



Ann M. Hess, Esq.

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State RTT Tax	\$0.00

Total: \$49.00

Local RTT Tax Breakout:

Document #: 2025-0723-J

Receipt #: 25-16361

Clerk: Twildman

Rec Date: 05/28/2025 03:23:42 PM

Num Pages: 19

Document Type: STORMWATER MANAGEMENT PLAN

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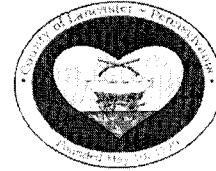
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RECORDER OF DEEDS
LANCASTER COUNTY | ANN M. HESS



STORMWATER PLAN

Plan Title: Post Construction Stormwater Management Plan

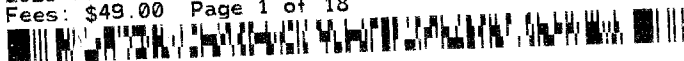
Name of Owners: Strasburg Borough

Property Address: Portions of South Decatur Street, E. Main Street, and Shenk Avenue,
and certain properties abutting those streets

Municipality: Strasburg Borough

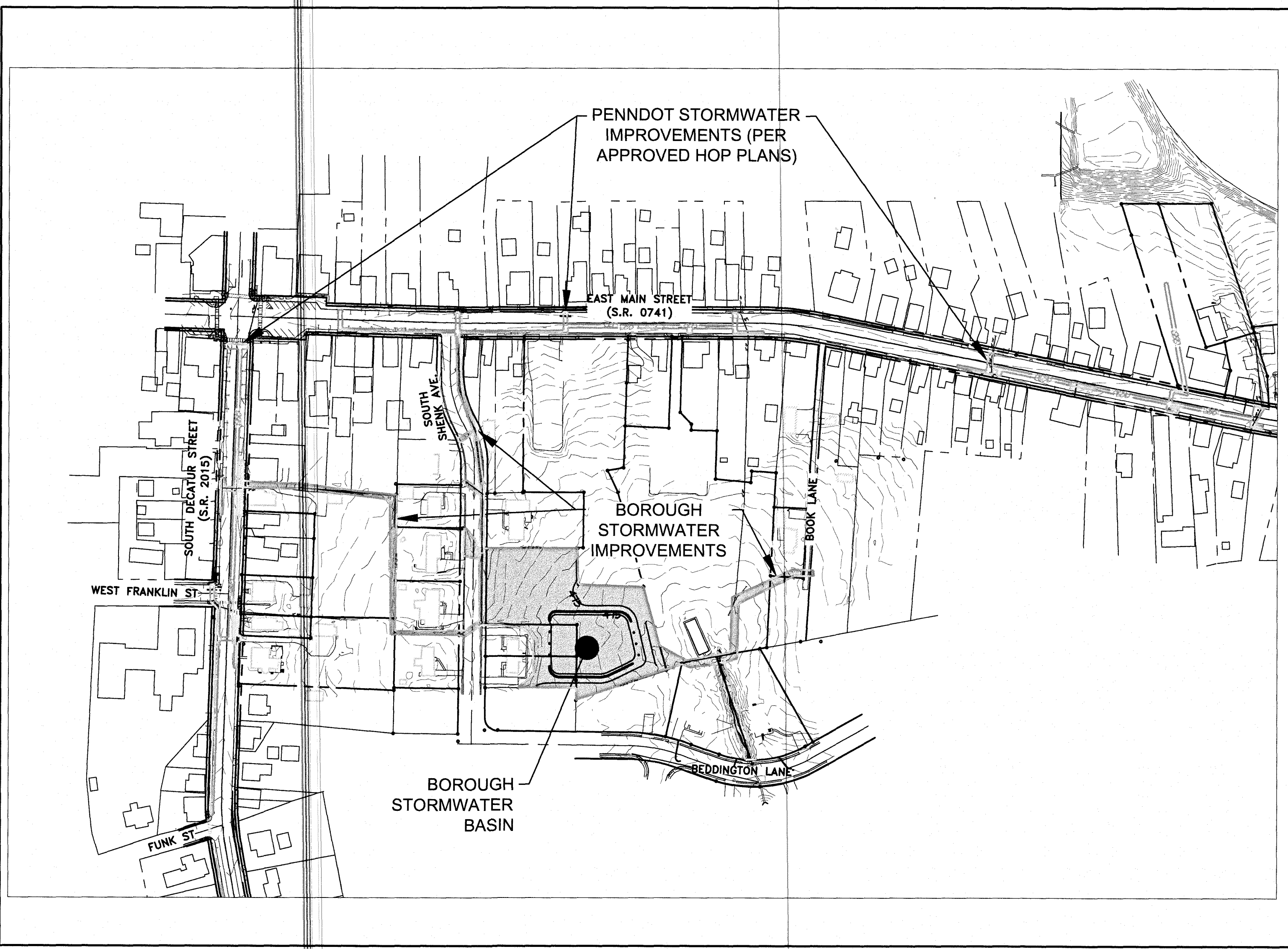
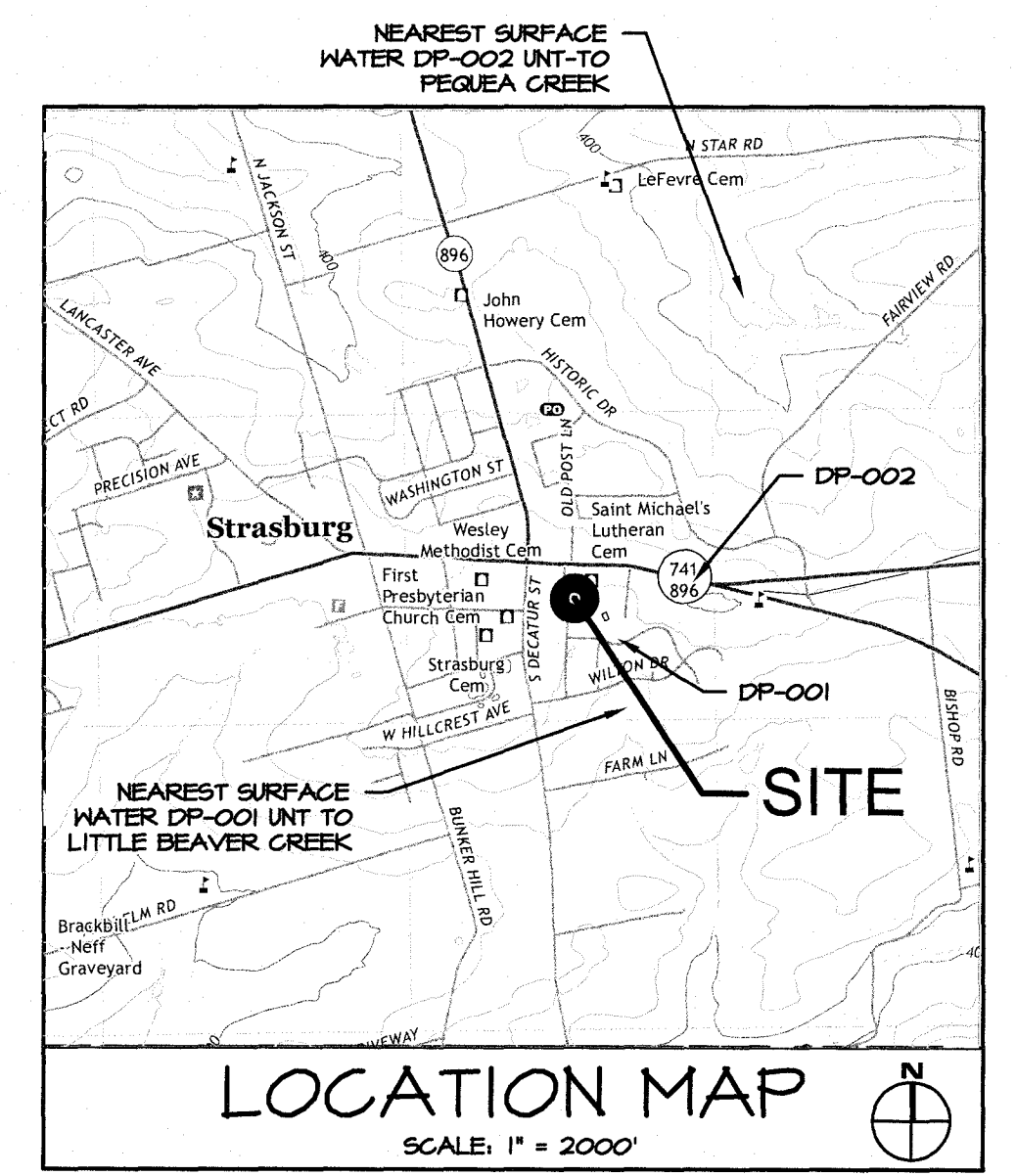
Date of Plan: October 5, 2023

Lancaster ROD Ann M. Hess, Esq.
STORMWATER MANAGEMENT PLAN
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Fees: \$49.00 Page 1 of 18



POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

FOR
STRASBURG BOROUGH - PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)
 STRASBURG BOROUGH - LANCASTER COUNTY - PENNSYLVANIA



SITE PLAN
 SCALE: 1" = 150'

NOTES:

- A. SURVEYING AND BASEMAPPING NOTES**
- BENCHMARK 1: LARGE NAIL SET IN GRASS APPROXIMATELY 37.7 FT SOUTHWEST OF CENTER OF WELL ON THE LANDS OF DALE W. AND SUSAN S. LONGS. ELEVATION = 485.17' NAVD 88 DATUM.
 - BENCHMARK 2: MAG. NAIL SET IN CONCRETE SIDEWALK AT THE NE CORNER OF INTERSECTION OF EAST MAIN STREET AND NORTH DECATUR STREET 10 FT SE OF UTILITY POLE 44028/524044. ELEVATION = 440.52' NAVD 88 DATUM.
 - BENCHMARK 3: LARGE NAIL SET IN BRICK SIDEWALK APPROXIMATELY 7 FT SOUTH OF UTILITY POLE 44061/524042. ELEVATION = 442.92' NAVD 88 DATUM.
 - BENCHMARK 4: MAG. NAIL SET AT THE SIDEWALK TRANSITION ZONE FROM CONCRETE TO BRICK APPROXIMATELY 5 FT SE OF UTILITY POLE 44109/524041. ELEVATION = 441.24' NAVD 88 DATUM.
 - BENCHMARK 5: MAG. NAIL SET ON SOUTHERN SIDE OF EAST MAIN STREET IN CONC. CURB 15 FT WEST OF UTILITY POLE 44166/524034 IN FRONT OF HOUSE #116. ELEVATION = 441.92' NAVD 88 DATUM.
 - BENCHMARK 6: MAG. NAIL SET IN PAVEMENT AT THE CENTER OF THE Y INTERSECTION OF GAP RD. AND GEORGETOWN

- B. STORM SEWER, EROSION AND SEDIMENT CONTROL**
- ROAD 50 FT WEST OF UTILITY POLE 44250/524022. ELEVATION = 493.17' NAVD 88 DATUM.
 - BENCHMARK 7: MAG NAIL SET IN SOUTH SIDE CURB ON BEDDINGTON LANE APPROXIMATELY 8.3 FT FROM A REBAR FOUND. ELEVATION = 466.21' NAVD 88 DATUM.
 - THIS PROPERTY DOES NOT LIE WITHIN A 100 YEAR FLOOD PLAIN ACCORDING TO FEMA FLOOD INSURANCE RATE MAP #420716C0395E DATED 4/5/2016.
 - UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM VISIBLE LOCATION, ACT 121 UTILITY RESPONSES AND/OR BEST AVAILABLE PLAN INFORMATION. (LAND GRANT SURVEYORS, LLC, CANNOT GUARANTEE THE EXACT LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES, AN EXACT LOCATION OR THE EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES CAN ONLY BE OBTAINED BY SUBSURFACE EXPLORATION, WHICH IS NOT PART OF THIS CONTRACT PERFORMANCE).
 - BASIS OF BEARINGS TAKEN FROM A REALIZATION OF THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 83.
 - RIGHT OF WAY FOR EAST MAIN STREET S.R. 0741 AND SOUTH DECATUR STREET S.R. 2015 WAS DETERMINED FROM STRASBURG BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

- ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN, AND PA DEP CHAPTER 102 REGULATIONS.
- IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 102 OF THE ADMINISTRATIVE CODE, TITLE 25 (PA DEP RULES AND REGULATIONS), A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON SITE DURING CONSTRUCTION UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL FACILITIES.
- THE MEASURES AND FACILITIES AS IDENTIFIED ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE APPLIED AND INSTALLED PRIOR TO THE COMMENCEMENT OF ANY EARTH MOVING, SITE WORK, OR CONSTRUCTION - AS PER THE CONSTRUCTION SEQUENCE IDENTIFIED ON THE EROSION AND SEDIMENT CONTROL PLANS. ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL MEET THE REQUIREMENTS OF APPROVED EROSION AND SEDIMENT CONTROL PLAN, PA DEP NPDES PERMIT (AS APPLICABLE), AND PA DEP CHAPTER 102 REGULATIONS.
- THE LIMIT OF DISTURBANCE MUST BE STRICTLY ADHERED AND NOT EXCEED ONE (1) ACRE (INCLUDING STAGING AREAS, STOCKPILING, ETC.).

- NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF AN EASEMENT THAT COULD ADVERSELY AFFECT THE FUNCTION OF THE EROSION AND SEDIMENT DRAINAGE FACILITY OR CONFLICT WITH THE EASEMENT AGREEMENT.
- ALL STORMWATER MANAGEMENT FACILITIES ARE PERMANENT AND SHALL BE MAINTAINED BY THE TOWNSHIP TO THE "DESIGN CONDITION" AS ESTABLISHED BY THESE PLANS. ANY REQUIRED TRAFFIC PERMITS SHALL BE OBTAINED BY THE OWNER.
- THE MAINTENANCE OF THE RAIN GARDEN SHALL BE IN ACCORDANCE WITH THE OWNERSHIP AND MAINTENANCE GUIDELINES PROVIDED ON THIS PLAN SET.
- IN THE EVENT THAT ANY SINKHOLES OR CARBONATE GEOLOGY FORMATIONS ARE DISCOVERED DURING CONSTRUCTION A PROFESSIONAL GEOLOGIST OR GEOTECHNICAL ENGINEER SHALL BE CONTACTED.
- WHERE SPECIFIED ON THE PLANS, ENGINEERED STORMWATER MANAGEMENT INFILTRATION SYSTEMS RELY ON PERMEABLE SOIL CONDITIONS TO DEWATER AND FUNCTION PROPERLY. AS PART OF THE DESIGN PROCESS, SOIL TESTING WAS PERFORMED TO ASSURE SUB SURFACE CONDITIONS WERE CONDUCIVE TO THE INFILTRATION OF STORMWATER. EVERY PRECAUTION MUST BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION TO ASSURE THAT CONSTRUCTION DOES NOT OCCUR WHICH WOULD COMPROMISE THE PERMEABILITY OF THE SUBGRADE OF THE INFILTRATION FACILITIES.

- THE INFILTRATION AREAS MUST BE PROTECTED AGAINST COMPACTION FROM CONSTRUCTION ACTIVITIES, SEDIMENT LADEN RUN, AND STOCK PILING.
- GENERAL CONSTRUCTION NOTES:**
 - THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING THE SAFE FLOW OF TRAFFIC DURING CONSTRUCTION WITHIN THE SITE AND EXISTING ROAD RIGHTS-OF-WAY WHILE ENTERING AND LEAVING THE SITE. DETERMINE THE SIZE AND THICKNESS OF THE AGGREGATE LAYERS BASED ON THE SIZE OF THE SINKHOLE. A NON-WOVEN GEOTEXTILE SHOULD THEN BE PLACED OVER THE AGGREGATE AND 2 FEET OF ENGINEERED SOIL SHOULD BE PLACED ABOVE THE GEOTEXTILE.
 - IF ANY CARBONATE FEATURES SUCH AS SINKHOLES, PINNACLES, DISAPPEARING STREAMS, LOOSE OR RAVELLED SOILS, OR OTHER DELETERIOUS CONDITIONS ARE OBSERVED DURING CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES, ALL WORK SHOULD STOP AND A GEOLOGIST OR GEOTECHNICAL ENGINEER SHOULD BE CONSULTED PRIOR TO CONTINUING WORK.
- FUTURE STORMWATER NOTE:**
 - FUTURE SHALL PROJECTS OR MINOR IMPROVEMENTS ON PROPERTIES WHICH ARE TRIBUTARY TO THE PROPOSED BASIN (SEE POST DEVELOPMENT WATERSHED MAP) AND/OR WHOSE PROPERTIES ARE IMPACTED BY NEW EASEMENTS AS PART OF THIS PLAN, WILL BE CONSIDERED FOR STORMWATER EXEMPTIONS AS DETERMINED BY THE AUTHORITY ON A CASE-BY-CASE BASIS.

WEATHERED ROCK STRATA, IF ENCOUNTERED, SHOULD BE FILLED WITH A SUITABLE SIZE AGGREGATE TO FILL AND BRIDGE THE VOID, REVERSE GRADED, LARGER TO SMALLER, AGGREGATE SHOULD THEN BE USED TO FILL THE AREA ABOVE THE SINKHOLE TO 2 FEET BELOW THE PROPOSED BED BOTTOM. A GEOLOGIST OR GEOTECHNICAL ENGINEER SHOULD DETERMINE THE SIZE AND THICKNESS OF THE AGGREGATE LAYERS BASED ON THE SIZE OF THE SINKHOLE. A NON-WOVEN GEOTEXTILE SHOULD THEN BE PLACED OVER THE AGGREGATE AND 2 FEET OF ENGINEERED SOIL SHOULD BE PLACED ABOVE THE GEOTEXTILE.



PENNSYLVANIA ACT 287 AS AMENDED BY ACT 50 (2017) REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.

