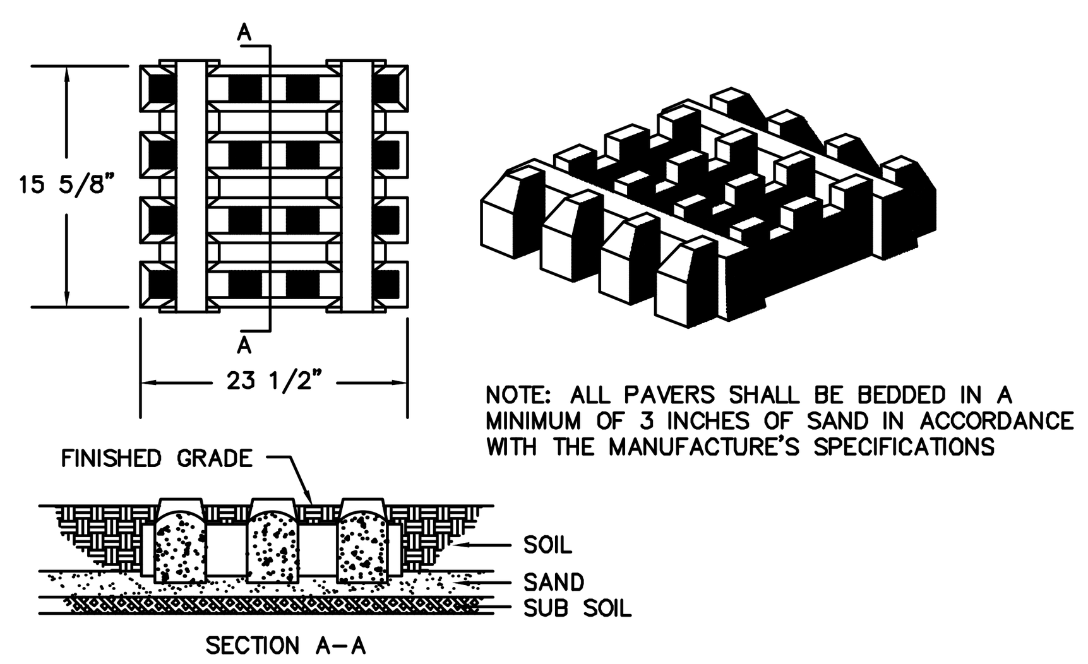


BASIN OR TRAP NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
SEDIMENT TRAP #1 (PCSM BMP ID 001)	18	42	2	7	7

NOTES:
1. ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE PIPE, OR BARREL, SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
2. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.
3. ANTI-SEEP COLLARS SHALL NOT BE LOCATED CLOSER THAN 2 FEET TO A PIPE JOINT.