DATE: _____ BY: _____ SERIAL NO: _____

NOTES: UNDERGROUND UTILITY LINE PROTECTION ACT

IN COMPLIANCE WITH AND PURSUANT TO THE PROVISIONS OF 73 P.S. §176, AS AMENDED BY ACT 121 OF 2008, LAND GRANT SURVEYORS, LLC HAS PERFORMED THE FOLLOWING REQUIREMENTS IN PREPARING THESE DRAWINGS THAT INCLUDE EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION AND/OR LAND DEVELOPMENT SHOWN ON THE DRAWINGS HEREIN:

- PURSUANT TO 73 P.S. §176(2), LAND GRANT SURVEYORS, LLC HAS REQUESTED LINE AND FACILITY INFORMATION FROM THE ONE CALL SYSTEM NOT LESS THAN TEN (10) NOR MORE THAN NINETY (90) BUSINESS DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED. IF SUCH INFORMATION WAS OBTAINED MORE THAN NINETY (90) DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED, LAND GRANT SURVEYORS, LLC HAS STATED IN THE REQUEST THAT THE WORK IS PRELIMINARY.
- PURSUANT TO 73 P.S. §176(3), LAND GRANT SURVEYORS, LLC HAS SHOWN, UPON REQUEST THESE DRAWINGS, THE POSITION AND TYPE OF EACH FACILITY OWNER'S LINE, AS DERIVED PURSUANT TO THE REQUEST MADE AS REQUIRED BY 73 P.S. §176(2), THE NAME OF THE FACILITY OWNER AND THE FACILITY OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.
- PURSUANT TO 73 P.S. §176(5), LAND GRANT SURVEYORS, LLC HAS CALLED THE ONE CALL SYSTEM AND SHOWN AS PROOF, THE SERIAL NUMBER OF THE ONE CALL NOTICE AND THE TOLL FREE NUMBER OF THE ONE CALL SYSTEM ON THE DRAWINGS NEAR THE SERIAL NUMBER.
- IF, PURSUANT TO 73 P.S. §176(2), LAND GRANT SURVEYORS, LLC HAS REQUESTED LINE AND FACILITY INFORMATION FROM THE ONE CALL SYSTEM MORE THAN NINETY (90) DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED, LAND GRANT SURVEYORS, LLC HAS INDICATED THAT THE REQUEST IS PRELIMINARY AND THE SERIAL NUMBER OF SAID REQUEST IS SHOWN ON THE DRAWINGS HEREIN.

LAND GRANT SURVEYORS, LLC DOES NOT REPRESENT, WARRANT, ASSURE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO THE ONE CALL SYSTEM REQUEST AND AS REFLECTED ON THESE DRAWINGS IS ACCURATE OR CORRECT. FURTHERMORE, LAND GRANT SURVEYORS, LLC INCLUDES THE INFORMATION ONLY PURSUANT TO THE REQUIREMENTS OF THE UNDERGROUND UTILITY LINE PROTECTION ACT, AS AMENDED BY ACT 121 OF 2008.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 A MINIMUM OF THREE (3) DAYS PRIOR TO EXCAVATING OR WITH CAREFUL EXPLORATORY WORK, AT THE CONTRACTOR'S RISK. PRIOR TO CONSTRUCTION FOR THESE PRIVATE LINES WHICH ARE NOT ABLE TO BE LOCATED THROUGH THE ONE CALL PROCESS, IT MAY BECOME NECESSARY IN THE FIELD TO ADJUST THE PROPOSED EROSION AND UTILITY CROSSING CORNER TO MATCH THE ONE CALL SYSTEM DATA. LAND GRANT SURVEYORS, LLC SHALL BE NOTIFIED IMMEDIATELY OF ANY SUCH CONFLICTS ARE ENCOUNTERED. THE INFORMATION CONTAINED IN THIS SECTION IS FOR THE USE OF CONTRACTORS DOES NOT CONSTITUTE LEGAL ADVICE AND IN NO WAY REPRESENTS THE EXTENT OF THE CONTRACTOR'S DUTIES PURSUANT TO THE UNDERGROUND UTILITY LINE PROTECTION ACT. CONTRACTORS WITH QUESTIONS REGARDING THE UNDERGROUND UTILITY LINE PROTECTION ACT SHOULD CONSULT WITH AN ATTORNEY IMMEDIATELY.

RECEIVING SURFACE WATER

UNT TO LITTLE BEAVER CREEK (W&F)

LIMIT OF DISTURBANCE = 2.34 AC

RECORDER OF DEEDS CERTIFICATE

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR LANCASTER COUNTY, PENNSYLVANIA, IN PLAN BOOK _____, PAGE _____ THIS _____ DAY OF _____, 20__

SURVEYOR OF RECORD
 LAND GRANT SURVEYORS
 9604 ASSEL DRIVE
 COLUMBIA, PA 17512
 (717) 285-1812

OWNER
 BOROUGH OF STRASBURG

STORMWATER MANAGEMENT PLAN CERTIFICATION

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE STORMWATER MANAGEMENT FACILITIES SHOWN AND DESCRIBED HEREON ARE DESIGNED IN CONFORMANCE WITH THE STRASBURG BOROUGH STORMWATER MANAGEMENT ORDINANCE.

MAY 27, 2025, *[Signature]*

STORMWATER MANAGEMENT OWNERSHIP ACKNOWLEDGEMENT

I, STEVEN ECHTERNACH, BOROUGH MANAGER, HEREBY ACKNOWLEDGE THE STORMWATER MANAGEMENT FACILITIES TO BE PERMANENT FIXTURES THAT CANNOT BE ALTERED OR REMOVED UNLESS A REVISED PLAN IS APPROVED BY STRASBURG BOROUGH.

MAY 27, 2025, *[Signature]*

CERTIFICATE OF OWNERSHIP AND ACKNOWLEDGMENT OF PLAN

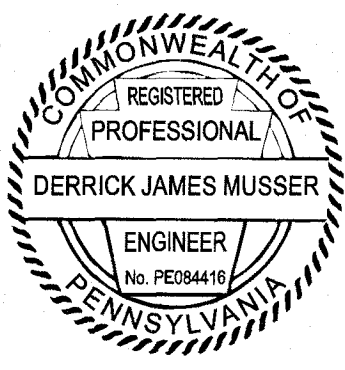
COMMONWEALTH OF PENNSYLVANIA
 COUNTY OF LANCASTER

ON THIS 27th DAY OF MAY, 2025, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED STEVEN ECHTERNACH, BEING BOROUGH MANAGER OF STRASBURG BOROUGH, COUNTY OF LANCASTER, ACCORDING TO THE LAM, DEPOSES AND SAYS THAT STRASBURG BOROUGH IS THE OWNER OF THIS PLAN, THAT HE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF STRASBURG BOROUGH, AND THAT THE PLAN IS THE ACT AND DEED OF STRASBURG BOROUGH.

[Signature] NOTARY (SEAL) *[Signature]* STEVEN ECHTERNACH, BOROUGH MANAGER

Commonwealth of Pennsylvania - Notary Seal
 Christine D. Moore, Notary Public
 Lancaster County
 My commission expires March 25, 2029
 Commission number 1213701
 Member: Pennsylvania Association of Notaries

Lancaster, PA
 Ann H. Hees, Esq.
 STORMWATER MANAGEMENT PLAN
 05/28/2025 03:23 PM
 Fees: \$49.00 Page 2 of 18



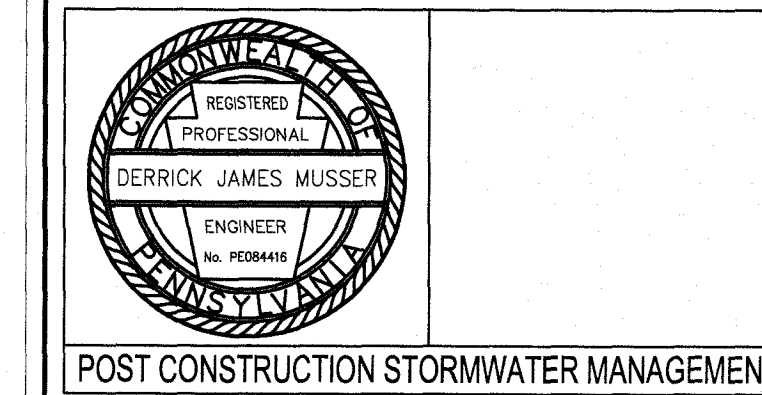
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REVISIONS PER:	DATE:	BY:
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3.		
4.		

EIA group, inc.
 ENGINEERS • LANDSCAPE ARCHITECTS

743 S. BROAD ST.
 LITITZ, PA 17543
 (717) 626-7271
 elagroup.com



STORMWATER MANAGEMENT PLAN
 SUBJECT:
COVER SHEET
 STRASBURG BOROUGH
 PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

CLIENT:
STRASBURG BOROUGH
 145 PRECISION AVENUE
 STRASBURG, PA 17579
 (717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO.:	953-028
DRAWN BY:	TRS	SCALE:	AS SHOWN

DRAWING NO.
1 of 17

TEMPORARY CONTROL MEASURES

1. **STABILIZED CONSTRUCTION ENTRANCE**
 - a. A STABILIZED PAD OF CRUSHED STONE (AASHTO NO. 1) SHALL BE LOCATED WHERE CONSTRUCTION TRAFFIC WILL BE ENTERING AND EXISTING THE SITE. THE STABILIZED CONSTRUCTION ENTRANCE IS USED TO REDUCE OR ELIMINATE THE TRACKING OR FLOWING OF SEDIMENT INTO THE EXISTING TRAVELWAYS AND STREETS BORDERING THE SITE.
 - b. ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK AS NEEDED. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WATER SHALL NOT BE USED TO REMOVE SEDIMENT.
2. **TOPSOIL STOCKPILE**
 - a. A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A MINIMUM.
 - b. STOCKPILES SHALL BE IMMEDIATELY STABILIZED WITH A TEMPORARY COVER CROP OF ANNUAL RYEGRASS (1 LB. / 1,000 SQUARE FEET) OF WINTER RYE (3.5 LBS. / 1,000 SQUARE FEET) IN ACCORDANCE WITH ACCEPTED SEEDING PRACTICES.
 - c. STOCKPILE HEIGHTS MUST NOT EXCEED 36". STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
 - d. STOCKPILES SHALL BE LOCATED WHERE SHOWN ON THE PLANS OR AT AN ALTERNATE LOCATIONS APPROVED BY THE CONSERVATION DISTRICT.
 - e. BEFORE DISPOSING OF SOIL, OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE COUNTY CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS.
3. **FILTER SOCKS**
 - a. FILTER SOCKS SHALL BE USED TO INTERCEPT SEDIMENT-LADEN RUNOFF FOR SMALL WATERSHEDS.
 - b. FILTER SOCKS SHALL BE INSTALLED IN ACCORDANCE WITH THE MAXIMUM SLOPE TO LENGTH RELATIONSHIPS AS PER MANUFACTURER, PADEP, AND CONSERVATION DISTRICT RECOMMENDATIONS.
 - c. THE CONTRACTOR SHALL MAINTAIN THE SOCK IN A FUNCTIONAL CONDITION AT ALL TIMES, AND IT SHALL BE ROUTINELY INSPECTED.
 - d. THE SOCK SHALL BE ROUTINELY MAINTAINED THROUGHOUT CONSTRUCTION AND REPAIRED WHEN NECESSARY.
 - e. THE CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SOCK WHEN SEDIMENT DEPTS TO EXCEED ONE HALF OF THE EXPOSED HEIGHT OF THE SOCK, OR AS DIRECTED BY INSPECTION AUTHORITIES.
4. **INLET SEDIMENT PROTECTION**
 - a. INLET SEDIMENT PROTECTION SHALL BE UTILIZED AT ALL STORM SEWER INLETS SUSCEPTIBLE TO RECEIVING SEDIMENT LADEN RUNOFF, AND WHICH DO NOT DISCHARGE TO A DESIGNATED SEDIMENT TRAP OR SEDIMENT BASIN.
 - b. THE CONTRACTOR SHALL UTILIZE THE TYPE OF INLET PROTECTION SHOWN ON THE EROSION CONTROL PLANS AND DETAILS. AT THE CONTRACTOR'S DISCRETION, A BAG TYPE INLET INSERT MAY BE USED FOR INLET PROTECTION OF PAVED AREAS.
 - c. THE INLET SEDIMENT PROTECTION SHALL BE CHECKED AND FLUSHED, AS REQUIRED, AFTER EACH RAINFALL/RUNOFF EVENT. IF NECESSARY, THE INLET SEDIMENT PROTECTION SHALL BE REPLACED TO ENSURE SEDIMENTS DO NOT ENTER THE STORM SEWER SYSTEM.
 - d. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INLET SEDIMENT PROTECTION TO MAINTAIN STORM WATER DRAINAGE, AND TO PREVENT SEDIMENT FROM COLLECTING AROUND THE INLET.
 - e. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT, OR WHEN THE DISTANCE BETWEEN THE GRATE AND THE SEDIMENT LEVEL IS REDUCED TO 10".
 - f. STORM WATER INLETS, WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
5. **TEMPORARY SEEDING/MULCHING**
 - a. TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED WHERE INDICATED IN THE NARRATIVE TO PROVIDE STABILIZATION TO EXPOSED AREAS. ALL AREAS WHERE CONSTRUCTION ACTIVITY HAS CEASED SHALL IMMEDIATELY BE SEEDDED WITH THE SPECIFIED TEMPORARY SEED MIX.
 - b. STRAW OR HAY MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 3.0 TONS PER ACRE (ENOUGH TO LIGHTLY COVER 75% TO 90% OF THE DESIGNATED AREAS).
 - c. THE TEMPORARY SEEDING/MULCHING SHALL BE AS INDICATED ON THE EROSION AND SEDIMENT CONTROL PLANS, AND AS OUTLINED IN THE SEEDING/MULCHING SECTION OF THIS NARRATIVE.
 - d. MULCH CONTROL NETTING, OR EROSION CONTROL BLANKETS, MUST BE INSTALLED ON ALL SLOPES GREATER THAN 3:1.

PERMANENT CONTROL MEASURES AND FACILITIES

1. **PERMANENT GRASS**
 - a. ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED SHALL BE COVERED WITH GRASS IN ORDER TO MINIMIZE EROSION. THE SEED MIXTURE SHALL BE APPLIED AS SPECIFIED OR IT MAY BE HYDRO-SEEDED BY A PERSON EXPERIENCED IN SUCH APPLICATIONS. SEED SHALL BE APPLIED DURING THE REGULAR GROWING SEASON OF THE SPECIES SPECIFIED.
 - b. PERMANENT SEEDING SHALL NOT OCCUR BEFORE APRIL 1 OR AFTER OCTOBER 15. DURING SUMMER APPLICATIONS, THE PERCENTAGE OF HARD SEED IN THE MIX, AND THE RATE OF APPLICATION, SHALL BE INCREASED. IF SEEDING CANNOT OCCUR DURING THE REGULAR GERMINATION PERIOD, THE EXPOSED AREAS SHALL BE MULCHED AS INDICATED PREVIOUSLY, AND THEN SEEDED WHEN THE GERMINATION PERIOD OCCURS.
 - c. SEED MIXTURE FOR PERMANENT SEEDING BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH SEEDING SCHEDULE ON THE DRAWINGS.
 - d. SOIL AMENDMENTS, SUCH AS LIME AND FERTILIZER, SHALL BE APPLIED IN ACCORDANCE WITH A SOIL TEST FOR THE TYPE OF SEED PROPOSED. IN LIEU OF A SOIL TEST, AMENDMENTS SHALL BE APPLIED AT THE RATES SPECIFIED IN THE SEEDING/MULCHING SECTION OF THIS NARRATIVE.
2. **MULCH**
 - a. STRAW MULCH SHALL BE APPLIED TO SEEDING AREAS TO HELP ESTABLISH A PERMANENT GRASS COVER AND TO PREVENT EROSION.
 - b. STRAW OR HAY MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 3.0 TONS PER ACRE (ENOUGH TO LIGHTLY COVER 75% TO 90% OF THE DESIGNATED AREA).
 - c. AREAS MAY BE HYDRO-MULCHED AS AN ALTERNATIVE TO STRAW MULCH, IF DESIRED.
3. **SOD**
 - a. IN AREAS WHERE THE SLOPE IS 2:1 OR GREATER, THE DEVELOPER WILL INSTALL SOD. SOD MATERIAL AND INSTALLATION SHALL CONFORM TO THE GUIDELINE SPECIFICATIONS TO SODDING, BY THE AMERICAN SOD PRODUCERS ASSOCIATION.
 - b. SOD SHALL BE INSTALLED DURING THE REGULAR GROWING SEASON OF THE SEED SPECIES OF WHICH THE SOD IS COMPRISED, OR GENERALLY NOT BEFORE APRIL 1 OR AFTER OCTOBER 15.
4. **EROSION CONTROL MATTING AND WATERCOURSE PROTECTION**
 - a. EROSION CONTROL MATTING SHALL BE USED WHERE INDICATED ON THE PLAN AND AT THE OWNER'S/ CONTRACTOR'S DISCRETION AT ALL AREAS WHERE STABILIZATION APPEARS TO BE DIFFICULT.
 - b. EROSION CONTROL MATTING/WATERCOURSE PROTECTION SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, AND IN ACCORDANCE WITH THE PLAN DETAILS.
 - c. EROSION CONTROL MATTING MAY BE USED ON STEEP SLOPE AREAS IF DISTURBANCE IS TO OCCUR DURING NON-GERMINATING PERIODS AND STABILIZATION APPEARS DIFFICULT.
 - d. EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES GREATER THAN 3:1.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE ACCOMPANYING CONSTRUCTION SEQUENCE/STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE THE SUBSEQUENT STAGE IS INITIATED. BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES AT LEAST 7 DAYS BEFORE CONSTRUCTION, THE GENERAL CONTRACTOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, (THE LANDOWNER, THE EROSION AND SEDIMENTATION CONTROL PLAN DESIGNER, AND A REPRESENTATIVE OF THE COUNTY CONSERVATION DISTRICT FOR AN ONSITE PRE-CONSTRUCTION MEETING. ALSO AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INCORPORATED AT 800-242-1176 TO LOCATE BURIED UTILITIES.
2. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME, AND NAME OF THE PERSON CONDUCTING THE INSPECTION MUST BE NOTED IN THE LOG FOLLOWING EACH INSPECTION. THE INSPECTION LOG WILL BE KEPT ON THE SITE AT ALL TIMES AND MADE AVAILABLE TO THE COUNTY CONSERVATION DISTRICT UPON REQUEST.
3. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.
4. WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION, THE PERMITEE OR CO-PERMITEE SHALL INCLUDE THE FOLLOWING INFORMATION:
 - A. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND POLLUTION EVENTS.
 - B. ALL STEPS TAKEN TO CORRECT THE NON-COMPLIANCE.
 - C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.
5. ONLY LIMITED UP-SLOPE DISTURBANCE WILL BE PERMITTED TO PROVIDE ACCESS TO THE SEDIMENT TRAPS, CONVEYANCE CHANNELS, DIVERSION CHANNELS, AND INTERCEPTOR CHANNELS FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE CONTROLS AS REQUIRED.
6. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS.
7. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED.
8. VEHICLES MAY ONLY ENTER AND EXIT AT THE LOCATION OF APPROVED CONSTRUCTION ENTRANCES(5).
9. STOCK PILE HEIGHTS MUST NOT EXCEED 35 FEET NOR SHALL THE SIDE SLOPE EXCEED 2:1.
10. SEDIMENT BASINS/TRAPS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.
11. CLEANOUT STAKES SHALL BE PLACED AT HALF DISTANCES FROM POINTS OF CONCENTRATED INFLOWS INTO BASINS/TRAPS TO OUTLET STRUCTURES. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATED TO THE CLEAN OUT ELEVATION ON THE STAKES.
12. SILT FENCINGS MUST BE INSTALLED PARALLEL TO EXISTING CONTOURS OR CONSTRUCTED LEVEL ALIGNMENTS. ENDS OF SILT FENCING MUST EXTEND 5', TRAVELING UP-SLOPE AT 45 DEGREES TO THE ALIGNMENT OF THE MAIN FENCING SECTION.
13. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH ONE-HALF THE ABOVE GROUND HEIGHT OF THE SILT FENCING.
14. ANY FENCING THAT HAS BEEN UNDERMINED OR TOPPED MUST BE REPLACED WITH FILTER OUTLETS IMMEDIATELY.
15. STORM WATER INLETS MUST BE PROTECTED UNTIL THE TRIBUTARY ACREAS ARE STABILIZED.
16. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM.
17. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MAY BE SEEDDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH AS SPECIFIED.
18. DIVERSIONS, CHANNELS, SEDIMENT TRAPS, AND STOCKPILES MUST BE SEEDDED AND MULCHED IMMEDIATELY. THEY SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS, OR OTHER PROJECTIONS THAT IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINDING TO SOILS CONTACT. CHANNEL SHALL BE INITIALLY OVER EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.
19. THE APPLICANT WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED ON THIS PLAN.
20. THE APPLICANT MUST DEVELOP, AND HAVE APPROVED BY THE COUNTY CONSERVATION DISTRICT, A SEPARATE EROSION AND SEDIMENTATION CONTROL PLAN FOR EACH SPOIL, BORROW, OR OTHER WORK AREA NOT DETAILED ON THE APPROVED PLAN, WHETHER LOCATED WITHIN OR OUTSIDE THE CONSTRUCTION LIMITS. PLAN MUST BE IN COMPLIANCE WITH CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.
21. UNLESS OTHERWISE NOTED, THE LIMITS OF GRADINGS SHALL BE CONSIDERED THE LIMITS OF DISTURBANCE.
22. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE APPLICANT TO ELIMINATE ALL SUCH PROBLEMS.
23. SHOULD UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.
24. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART I, DEPARTMENT OF ENVIRONMENTAL RESOURCES, SUB-PART G, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
25. PROTECTION TO EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.
26. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
27. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE COUNTY CONSERVATION DISTRICT.
28. 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.
29. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTE IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601 ER SEQ. AND 287J ER SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
30. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITH EROSION CONTROL BLANKETING (ECB).
31. SEDIMENT REMOVED FROM BMP'S DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE WITH EXISTING SEDIMENT PROTECTION MEASURES IN PLACE AND INCORPORATED INTO THE SITE GRADINGS.
32. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES, PERMANENT STABILIZATION OF ALL DISTURBED AREAS SHALL OCCUR. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
33. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION PRIOR TO REMOVAL OF THE BMP'S.
34. SEDIMENT BASINS/TRAPS SHALL BE KEPT FREE OF ALL TRASH, CONCRETE WASH WATER AND OTHER DEBRIS THAT POSE THE POTENTIAL FOR CLOGGING THE BASIN/TRAP OUTLET STRUCTURES AND/OR POSE THE POTENTIAL FOR POLLUTION TO WATERS OF THE COMMONWEALTH.
35. WHEN SEDIMENT HAS ACCUMULATED TO THE CLEAN OUT ELEVATION ON ANY STAKE, ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE ENTIRE TRAP/BASIN BOTTOM.
36. APPROVAL OF THE USE OF SKIMMER(S) DOES NOT APPROVE USE OF ANY SKIMMER(S) IN VIOLATION OF ANY PATENT, PATENT RIGHTS, AND/OR PATENT LAWS.
37. 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 MAXIMUM 6" LAYERED LIFTS AT 95% DENSITY.
38. A MINIMUM 6" LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS PRIOR TO PERMANENT STABILIZATION AND RE VEGETATION.
39. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP'S MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.

FILL DETERMINATION

1. TO DETERMINE WHETHER FILL IS CLEAN OR REGULATED, THE CONTRACTOR MUST PERFORM ENVIRONMENTAL DUE DILIGENCE.

ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATABASE SEARCHES, REVIEW OF OWNERSHIP AND USE HISTORY OF PROPERTY, SANDBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL AGREEMENTS OR AUDITS.

 - A) IF DUE DILIGENCE SHOWS NO EVIDENCE OF A RELEASE OF A REGULATED SUBSTANCE, THE MATERIAL MAY BE MANAGED AS CLEAN FILL UNDER DEP'S MANAGEMENT OF FILL POLICY.
 - B) IF DUE DILIGENCE SHOWS EVIDENCE OF A RELEASE, THE MATERIAL MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING MUST BE PERFORMED IN ACCORDANCE WITH THE PENNSYLVANIA DEP, BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT'S "MANAGEMENT OF FILL POLICY."
 - I. IF TESTING REVEALS THAT THE MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS ESTABLISHED IN DEP'S MANAGEMENT OF FILL POLICY, THE MATERIAL MUST BE MANAGED AS CLEAN FILL.
 - II. IF TESTING REVEALS THAT THE MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT EXCEED THE LIMITS ESTABLISHED IN DEP'S MANAGEMENT OF FILL POLICY, THE MATERIAL MUST BE MANAGED AS REGULATED FILL.

CLEAN FILL IS DEFINED AS, INCONTAMINATED, NONWATER-SOLUBLE, NONDECOMPOSABLE INERT SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DRESSED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DESTRUCTION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND RECOGNIZABLE AS SUCH (25 PA. CODE, SECTIONS 271.01 AND 287J.01). THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR MAY NOT BLEND OR MIX MATERIALS TO BECOME CLEAN FILL. MATERIALS THAT CONTAIN REGULATED SUBSTANCES THAT ARE INTENTIONALLY RELEASED MAY NOT BE MANAGED UNDER DEP'S MANAGEMENT OF FILL POLICY.

RECYCLING OR DISPOSAL OF MATERIALS

1. PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH DEPARTMENT REGULATIONS.
2. INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS.
3. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
4. THE CONTRACTOR SHALL PLAN AND IMPLEMENT MEASURES FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL DURING CONSTRUCTION.
5. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL. DISPOSAL OF CONSTRUCTION WASTES SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES AND REGULATIONS (25 PA. CODE 2601 ET SEQ., 271E. SEQ. AND 287J ET SEQ.).

MAINTENANCE

1. ALL SEDIMENT AND EROSION CONTROL FACILITIES SHALL BE CHECKED FOR DAMAGE WEEKLY AND/OR AFTER EACH PRECIPITATION EVENT. ALL FACILITIES THAT ARE DAMAGED, CLOGGED, OR CAN NO LONGER EFFECTIVELY PERFORM THE JOB IN WHICH THEY ARE DESIGNED, SHALL BE REPLACED.
2. ALL SEDIMENT REMOVED FROM SEDIMENT TRAPPING DEVICES SHALL BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE EROSION OR SEDIMENTATION, AND SHALL BE PLACED IN AN AREAS WITHIN THE DEFINED LIMITS OF DISTURBANCE.
3. ANY PERMANENTLY SEEDDED AREAS THAT BECOME ERODED OR DISTURBED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS RESEEDDED, AND THE MULCH REPLACED, OR, AT THE DISCRETION OF THE OWNER, SOD MAY BE INSTALLED.
4. UNTIL THE SITE HAS ACHIEVED FINAL STABILIZATION, THE OWNER AND/OR CONTRACTOR SHALL PROPERLY IMPLEMENT, OPERATE AND MAINTAIN ALL THE BEST MANAGEMENT PRACTICES AND EROSION AND SEDIMENT CONTROL FEATURES. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS 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.
5. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF, ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS AS INDICATED IN CHAPTER 25 OF THE PENNSYLVANIA CODE.

SITE STABILIZATION

1. UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY, OR ANY STAGE OR PHASE OF AN ACTIVITY, THE OPERATOR SHALL IMMEDIATELY STABILIZE THE DISTURBED AREAS TO PROTECT FROM ACCELERATED EROSION. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1-YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1-YEAR, MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.
2. SPREAD TOPSOIL (6") OVER ALL AREAS WHICH HAVE NOT BEEN PAVED (OR WILL NOT BE PAVED) AND ALL AREAS WHICH WERE NOT SEEDDED. FINAL PASSES DURING FINE GRADINGS SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. SEED ALL AREAS WITH A PERMANENT SEED MIX AS SPECIFIED, AND PROVIDE MULCH OVER ALL FRESHLY SEEDDED AREAS. ALL SEEDDED AREAS MUST BE MULCHED IMMEDIATELY AFTER SEEDING HAS BEEN COMPLETED.
3. ASSURE SITE STABILIZATION OF ALL AREAS OF THE SITE PRIOR TO REMOVING EROSION AND SEDIMENT CONTROLS. SEED AND MULCH ANY AREAS OF MINIMAL DISTURBANCE RESULTING FROM THE REMOVAL OF EROSION AND SEDIMENT CONTROLS.
4. UNTIL THE SITE HAS ACHIEVED FINAL STABILIZATION, THE OWNER AND/OR CONTRACTOR SHALL PROPERLY IMPLEMENT, OPERATE AND MAINTAIN ALL THE BEST MANAGEMENT PRACTICES. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROL 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.
5. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 10% UNIFORM PERENNIAL VEGETATIVE COVER OF OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

102.4(b)(4) E&S PLANNING AND DESIGN NOTES

1. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL FACILITIES HAVE BEEN DESIGNED TO THE STANDARDS ESTABLISHED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATERWAYS ENGINEERING AND WETLANDS, DIVISION OF WETLANDS, ENCROACHMENT AND TRAINING) FINAL - MARCH 2012 (TECHNICAL GUIDANCE NUMBER 369-2194-009).
2. THIS E45 PLAN MINIMIZES THE EXTENT AND DURATION OF EARTH DISTURBANCES THROUGH THE THOUGHTFUL AND INTENTIONAL SEQUENCING OF CONSTRUCTION ACTIVITIES. THE SEQUENCE OF CONSTRUCTION ATTEMPTS TO MINIMIZE AREAS OF THE SITE THAT ARE OPEN/DISTURBED AT ANY GIVEN TIME AND ENDEAVORS TO PROMOTE THE IMMEDIATE STABILIZATION OF DISTURBED AREAS THROUGH SEEDING/MULCHING AND/OR OTHER STABILIZATION METHODS.
3. THIS E45 PLAN MAXIMIZES THE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION THROUGH THE INSTALLATION OF TREE PROTECTION FENCING AND OTHER PHYSICAL BARRIERS SUCH AS FILTER SOCKS TO HELP DELINEATE CONSTRUCTION AREAS AND TO PREVENT UNNECESSARY OR UNINTENTIONAL ENCROACHMENT.
4. THIS E45 PLAN MINIMIZES SOIL COMPACTION BY PROVIDING UNDISTURBED/SCARIFIED SUBGRADE FOR THE INFILTRATION FACILITY BOTTOM FIELDS AND ALSO THROUGH MINIMIZING DISTURBANCES OUTSIDE OF PROPOSED IMPERVIOUS AREAS.
5. THIS E45 PLAN UTILIZES OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE THE GENERATION OF INCREASED STORMWATER. THE MAIN MEASURE IS BY PRESERVING EXISTING FLOW PATHS AND ENSURING ALL RUNOFF IS CLEANED USING E45 BMP'S PRIOR TO DISCHARGING TO EXISTING NATURAL DRAINAGE HAYS, SLOPE AND CHANNEL STABILIZATION ALSO HELP MINIMIZE THE GENERATION OF INCREASED STORMWATER AND EROSION.

SOIL LIMITATIONS AND RESOLUTIONS

1. THE FOLLOWING ADDRESSES POTENTIAL ON-SITE SOILS USE LIMITATIONS AND PROPOSED RESOLUTIONS. A QUALIFIED GEOTECHNICAL PROFESSIONAL SHALL BE CONSULTED FOR PROFESSIONAL RECOMMENDATIONS FOR ANY ADVERSE SITUATION ENCOUNTERED DURING CONSTRUCTION.
2. FROST ACTION - NO FILL OR BACKFILL SHALL BE PLACED ON FROZEN OR SATURATED GROUND.
3. SEASONAL HIGH WATER TABLE - IF GROUNDWATER IS ENCOUNTERED DURING TRENCHING PROCEDURES, THE SEDIMENT-LADEN WATER SHALL BE PUMPED TO AN APPROVED SEDIMENT-REMOVAL FACILITY SUCH AS A SILT BAG AND DISCHARGED AT A STABILIZED POINT OF DISCHARGE.
4. UNSTABLE FILL OR USE IN EMBANKMENT - AT THE TIME OF EMBANKMENT CONSTRUCTION (I.E. SEDIMENT BASIN CONSTRUCTION) A QUALIFIED GEOTECHNICAL ENGINEER SHALL BE ON-SITE TO PROVIDE RECOMMENDATIONS FOR THE SUITABILITY OF ON-SITE SOILS. IF SOILS OUTSIDE THE LIMIT OF DISTURBANCES ARE NEEDED FOR CONSTRUCTION, THE CONTRACTOR/EXCAVATOR SHALL BE RESPONSIBLE FOR THE DEVELOPMENT AND IMPLEMENTATION OF AN APPROVED EROSION AND SEDIMENTATION CONTROL PLAN FOR ALL OFF-SITE BORROW AREAS ASSOCIATED WITH MATERIAL NEEDED FOR CONSTRUCTION.
5. SHALLOW DEPTH TO BEDROCK - IF ROCK IS ENCOUNTERED DURING SITE EXCAVATION, THE ROCK SHALL BE REMOVED WITH COMMONLY ACCEPTED CONSTRUCTION PRACTICES. THE CONTRACTOR/EXCAVATOR SHALL BE RESPONSIBLE FOR THE DEVELOPMENT AND IMPLEMENTATION OF AN APPROVED EROSION AND SEDIMENTATION CONTROL PLAN FOR ALL OFF-SITE DISPOSAL AREAS ASSOCIATED WITH EXCESS MATERIAL GENERATED THAT MUST BE REMOVED FROM THE SITE.
6. IT IS RECOMMENDED THAT A QUALIFIED GEOTECHNICAL ENGINEER BE PRESENT ON SITE DURING ALL PHASES OF CONSTRUCTION TO EVALUATE, MAKE RECOMMENDATIONS, AND PROVIDE SOLUTIONS FOR ALL SOIL USE LIMITATIONS, CONSTRUCTION TECHNIQUES, AND OTHER SOILS-RELATED ITEMS.

SITE STABILIZATION

UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY, OR ANY STAGE OR PHASE OF AN ACTIVITY, THE OPERATOR SHALL IMMEDIATELY STABILIZE THE DISTURBED AREAS TO PROTECT FROM ACCELERATED EROSION. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1-YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1-YEAR, MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.

SPREAD TOPSOIL (6") OVER ALL AREAS WHICH HAVE NOT BEEN PAVED (OR WILL NOT BE PAVED) AND ALL AREAS WHICH WERE NOT SEEDDED. FINAL PASSES DURING FINE GRADINGS SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. SEED ALL AREAS WITH A PERMANENT SEED MIX AS SPECIFIED, AND PROVIDE MULCH OVER ALL FRESHLY SEEDDED AREAS. ALL SEEDDED AREAS MUST BE MULCHED IMMEDIATELY AFTER SEEDING HAS BEEN COMPLETED.

ASSURE SITE STABILIZATION OF ALL AREAS OF THE SITE PRIOR TO REMOVING EROSION AND SEDIMENT CONTROLS. SEED AND MULCH ANY AREAS OF MINIMAL DISTURBANCE RESULTING FROM THE REMOVAL OF EROSION AND SEDIMENT CONTROLS.

UNTIL THE SITE HAS ACHIEVED FINAL STABILIZATION, THE OWNER AND/OR CONTRACTOR SHALL PROPERLY IMPLEMENT, OPERATE AND MAINTAIN ALL THE BEST MANAGEMENT PRACTICES. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROL 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.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 10% UNIFORM PERENNIAL VEGETATIVE COVER OF OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

THERMAL IMPACTS

THERMAL IMPACTS WILL BE MITIGATED VIA THE BIORETENTION BASIN FACILITY. IT SHOULD BE NOTED THAT NO ADDITIONAL IMPERVIOUS IS BEING PROPOSED AS PART OF THIS PROJECT.

GEOLOGIC FORMATION

ON-SITE GEOLOGIC AND SOIL CONDITIONS DO NOT PRESENT A HAZARD FOR POLLUTION DURING EARTH DISTURBANCE ACTIVITIES. IF SITE CONDITIONS WOULD INDICATE OTHERWISE, A QUALIFIED GEOTECHNICAL PROFESSIONAL SHALL BE IMMEDIATELY CONTACTED TO PROVIDE RECOMMENDATIONS IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.