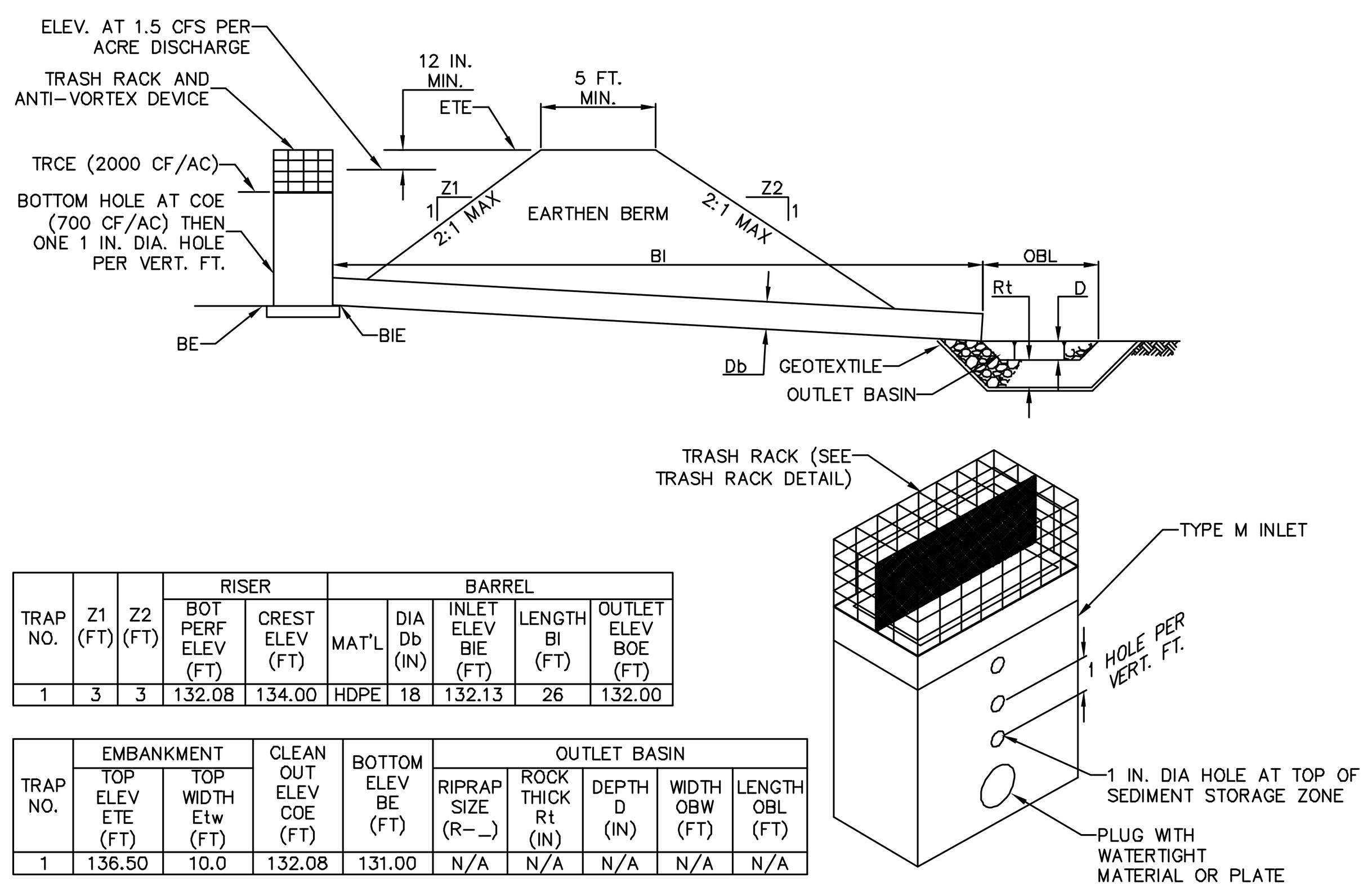
STANDARD CONSTRUCTION DETAIL #7-16
CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS

NOT TO SCALE



CONCRETE GRASS PAVER DETAIL

NTS



TRAP NO.	Z1 (FT)	Z2 (FT)	RISER: BOT PERF ELEV (FT)	RISER: CREST ELEV (FT)	BARREL: MAT'L	BARREL: DIA Db (IN)	BARREL: INLET ELEV BIE (FT)	BARREL: LENGTH Bl (FT)	BARREL: OUTLET ELEV BOE (FT)
1	3	3	132.08	134.00	HDPE	18	132.13	26	132.00

TRAP NO.	EMBANKMENT: TOP ELEV ETE (FT)	EMBANKMENT: TOP WIDTH Etw (FT)	CLEAN OUT ELEV COE (FT)	BOTTOM ELEV BE (FT)	OUTLET BASIN: RIPRAP SIZE (R–_)	OUTLET BASIN: ROCK THICK Rt (IN)	OUTLET BASIN: DEPTH D (IN)	OUTLET BASIN: WIDTH OBW (FT)	OUTLET BASIN: LENGTH OBL (FT)
1	136.50	10.0	132.08	131.00	N/A	N/A	N/A	N/A	N/A

NOTES:

FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.

ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

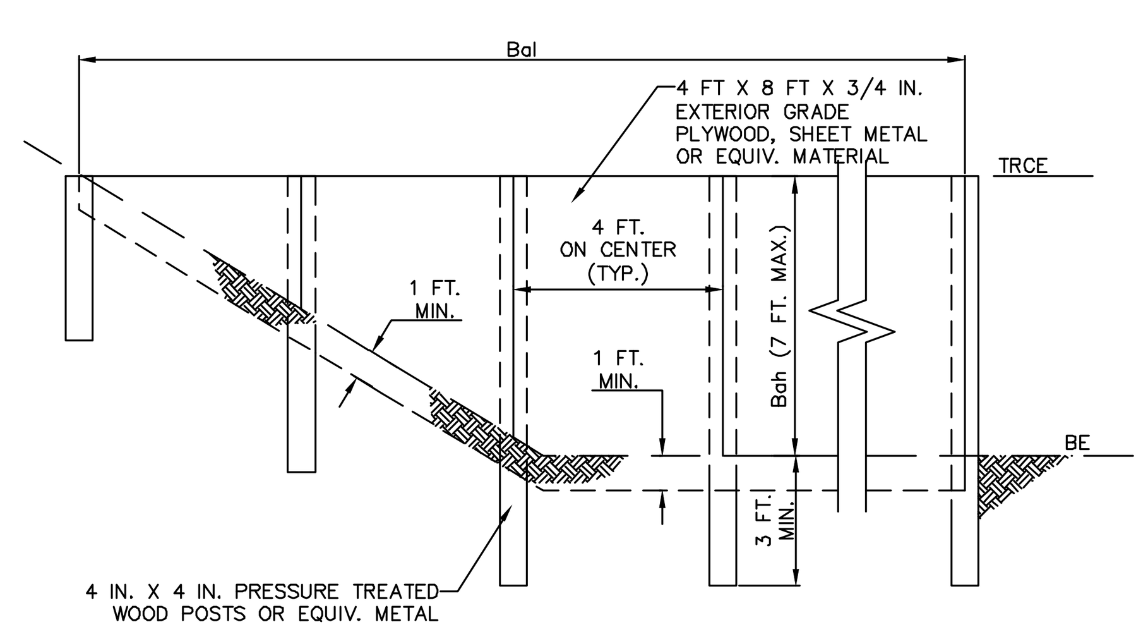
A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.

CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS.
DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO STORMWATER MANAGEMENT FACILITY.

STANDARD CONSTRUCTION DETAIL #8-8
CONCRETE RISER WITH TEMPORARY DEWATERING HOLES

NOT TO SCALE



BASIN OR TRAP NO.	BAFFLE: LENGTH Bal (FT)	BAFFLE: HEIGHT Bah (FT)	TEMPORARY RISER: CREST ELEV. TRCE (FT)	BOTTOM: BOTTOM ELEV BE (FT)
SEDIMENT TRAP #1	55	2.75	133.75	131.00

NOTES:

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

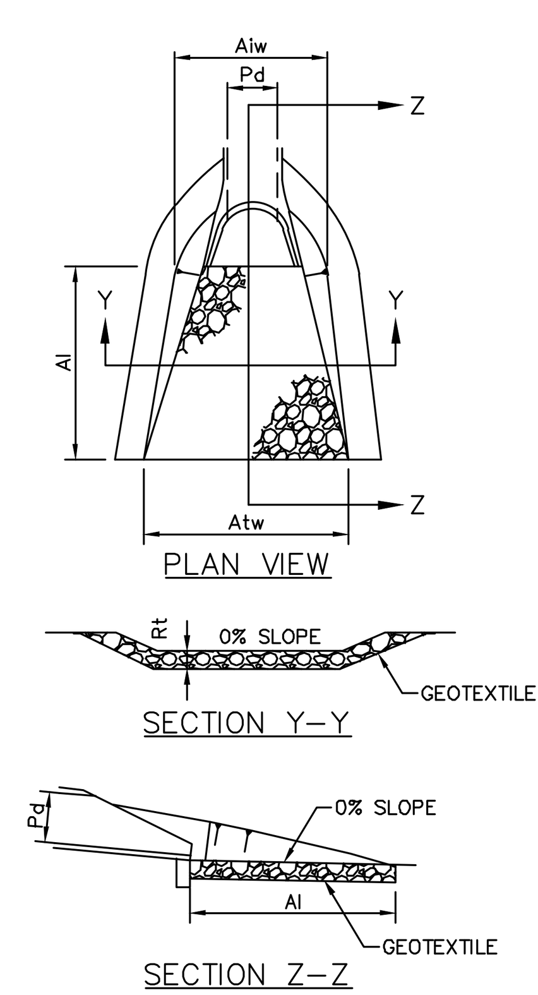
SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

STANDARD CONSTRUCTION DETAIL #7-14
BAFFLE

NOT TO SCALE



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP: SIZE R–_	RIPRAP: THICK. Rt (IN)	APRON: LENGTH Al (FT)	APRON: INITIAL WIDTH Aiw (FT)	APRON: TERMINAL WIDTH Atw (FT)
FES#1	24	4	18.0	22.0	6.0	14.8