REVISIONS PER	DATE:	BY:
1 REVISED PER LCDD COMMENTS	1/25/24	MAC
2 PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3 -	-	-
4 -	-	-
5 -	-	-

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POST CONSTRUCTION STORMWATER MANAGEMENT

DERRICK JAMES MUSSEN
REGISTERED PROFESSIONAL ENGINEER
NO. 108449

STORMWATER MANAGEMENT PLAN

SUBJECT:
ESC NOTES
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SEE QUADRANT)

CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO:	953-028
DRAWN BY:	TRS	SCALE:	AS SHOWN

DRAWING: C:\Users\trousenr\Documents\Projects\Improvements\Project Files\CAD Data\Land Development\Views.dwg - PLOTTED: Apr 24, 2025 10:33 am

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EXISTING LEGEND

		ADJOINER PROPERTY LINE
		PROPERTY LINE
		RIGHT-OF-WAY LINE
		CENTERLINE
		EASEMENTS
		INDEX CONTOUR
		INTERMEDIATE CONTOUR
		SPOT ELEVATION
		CURB LINE
		EDGE OF PAVEMENT (E.O.P.)
		MIN. BLDG. SETBACK LINE
		OVERHEAD ELECTRIC
		UNDERGROUND ELECTRIC
		UNDERGROUND TELEPHONE
		GAS LINE
		SANITARY SEWER LINE
		SANITARY FORCE MAIN
		WATER LINE

DEMOLITION LEGEND

TREES, STORMWATER PIPES AND STRUCTURES TO BE REMOVED

SOILS TABLE

	LETORT SILT LOAM, 0-3% SLOPES
	LETORT SILT LOAM, 3-8% SLOPES
	NOLIN SILT LOAM

SCALE IN FEET, 1" = 50'

REVISIONS PER	DATE	BY
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-

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DERRICK JAMES MUSSER
REGISTERED PROFESSIONAL ENGINEER
No. 100886

POST CONSTRUCTION STORMWATER MANAGEMENT

STORMWATER MANAGEMENT PLAN
SUBJECT:
EXISTING CONDITIONS & DEMOLITION PLAN
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

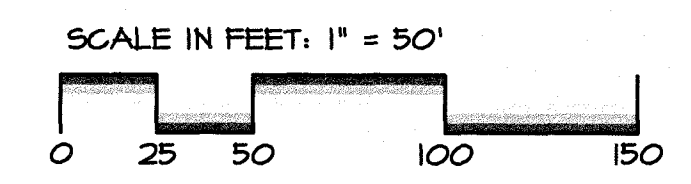
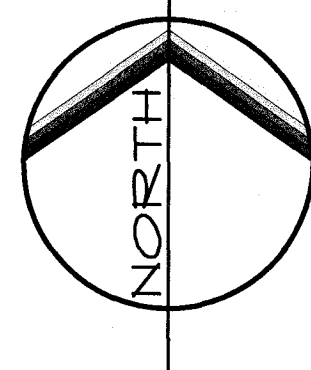
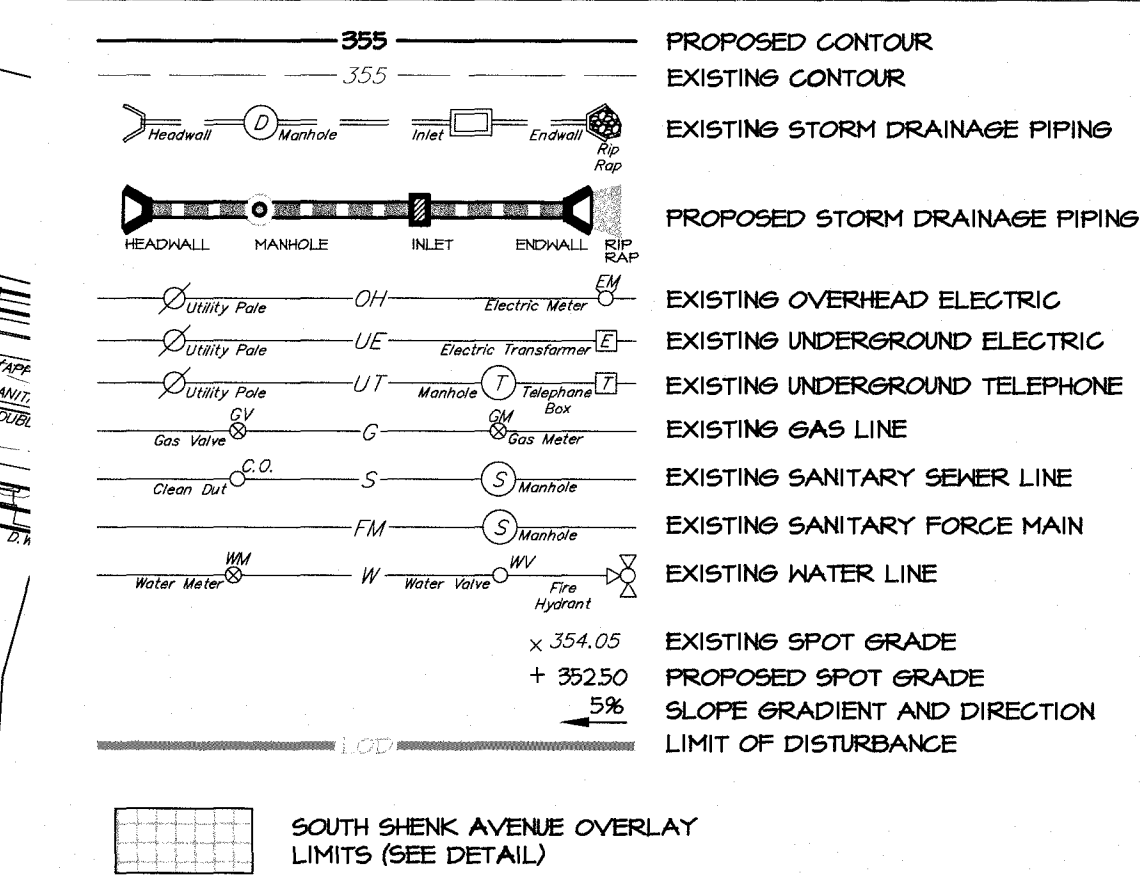
CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO.:	953-028
DRAWN BY:	TRS	SCALE:	1" = 50'

DRAWING NO.
4 of 17

Lancaster Road - Ann M. Hess, Esq.
STORMWATER MANAGEMENT PLAN
2025-0723-J - 05/28/2025 03:23 PM
Feet: 549.90 Page 6 of 18

GRADING LEGEND



REVISIONS PER:	DATE:	BY:
1. REVISED PER LCCD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3.	-	-
4.	-	-
5.	-	-

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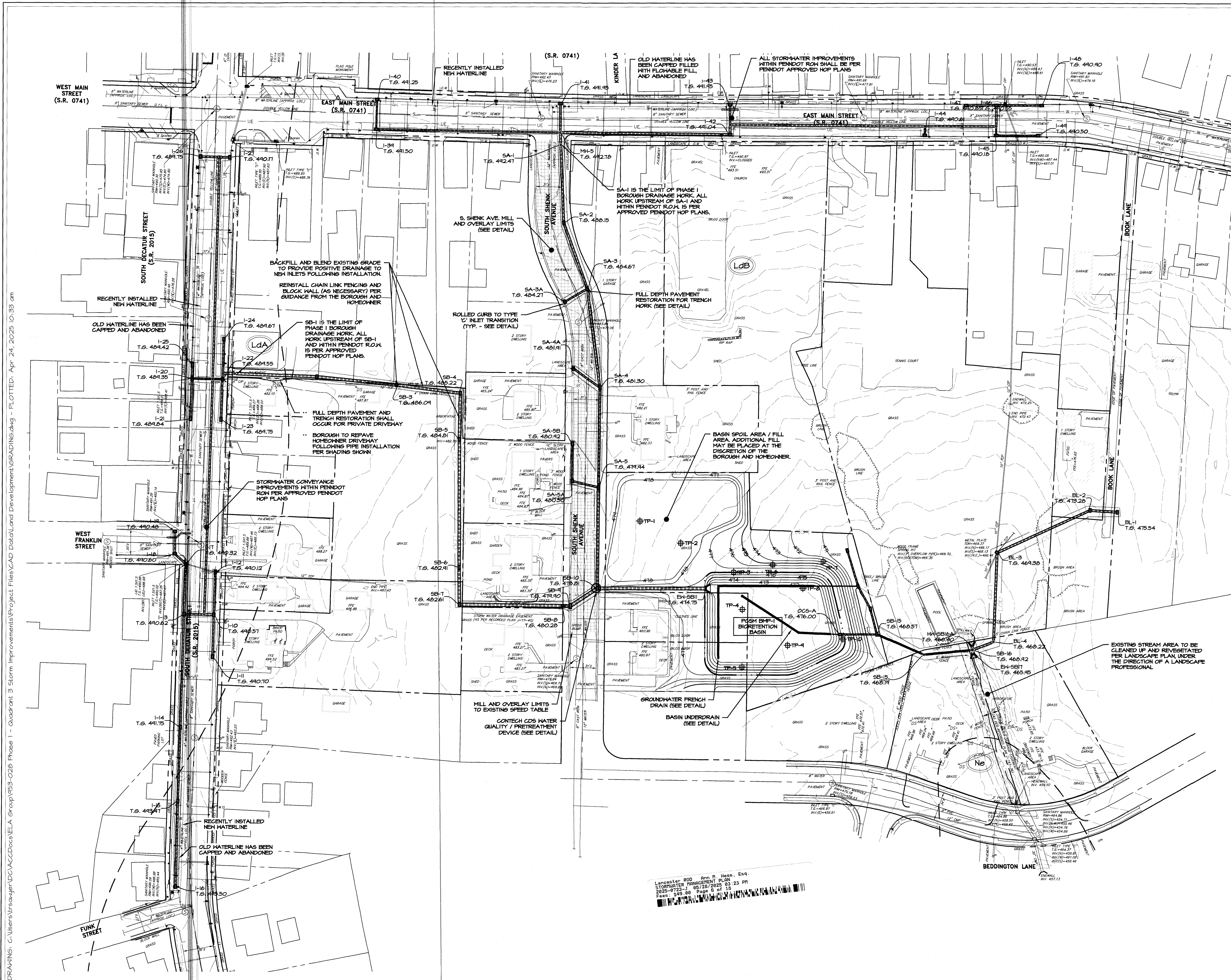
POST CONSTRUCTION STORMWATER MANAGEMENT

STORMWATER MANAGEMENT PLAN
SUBJECT:
PCSM PLAN
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

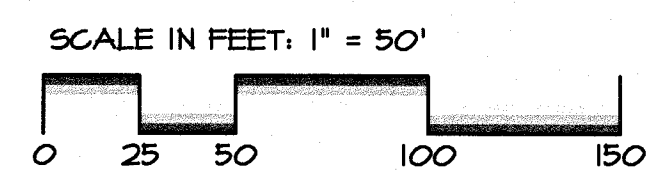
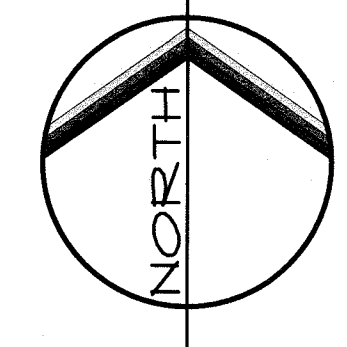
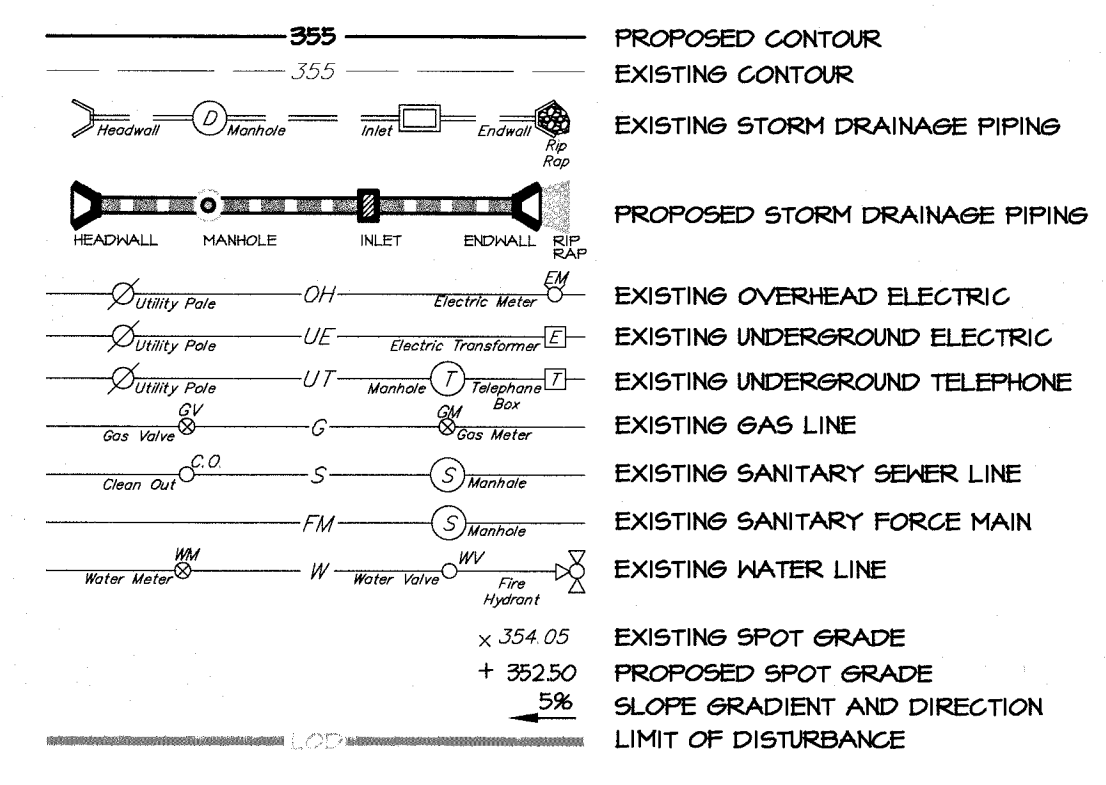
CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO.:	953-028
DRAWN BY:	TRS	SCALE:	1" = 50'

DRAWING NO.
5 of 17



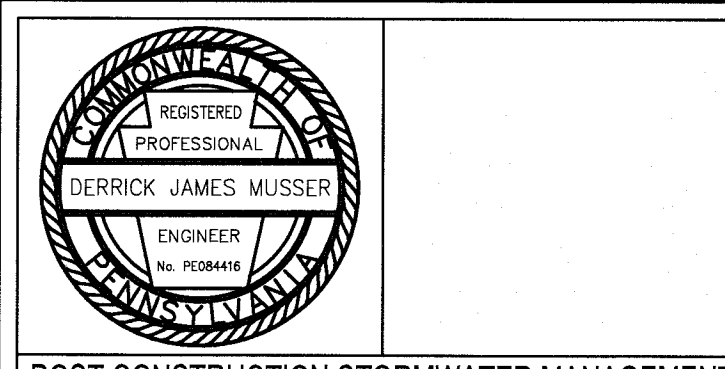
GRADING LEGEND



REVISIONS PER:	DATE:	BY:
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-

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POST CONSTRUCTION STORMWATER MANAGEMENT

STORMWATER MANAGEMENT PLAN
SUBJECT:
PCSM PLAN
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

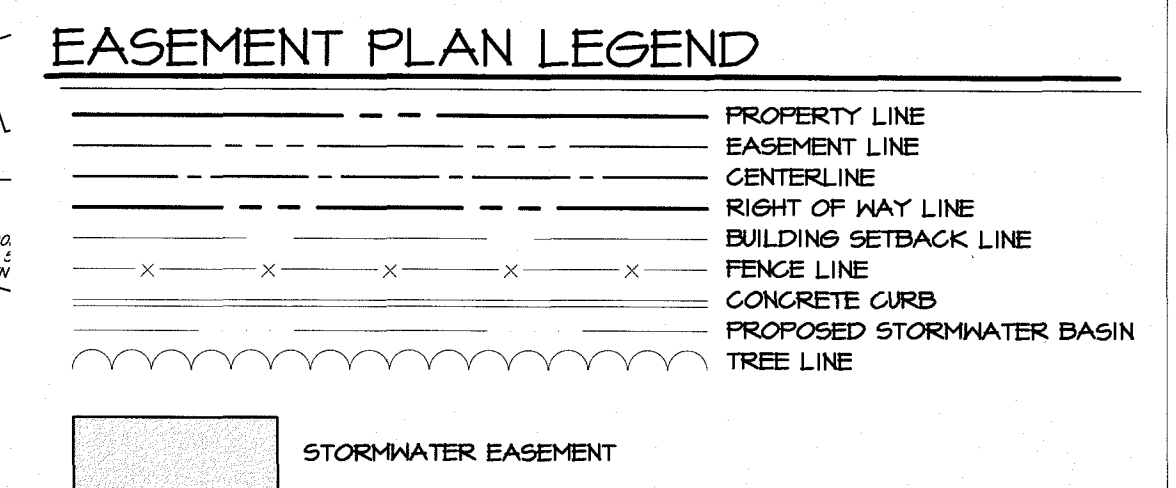
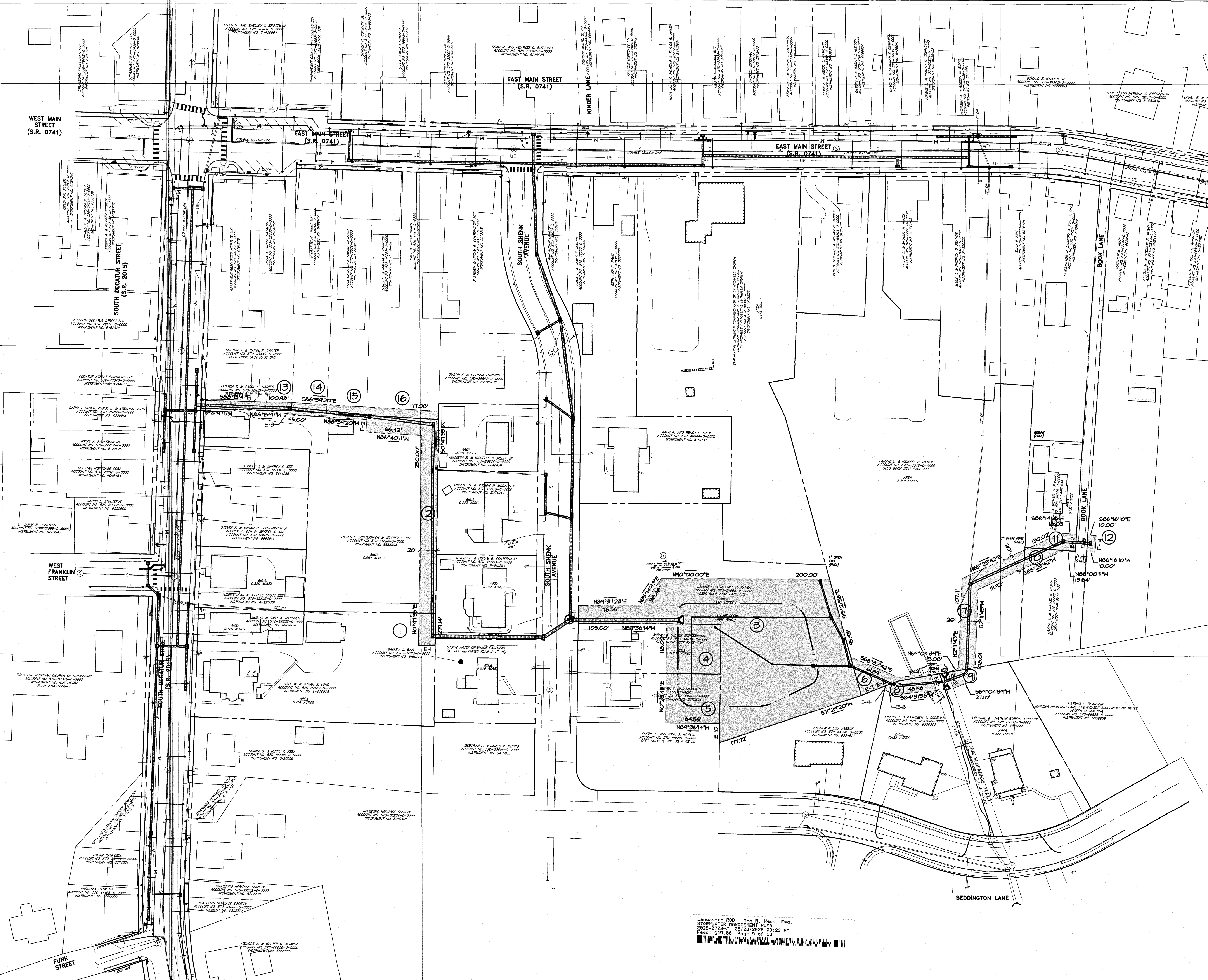
CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER	DLM	DATE	OCTOBER 5, 2023
DESIGNER	DLM	PROJECT NO.	953-028
DRAWN BY	TRS	SCALE	1" = 50'

DRAWING NO.
6 of 17

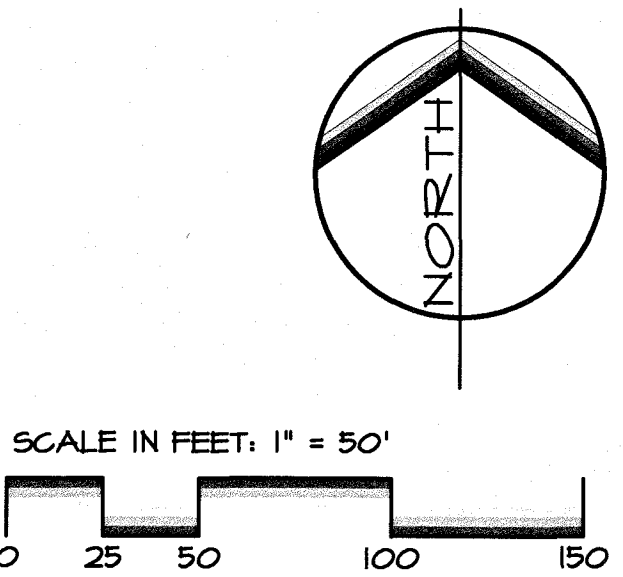
Lancaster ROD Ann II, Hess, Esq.
STORMWATER MANAGEMENT PLAN
2025-0723-J 05/28/2025 03:23 PM
Fees: \$49.00 Stage: 7 of 18

DRAWING: C:\Users\rschaefer\OneDrive\Documents\ELA Group\Projects\Storm Improvements\Project Files\CAD Data\Land Development\EASEMENT.dwg - Plotted: Apr. 24, 2025 10:34 am



PROPOSED EASEMENT LINE DATA

LINE	BEARING	LENGTH
E-1	N89°12'25"W	20.00'
E-2	N8°14'44"E	15.02'
E-3	N1°44'19"E	4.91'
E-4	N84°3'56"E	39.13'
E-5	S18°31'02"E	20.54'
E-6	N66°32'42"W	14.24'
E-7	S68°23'09"W	24.24'
E-8	S68°23'09"W	6.55'
E-9	N2°20'40"E	4.72'
E-10	N0°36'05"E	22.58'
E-11	N0°33'14"E	21.28'
E-12	S3°43'50"W	20.41'
E-13	N18°31'02"W	20.02'
E-14	S3°43'50"W	20.00'
E-15	N3°43'50"E	20.00'
E-16	N1°50'25"E	10.00'



REVISIONS PER	DATE:	BY:
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3.		
4.		
5.		

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DERRICK JAMES MUSSER
REGISTERED PROFESSIONAL ENGINEER
No. 12584
PA

POST CONSTRUCTION STORMWATER MANAGEMENT

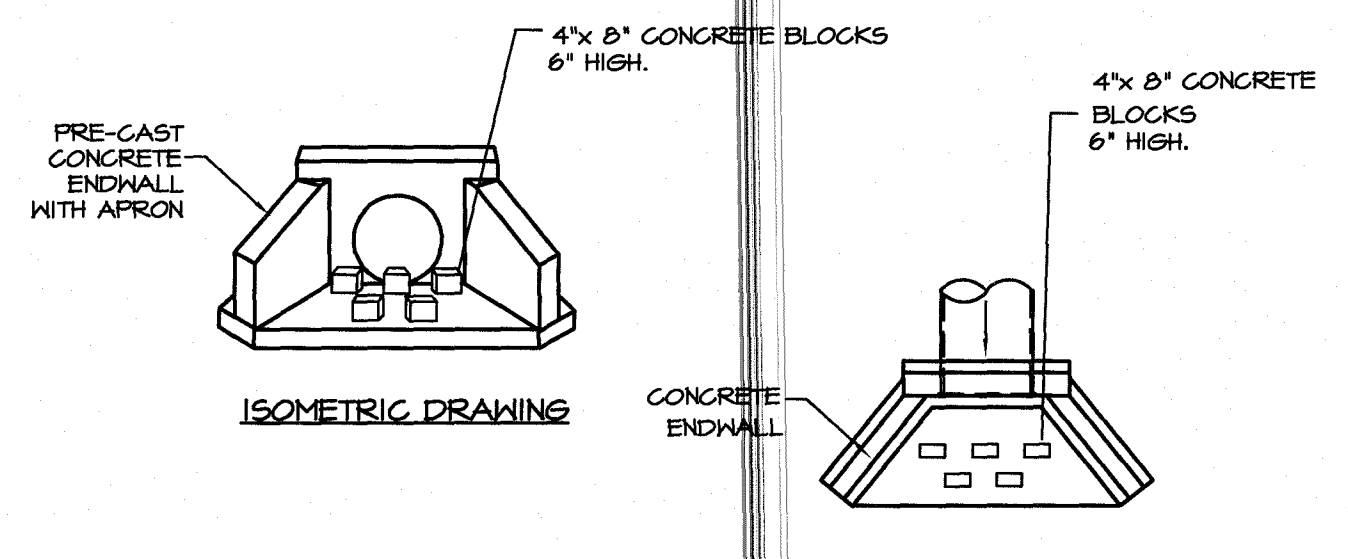
STORMWATER MANAGEMENT PLAN
SUBJECT:
EASEMENT PLAN
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

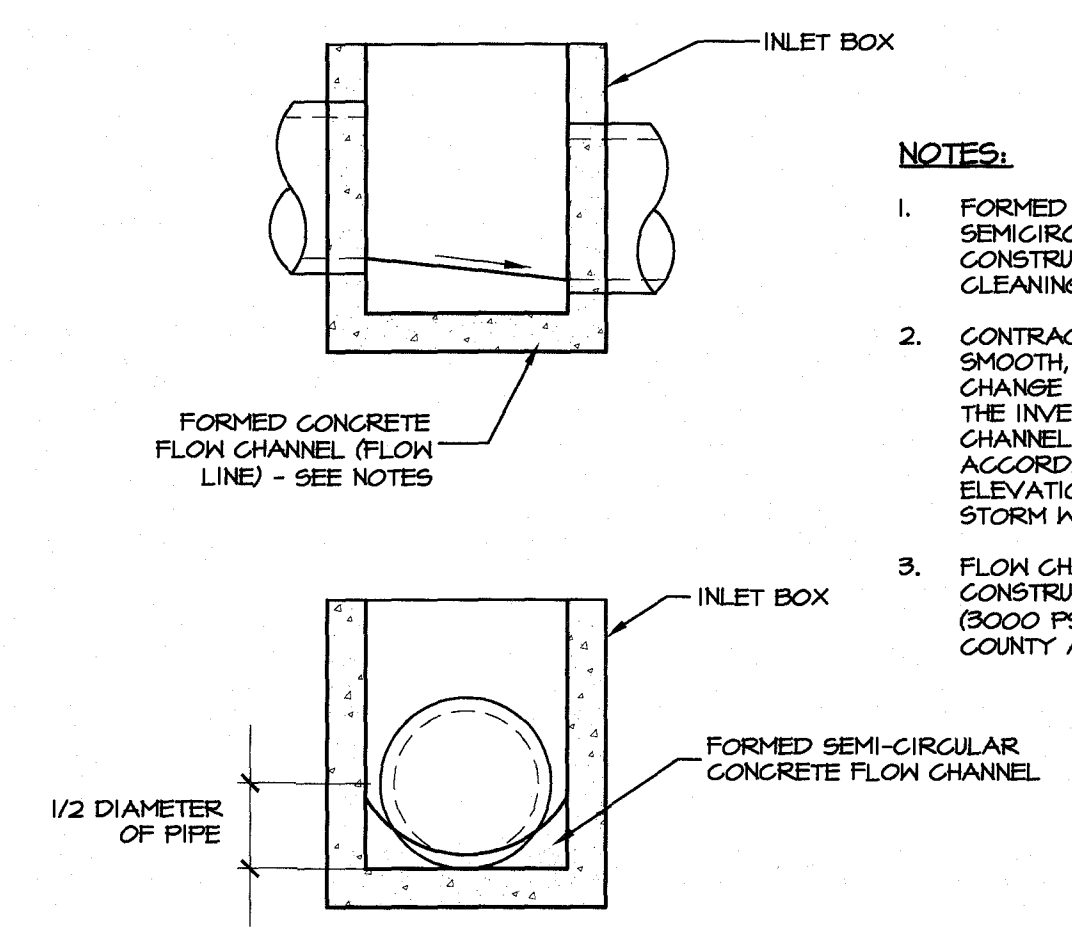
MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO:	953-028
DRAWN BY:	TRS	SCALE:	1" = 50'

DRAWING NO.
8 of 17

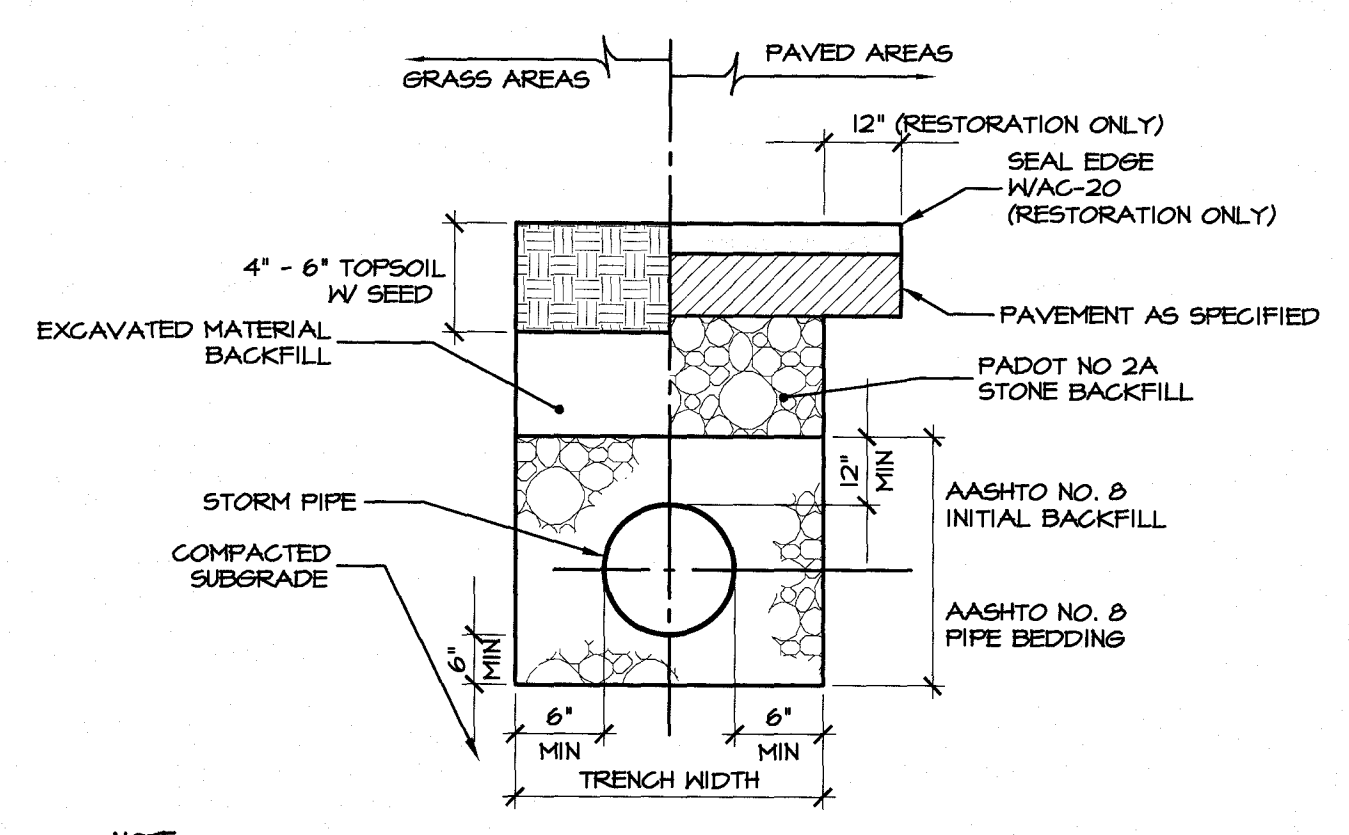
Lancaster RD Ann R. Hess, Esq.
2025-0723-J 05/28/2025 03:23 PM
Page 9 of 18