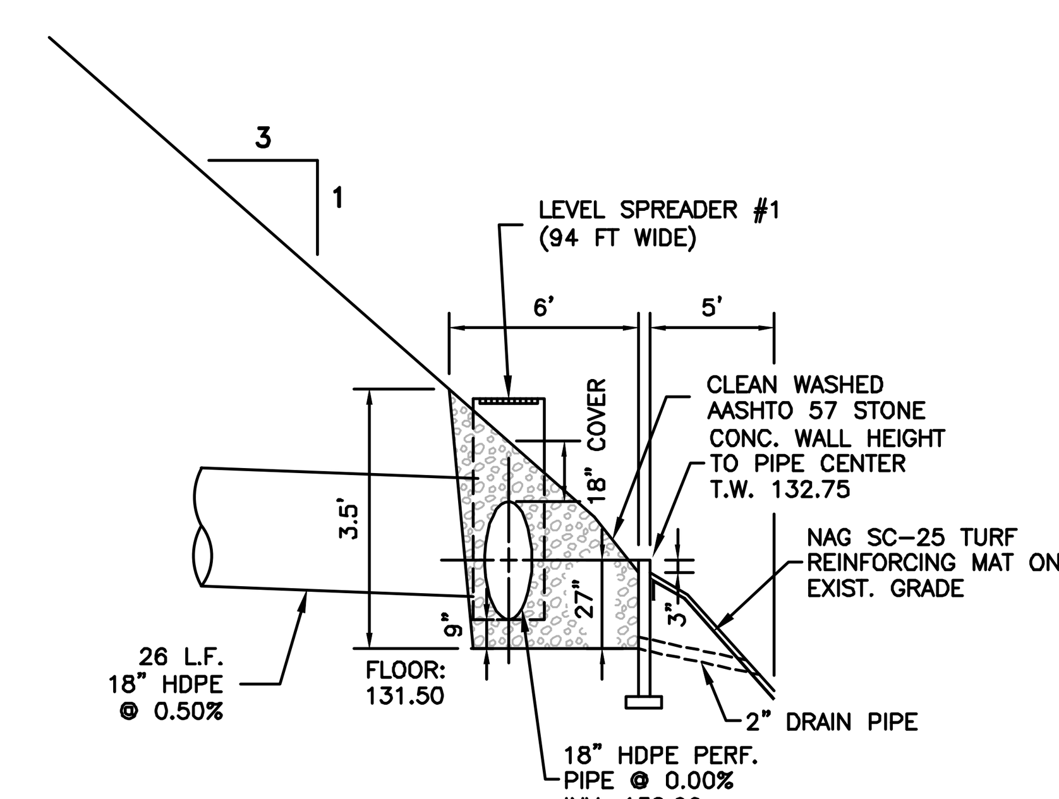
NOTES:

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

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

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE



LEVEL SPREADER #1

(NOT TO SCALE)

REGISTERED PROFESSIONAL ENGINEER

ROBERT E. BLUE JR.
LICENSE NO. 26169-E
9/12/2023 (DATE)

REVISIONS
5) 2022-02-08; REV. PER MCCD COMMENTS
6) 2022-03-04; REV. PER ADD'L TREE SURVEY
7) 2022-04-14; REV. PER ADD'L TREE SURVEY
8) 2022-07-19; REV PER TWP. REVIEW
9) 2022-09-28; ISSUED FOR FINAL LD REVIEW
10) 2023-02-03; REV. PER TWP. REVIEWS
11) 2023-02-28; REV. PER NPDES SUBMISSION
12) 2023-05-26; REV. PER NPDES RESUBMISSION
13) 2023-06-29; REV. PER NPDES RESUBMISSION
14) 2023-09-12; REV. PER NPDES RESUBMISSION

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FINAL PLAN

EROSION AND SEDIMENT CONTROL DETAILS (2)

222 CHURCH ROAD
CHELTENHAM TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

PREPARED FOR
222 CHURCH RD LLC
C/O RABBI ZVI BLOOM
509 CEDARHILL ROAD
FAR ROCKAWAY, NY 11691

DRAWN BY:	CHECKED BY:	SCALE:
DJG	REB	1"=40'
DATE: N.T.S.	JOB NUMBER: 2154-10E	SHEET NUMBER: 29 of 31

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