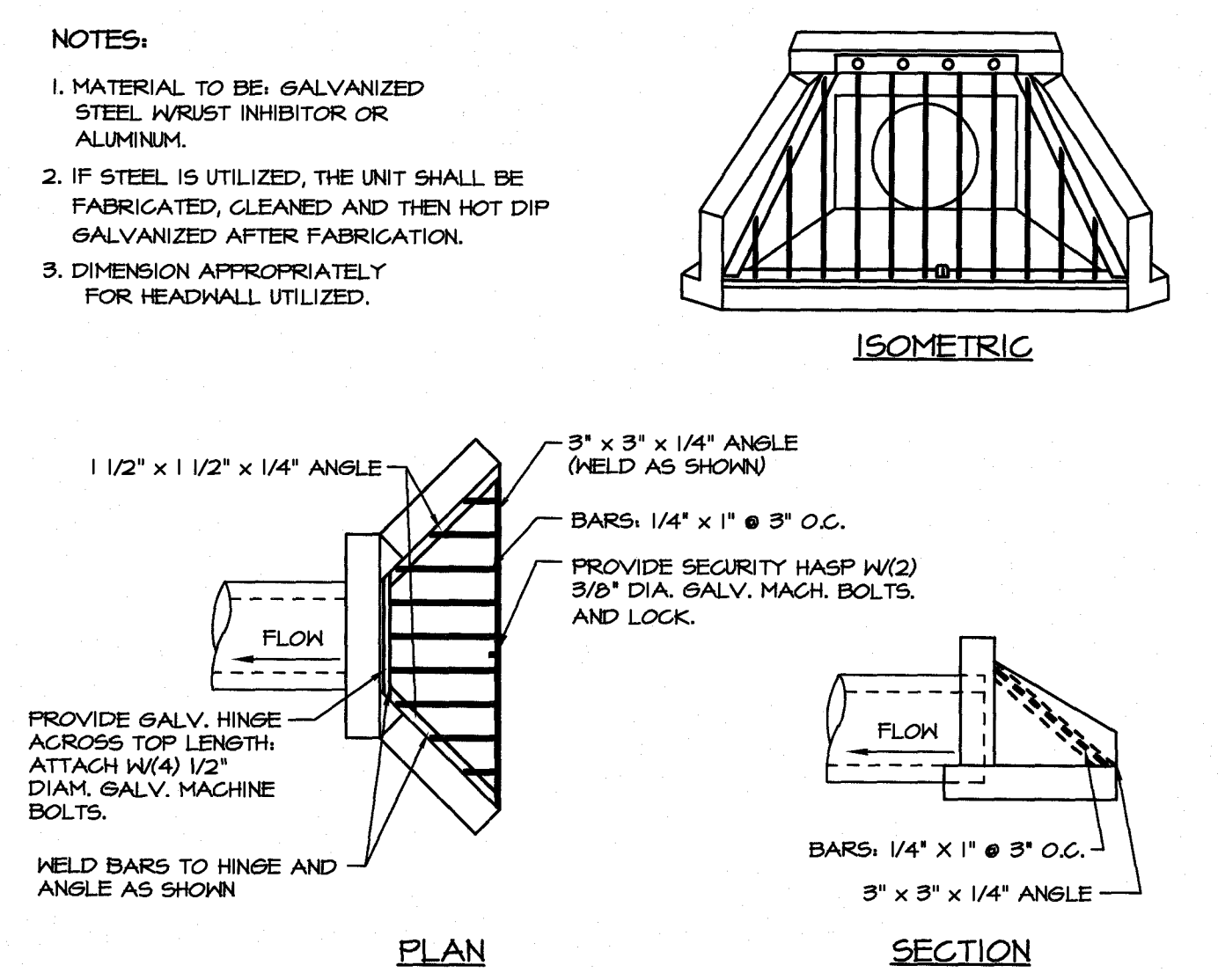
A TYPE 'DW' PRECAST ENDWALL W/ ENERGY DISSIPATER BLOCKS
NO SCALE



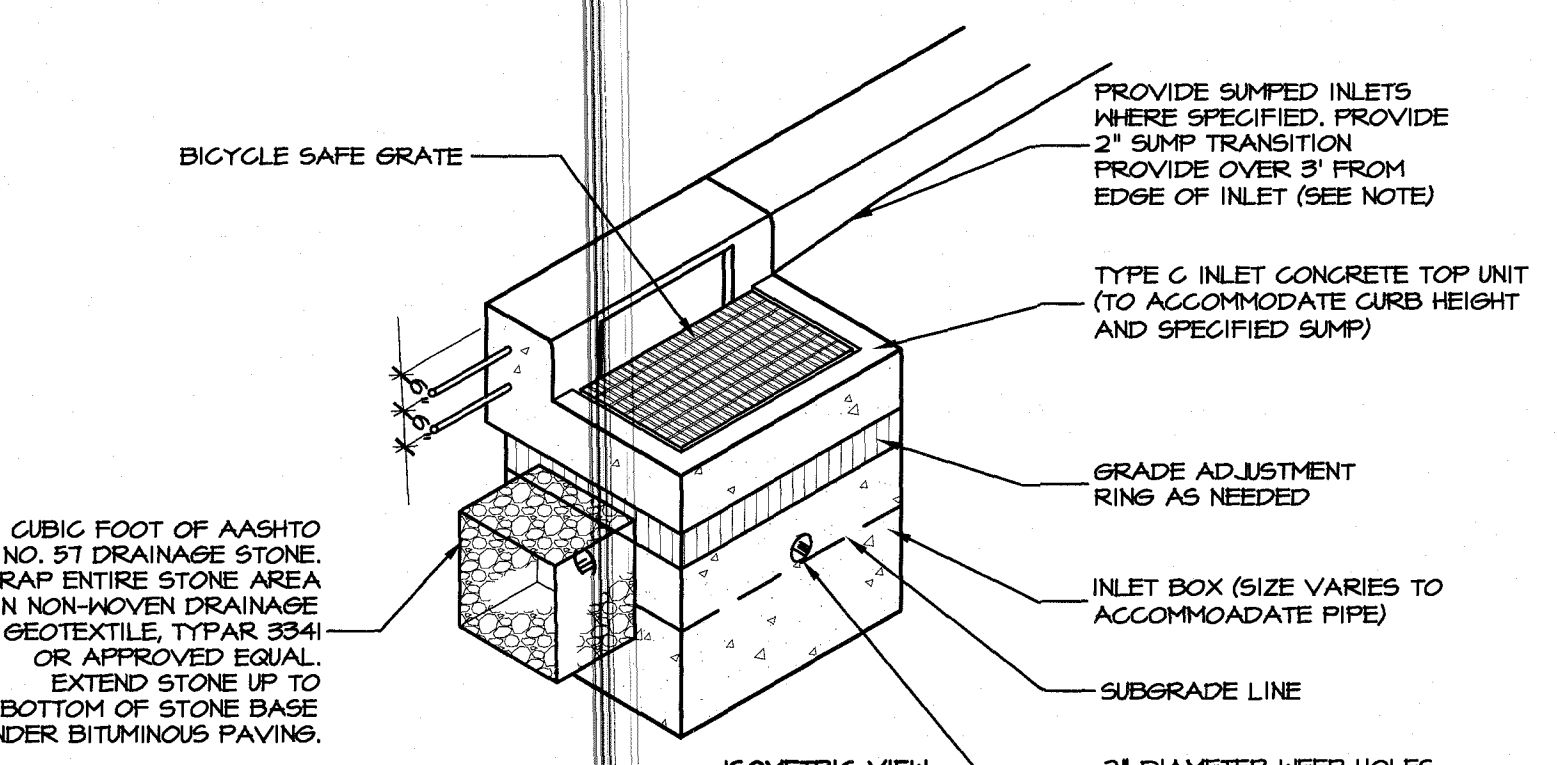
B CATCH BASIN FLOW CHANNEL
NO SCALE



C STORM/ROOF PIPE TRENCH DETAIL
NO SCALE



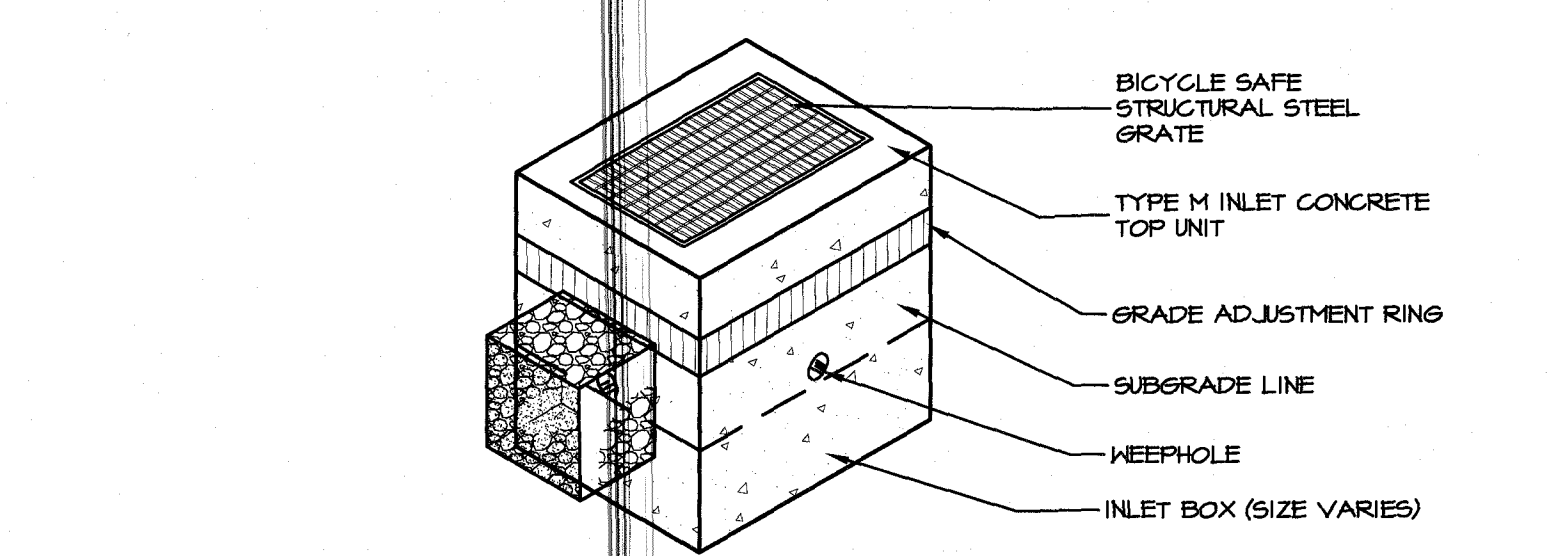
D TRASH RACK DETAIL (HEADWALLS ONLY)
NO SCALE



PA DOT TYPE 'C' INLET

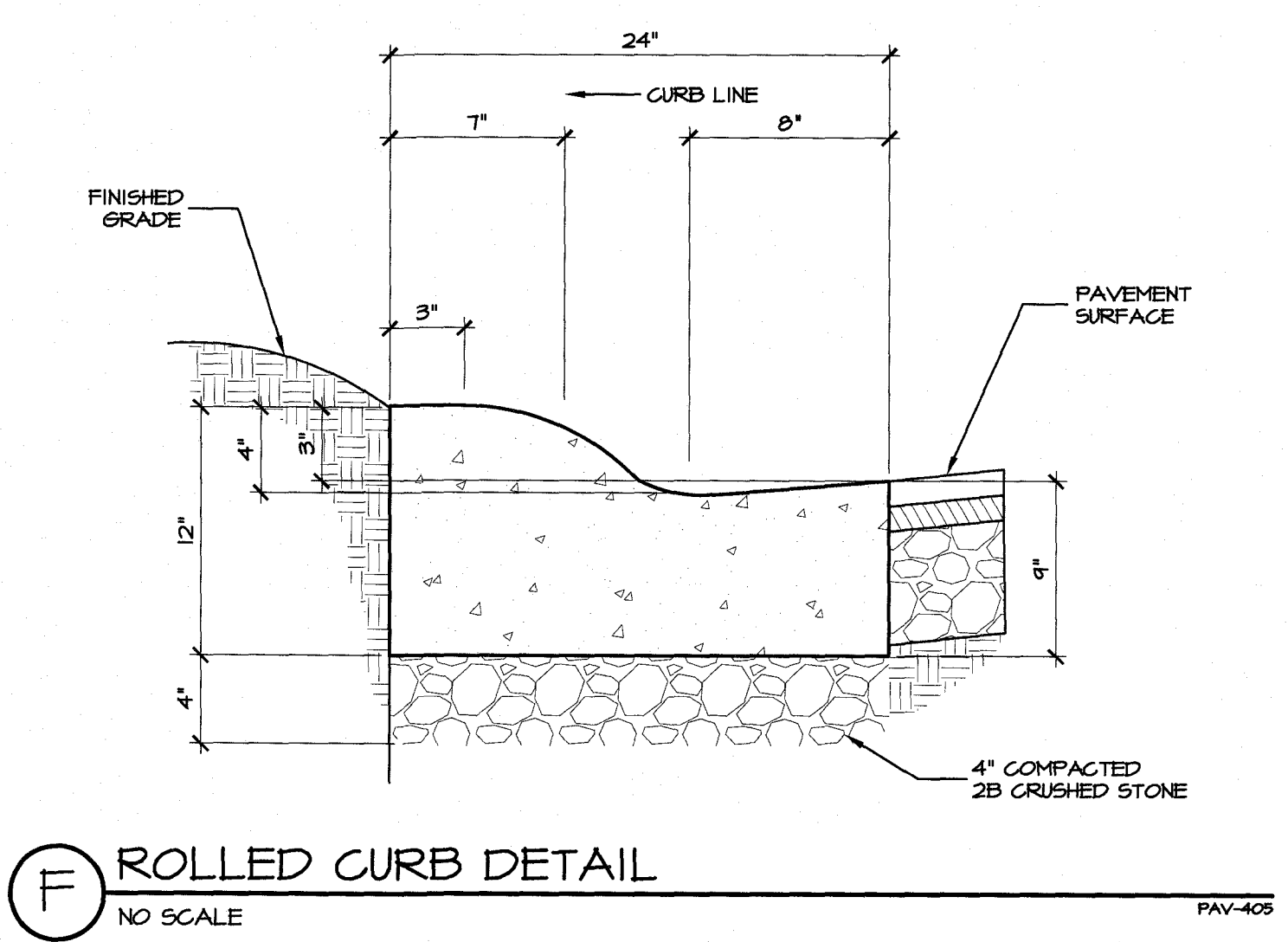
INLET NOTES:

- MATERIAL AND CONSTRUCTION BASED UPON PENNDOT STANDARDS AND SPECIFICATIONS. ALL CONSTRUCTION SHALL BE IN GENERAL ACCORDANCE WITH PA DOT PUBLICATION 40B, SECTION 605 & APPLICABLE PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION PERTAINING TO INLET STRUCTURES.
- THIS DETAIL DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO 15 WILL BE PERMITTED.
- INLETS WITHIN THE PENNDOT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH PENNDOT ROADWAY CONSTRUCTION STANDARDS, LATEST REVISION, AND AS PER APPROVED PENNDOT HIGHWAY OCCUPANCY PERMIT PLANS.
- INLETS WITHIN A MUNICIPAL ROADWAY/RIGHT OF WAY SHALL BE APPROVED BY THE MUNICIPALITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES, MATERIAL AND ALIGNMENT PRIOR TO ORDERING PRE CAST STRUCTURES.
- CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
- WHenever an inlet is required within a mountable curb section, a type M inlet will be located adjacent to the back edge of the curb and will be flush with the pavement surface. SEE PA DOT RC-65 FOR INSTALLATION DETAILS.
- THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
- PIPES SHALL BE LOCATED AS REQUIRED.
- WEEP HOLES SHALL BE INSTALLED IN INLET BOXES WITHIN PAVED AREAS TO PERMIT DRAINAGE OF THE PAVEMENT SUBBASE, UNLESS OTHERWISE APPROVED.
- USE PRE CAST CONCRETE GRADE ADJUSTMENT RINGS FOR FINAL GRADE. BRICKS, BLOCKS, MORTAR, ETC. ARE NOT PERMITTED AS GRADE ADJUSTMENTS.
- INLET BOX SHALL BE PRE CAST CONCRETE, UNLESS OTHERWISE SPECIFIED OR APPROVED.
- ALL ON-SITE INLETS SHALL HAVE TOP UNITS TO MATCH CURB REVEAL AND SPECIFIED SUMP.
- INLETS THAT ARE FIVE FOOT OR GREATER IN DEPTH SHALL HAVE POLYPROPYLENE ENCASED MANHOLE STEPS INSTALLED.
- ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS OTHERWISE NOTED (SUCH AS SNOTS, WATER QUALITY INLETS, DESIGNATED SEDIMENT STORAGE, ETC.) ON THE PLANS.
- PROVIDE PRECAST OPENINGS IN THE INLET BOX FOR ALL ROOF LEADER DRAINAGE CONNECTIONS, UNLESS OTHERWISE APPROVED. PROVIDE OPENINGS TO THE INLET BOX AT THE REQUIRED ELEVATIONS AND LOCATION. ALL CONNECTIONS SHALL BE WATERTIGHT.
- PROVIDE PRE-CAST OPENINGS IN THE INLET BOX TO ACCOMMODATE ROADWAY, PARKING, AND BUILDING UNDERDRAINS WHERE SPECIFIED ON THE PLANS.
- A 2' SUMP ON TYPE 'C' INLETS SHALL BE PROVIDED WHERE NOTED ON THE STORMWATER PIPE PROFILES. THE 2' SUMP TRANSITION ALONG CURB GUTTER LINE SHALL BE ADJUSTED ACCORDINGLY FOR FIELD CONDITIONS, ADA REQUIREMENTS, AND/OR AS SPECIFIED/DETAILED ON THE PLANS.
- FINAL INLET TOP OF GRATE ELEVATION SHALL BE ADJUSTED TO ACCOUNT FOR SPECIFIED ROAD GRADE.
- GROUT OPENINGS AROUND PIPE CONNECTIONS TO PROVIDE A WATERTIGHT JOINT. USE NON-SHRINK GROUT ON INSIDE & OUTSIDE OF STRUCTURE.
- ALL JOINTS ADJACENT TO BITUMINOUS PAVING SHALL BE SEALED WITH P664-22.
- PROVIDE 2'x6' INLET BOXES, DOUBLE 2'x4' BOXES, ETC. WHERE NOTED ON THE PLAN.
- CONSULT THE PLANS FOR ANY SPECIFIC SUMP REQUIREMENTS FOR TYPE 'M' INLETS LOCATED IN A SAG CONDITION.

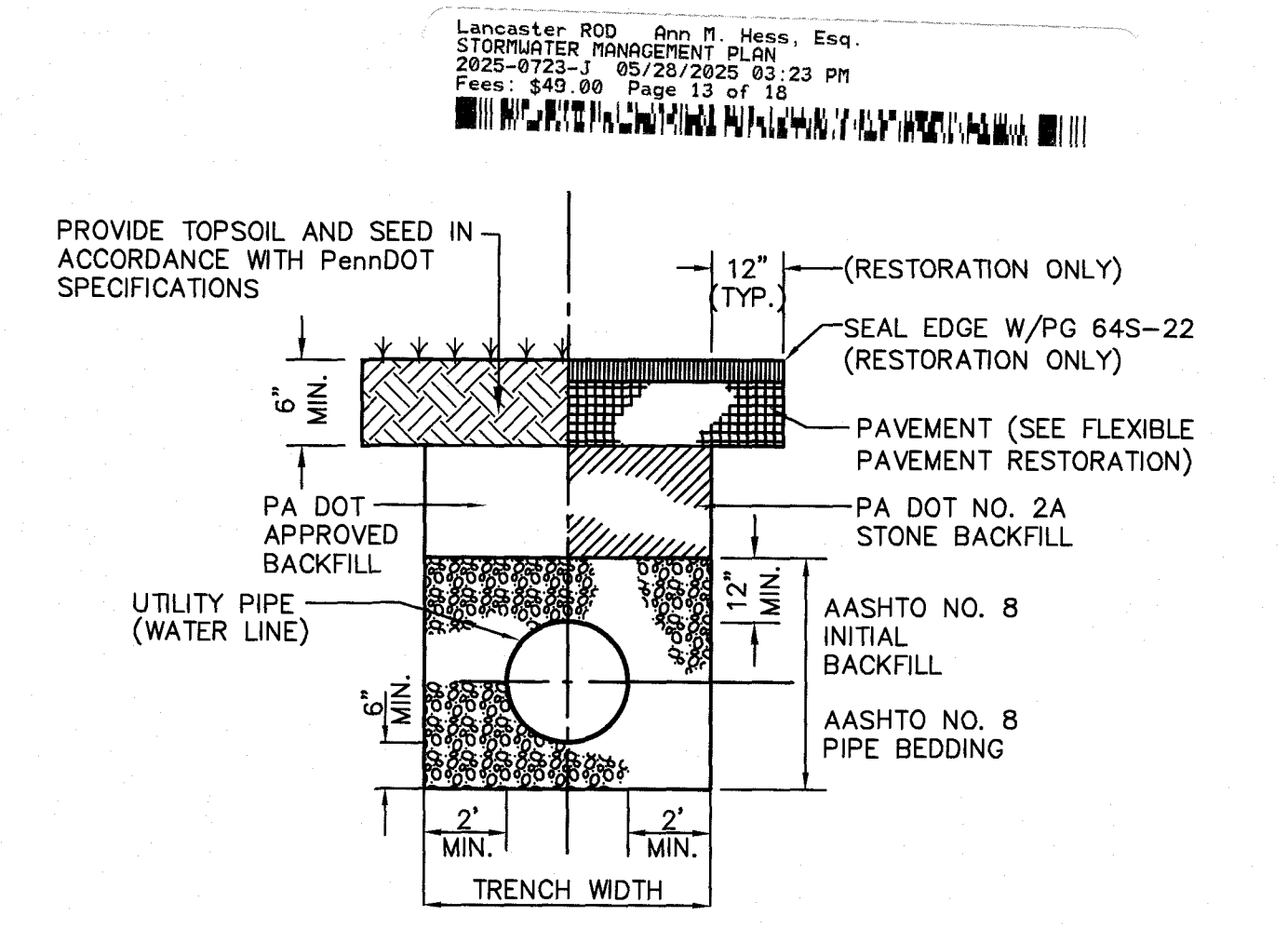


PA DOT TYPE 'M' INLET

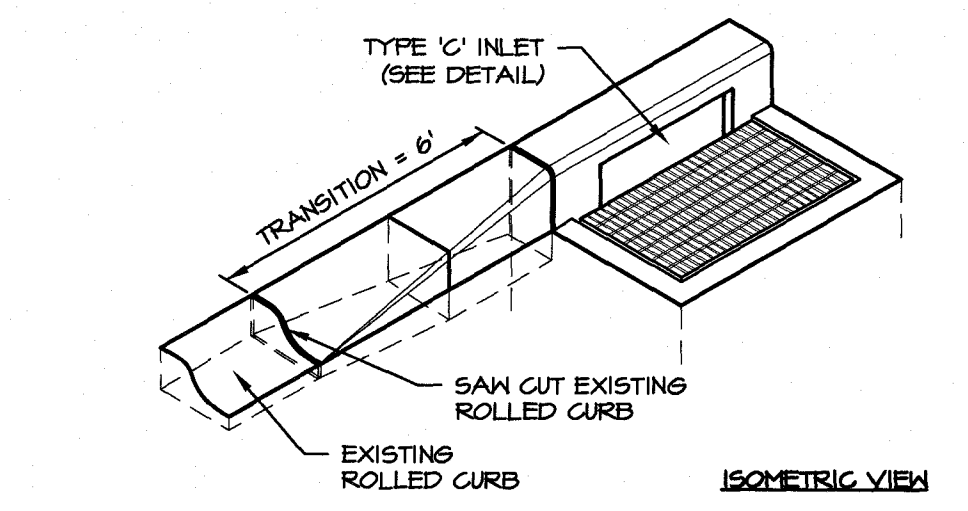
E PA DOT TYPE STORMWATER INLETS (TYPE 'C' & 'M')
NO SCALE



F ROLLED CURB DETAIL
NO SCALE



H PIPE TRENCH RESTORATION DETAIL
NO SCALE



G ROLLED CURB TO TYPE 'C' INLET TRANSITION DETAIL
NO SCALE

REVISIONS PER.	DATE	BY:
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-

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REGISTERED PROFESSIONAL ENGINEER
DERRICK JAMES MUSSER
POST CONSTRUCTION STORMWATER MANAGEMENT

STORMWATER MANAGEMENT PLAN
SUBJECT:
STORMWATER DETAILS
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

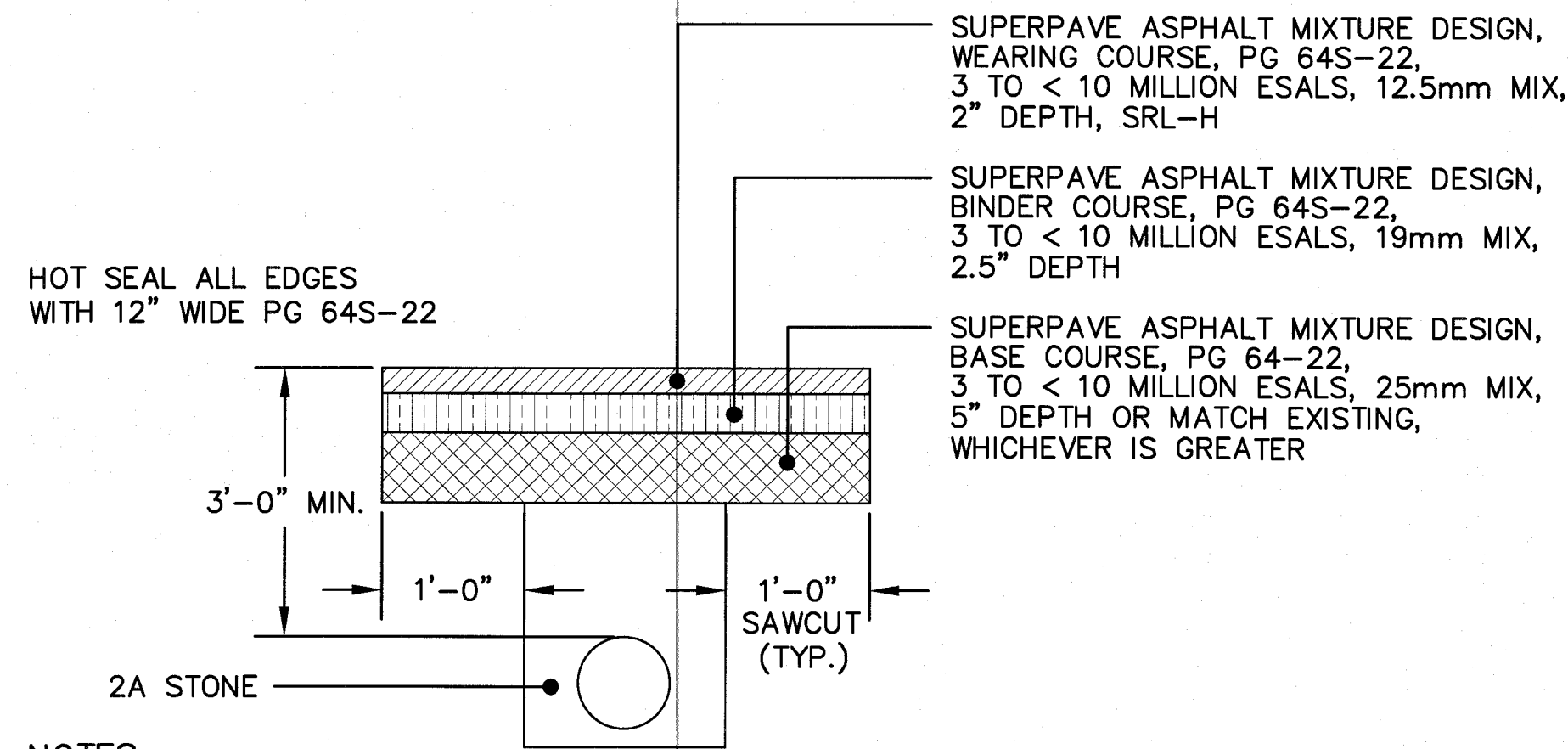
MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO.	953-028
DRAWN BY:	TRS	SCALE:	AS SHOWN

DRAWING: c:\Users\trscawjen\OneDrive\Documents\Projects\Storm Improvements\Project Files\CAD Data\Land Development\DETAILS.dwg - PLOTTED: Apr 24, 2025 10:35 am

EXISTING SR 0741 PAVEMENT HISTORY FROM PENNDOT

- 1.50" ID-2 WEARING, 36' (2000)
- 0.50" ID-2 SCRATCH WEARING, 36' (2000)
- 1.00" FJ-1 WEARING, 36'
- 1.00" UNKNOWN WEARING, 29' (1900)

TOTAL PAVED: 4.00"
TOTAL DEPTH: 4.00"



NOTES:

1. EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB 408, SECT. 409.3(g)
2. MINIMUM 1' PAVEMENT CUTBACK, EXCAVATE OLD AND TEMPORARY MATERIAL RECOMPACT SUB-GRADE, TACK COAT ALL VERTICAL EDGES. INSTALL ONLY BASE COURSE AND BINDER COURSE IN ONE DAY.
3. MATCH EXISTING DEPTHS IF GREATER

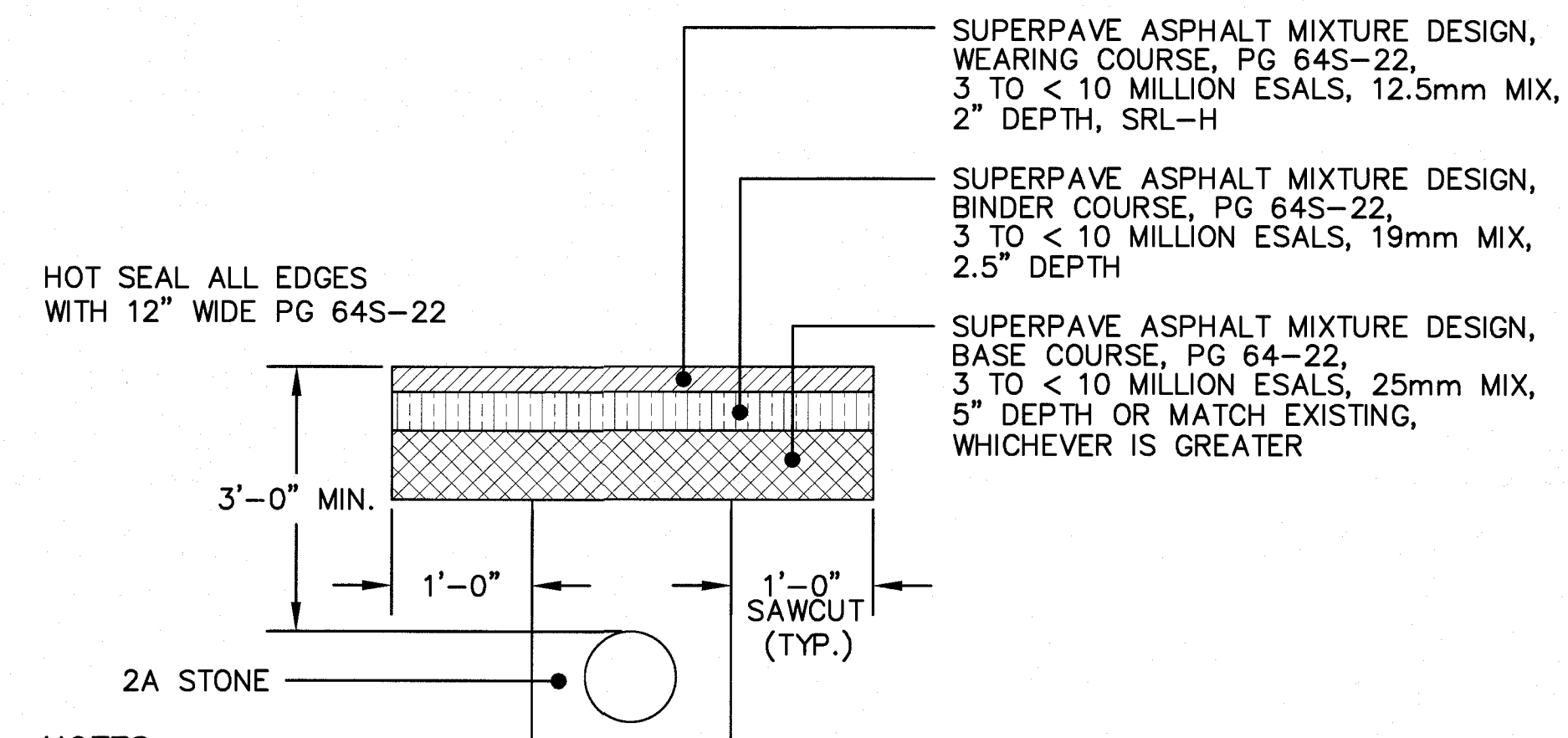
SR 0741 FLEXIBLE PAVEMENT RESTORATION DETAIL

NOT TO SCALE

EXISTING SR 2015 PAVEMENT HISTORY FROM PENNDOT

- 1.50" SUPERPAVE HMA WEARING, 64-22, 9.5mm, SRL-G, 24' (2006)
- 0.75" SUPERPAVE HMA WEARING SCRATCH, 9.5mm, 24' (2006)
- 2.50" ID-2 WEARING, 24' (1997)
- 3.00" FB-1 WEARING, 20' (1979)
- 8.00" CRUSHED AGGREGATE BASE, 3' (1979)
- 2.50" FB-1 WEARING, 16' (1964)
- 2.00" UNKNOWN WEARING, 16' (1931)

TOTAL PAVED: 12.25"
TOTAL DEPTH: 12.25"

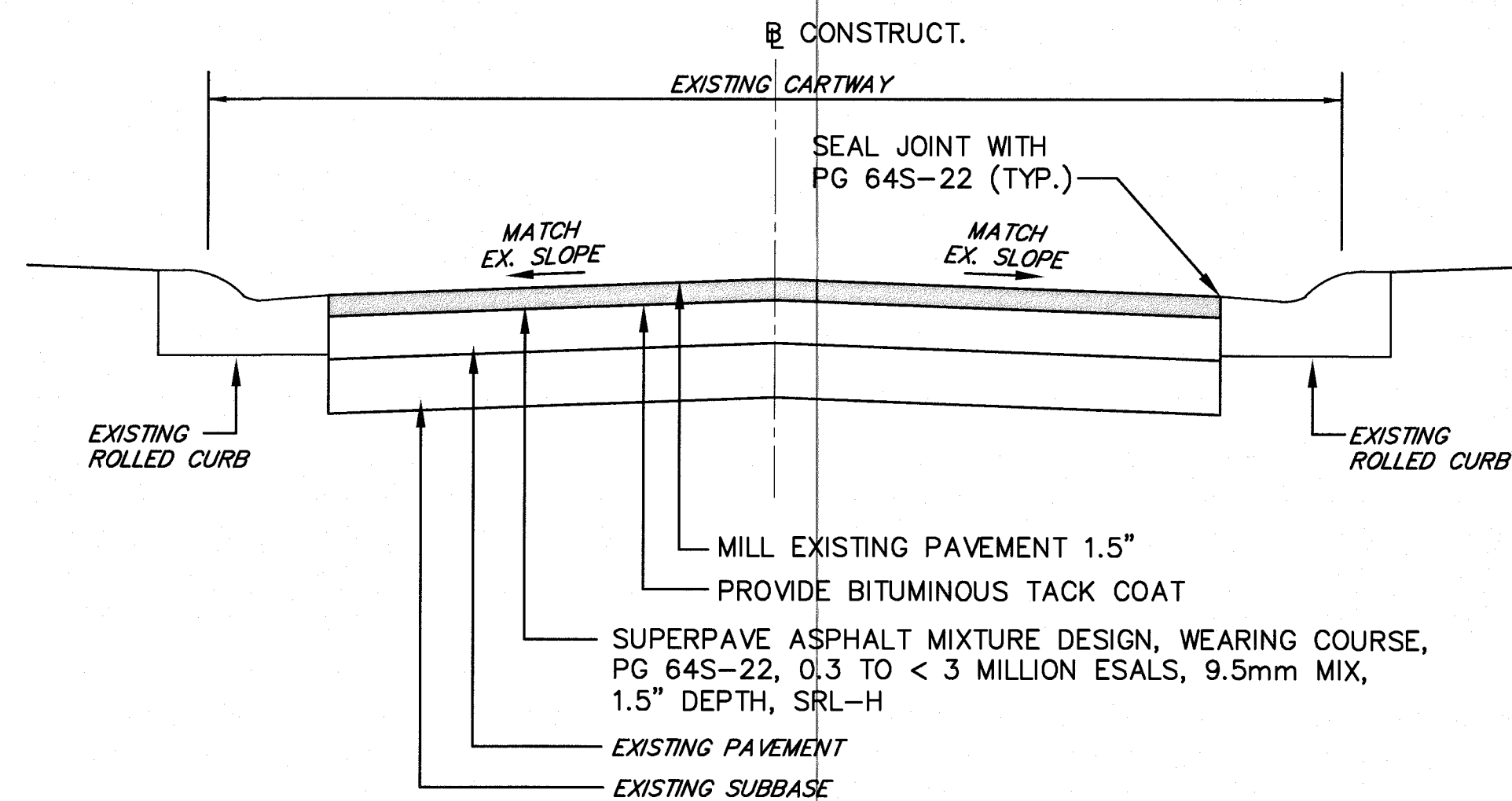


NOTES:

1. EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB 408, SECT. 409.3(g)
2. MINIMUM 1' PAVEMENT CUTBACK, EXCAVATE OLD AND TEMPORARY MATERIAL RECOMPACT SUB-GRADE, TACK COAT ALL VERTICAL EDGES. INSTALL ONLY BASE COURSE AND BINDER COURSE IN ONE DAY.
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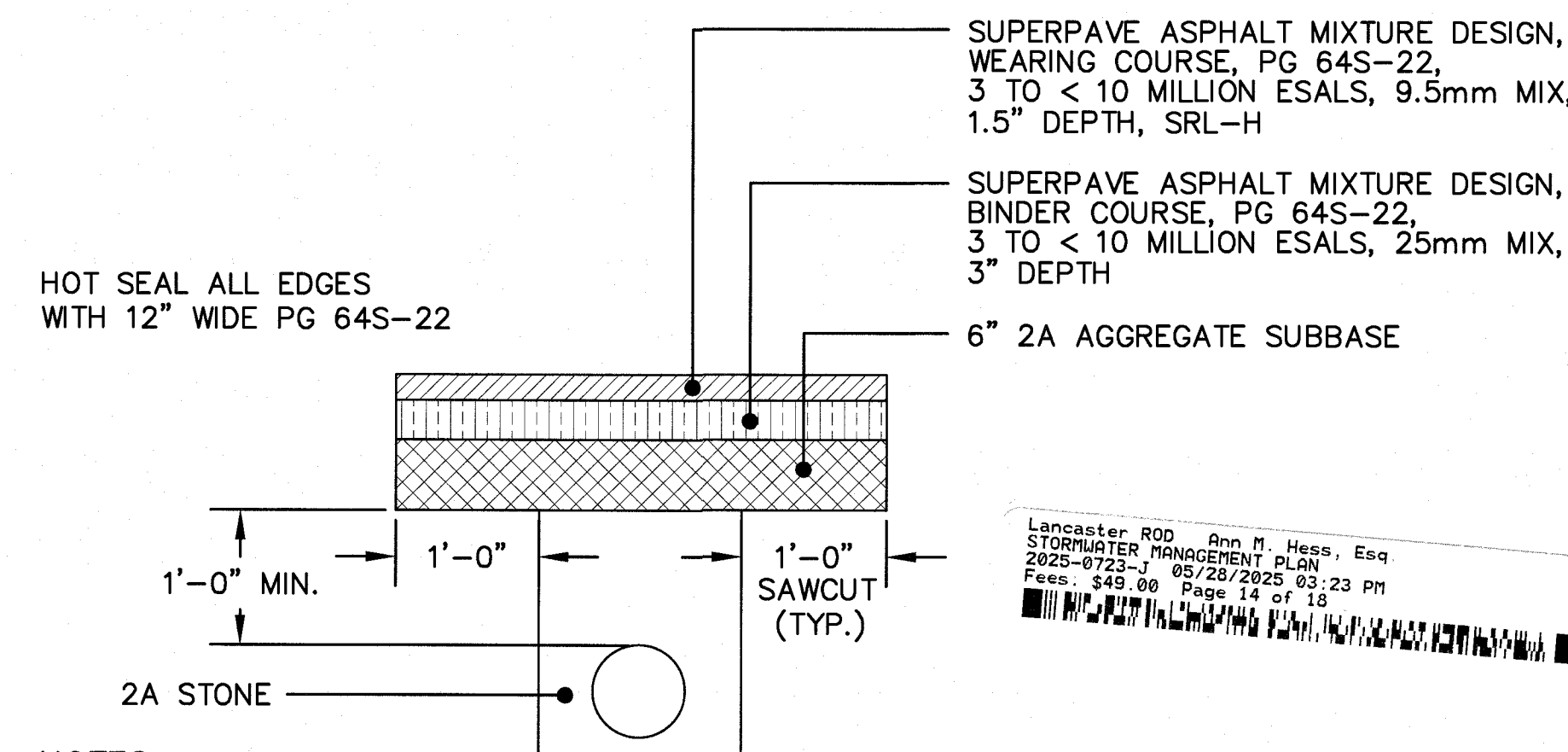
SR 2015 FLEXIBLE PAVEMENT RESTORATION DETAIL

NOT TO SCALE



BOROUGH STREET - MILL & OVERLAY DETAIL

NO SCALE



NOTES:

1. EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB 408, SECT. 409.3(g)
2. MINIMUM 1' PAVEMENT CUTBACK, EXCAVATE OLD AND TEMPORARY MATERIAL RECOMPACT SUB-GRADE, TACK COAT ALL VERTICAL EDGES. INSTALL ONLY BASE COURSE AND BINDER COURSE IN ONE DAY.
3. MATCH EXISTING DEPTHS IF GREATER

BOROUGH STREET - FLEXIBLE PAVEMENT RESTORATION DETAIL

NOT TO SCALE

REVISIONS PER	DATE	BY
1. REVISED PER LOCD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-

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REGISTERED PROFESSIONAL ENGINEER
DERRICK JAMES MUSSER
No. PE084418

POST CONSTRUCTION STORMWATER MANAGEMENT

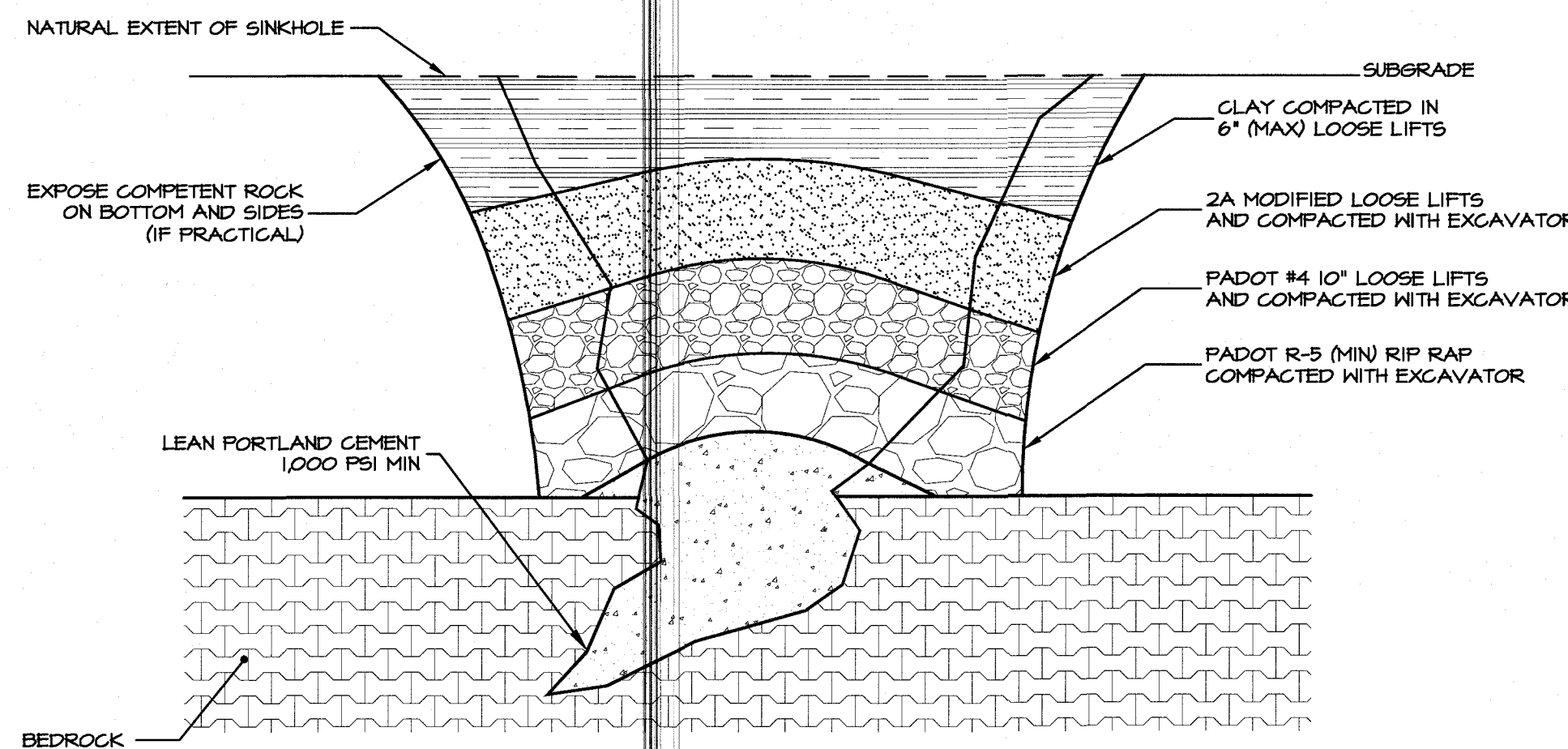
STORMWATER MANAGEMENT PLAN
SUBJECT:
BOROUGH ROADWAY DETAILS
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO:	953-028
DRAWN BY:	TRS	SCALE:	AS SHOWN

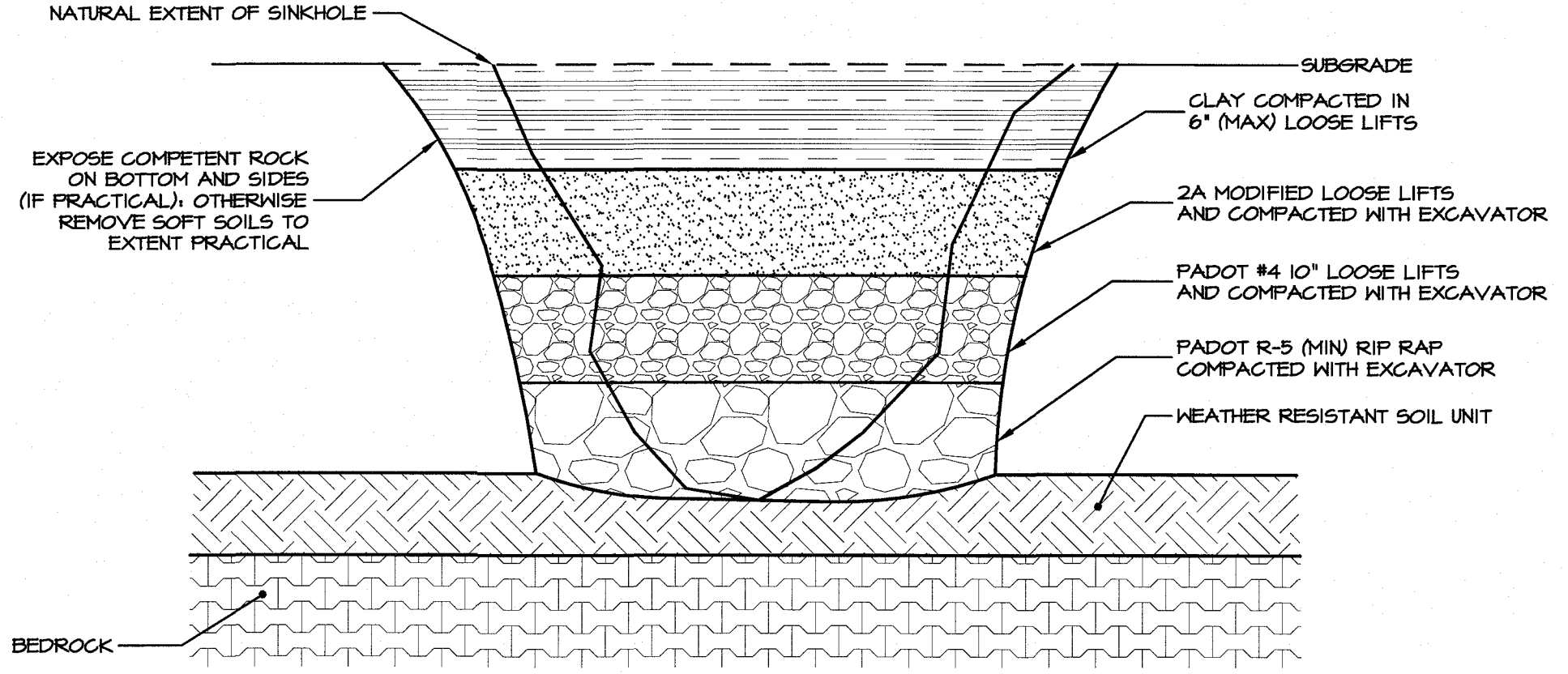
DRAWING NO.
13 of 17

DRAWING: C:\Users\rsouyer\Documents\DCACCDocs\ELIA_Group\Improvements\Project_Files\CAD Data\Land_Development\DETAILS.dwg - PLOTTED: Apr. 24, 2025 10:35 am



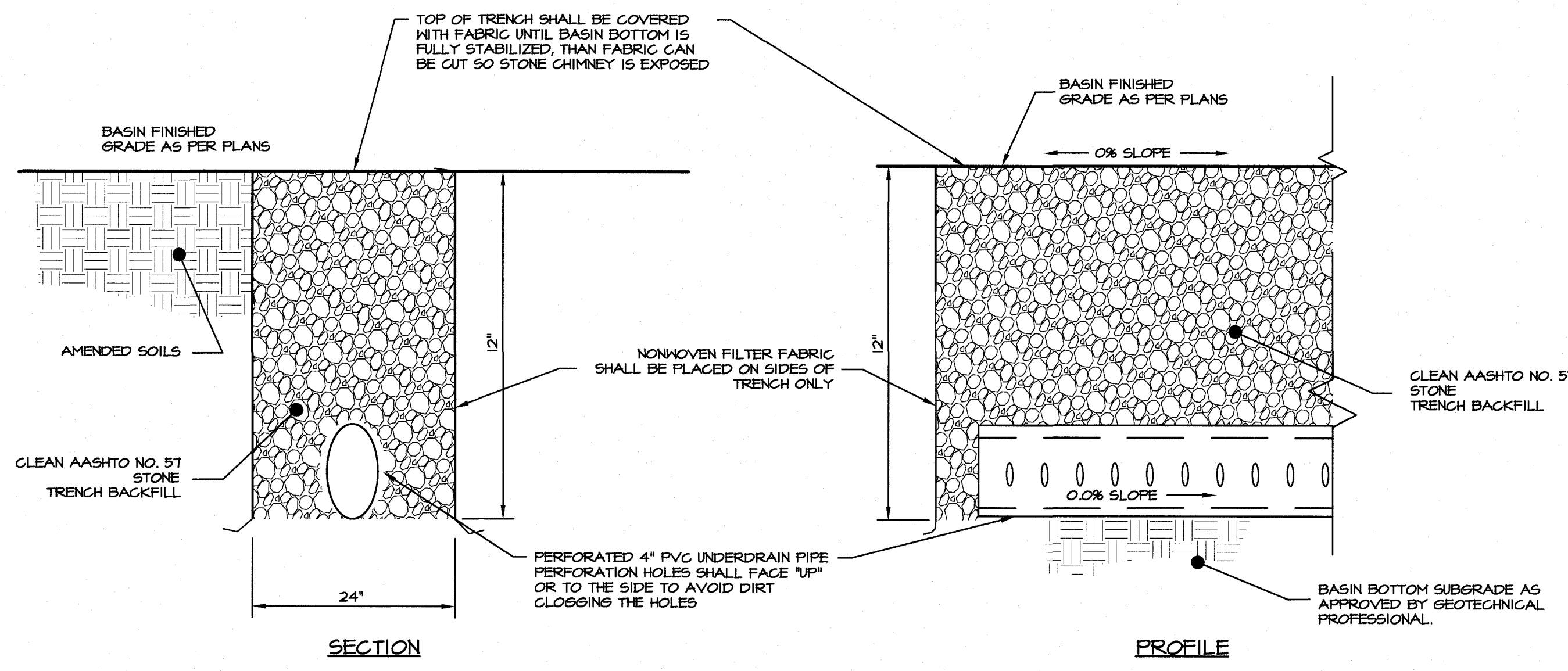
NOTES:
 1. SINKHOLE MITIGATION MEASURES SHOULD BE APPROVED BY A PA LICENSED GEOLOGIST OR ENGINEER PRIOR TO IMPLEMENTATION
 2. EXAMPLE MITIGATION PRESENTED FOR SINKHOLES NOT NEAR SURFACE STRUCTURES AND/OR STRUCTURAL SUPPORT.
 3. THICKNESS OF BACKFILL MATERIAL WILL VARY BASED ON SITE CONDITIONS. IT IS SUGGESTED THAT A PA LICENSED GEOLOGIST BE CONSULTED PRIOR TO MITIGATION

A SINKHOLE REPAIR DETAIL - THROAT ENCOUNTERED
NO SCALE



NOTES:
 1. SINKHOLE MITIGATION MEASURES SHOULD BE APPROVED BY A PA LICENSED GEOLOGIST OR ENGINEER PRIOR TO IMPLEMENTATION
 2. EXAMPLE MITIGATION PRESENTED FOR SINKHOLES NOT NEAR SURFACE STRUCTURES AND/OR STRUCTURAL SUPPORT.
 3. THICKNESS OF BACKFILL MATERIAL WILL VARY BASED ON SITE CONDITIONS. IT IS SUGGESTED THAT A PA LICENSED GEOLOGIST BE CONSULTED PRIOR TO MITIGATION

B SINKHOLE REPAIR DETAIL - NO THROAT ENCOUNTERED
NO SCALE



C STONE DEWATERING TRENCH BASIN AND UNDERDRAIN DETAIL
NO SCALE

1 1/2", 2", 3", 4", 6", & 8" Valterra Gate Valves
Inexpensive valve for industrial, agricultural, and commercial markets.

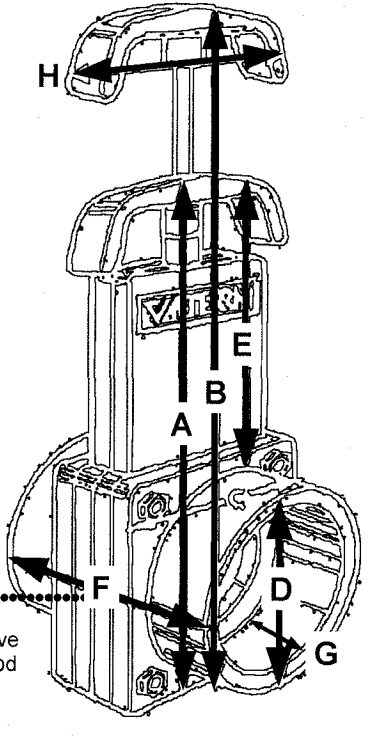
- Must provide a stable base, and installation using flexible couplers is recommended.
- Well suited as a drain valve to tanks.
- Attaches to SCH40 PVC pipe.
- Unrestricted flow.
- Quick opening.
- Trouble-free simplicity.
- 100% water tested at factory.
- Quick shutoff in low pressure or vacuum lines.
- Other sizes available.

Materials and Specifications

	1 1/2"	2"	3"	4"	6"/8"
Color	White	White	White	White	White
Hubs	PVC	PVC	PVC	PVC	PVC
Body	PVC	PVC	PVC	PVC	ABS
Shaft	304SS	304SS	304SS	304SS	304SS
Paddle	Polypro	304SS	304SS	304SS	304SS
Handle	Plastic	Plastic	Plastic	Die Cast Aluminum	304SS
Seals	Sarlink	Sarlink	Sarlink	Sarlink	Sarlink
Max PSI Open/Closed	30/45	20/40	15/15	15/15	6/10

Dimensions and Hub Depth

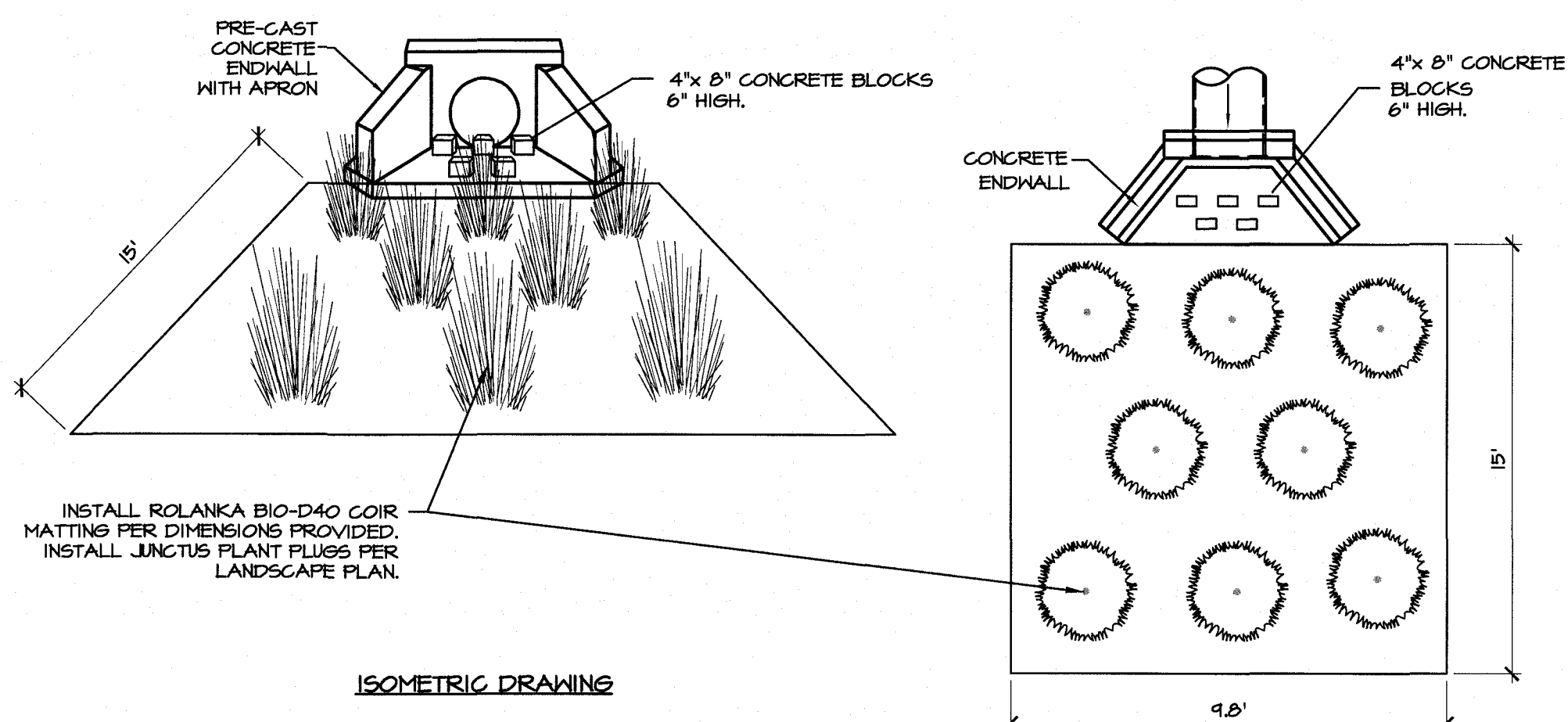
	1 1/2"	2"	3"	4"	6"	8"
A	6.5"	7.5"	9.25"	13.25"	22.75"	22.75"
B	8.625"	10.25"	13"	18"	31.125"	31.125"
C	2.896"	3.37"	4.37"	6.665"	11.1"	11.1"
D (Stub I.D.)	1.913"	2.387"	3.516"	4.518"	6.647"	8.655"
E	3.9375"	4.5"	5.1875"	7.4375"	13.25"	12.1875"
F	3.375"	3.5"	4.5"	5.1875"	11.125"	13.75"
G	1.25"	1.6"	1.8"	1.7"	4.375"	5.67"
H	3.25"	3.25"	3.25"	3.25"	3.5"	3.5"



Extension Rods for Valterra Gate Valves

- Handle threads onto stub.
- Extension Rod for 6"-8" Valve
- Can attach multiple extensions together to achieve greater height.

D VALTERRA GATE VALVES FOR BASIN UNDERDRAIN CONTROL
NO SCALE



E NATURALIZED PIPE OUTLET / ENERGY DISSIPATION DETAIL
NO SCALE

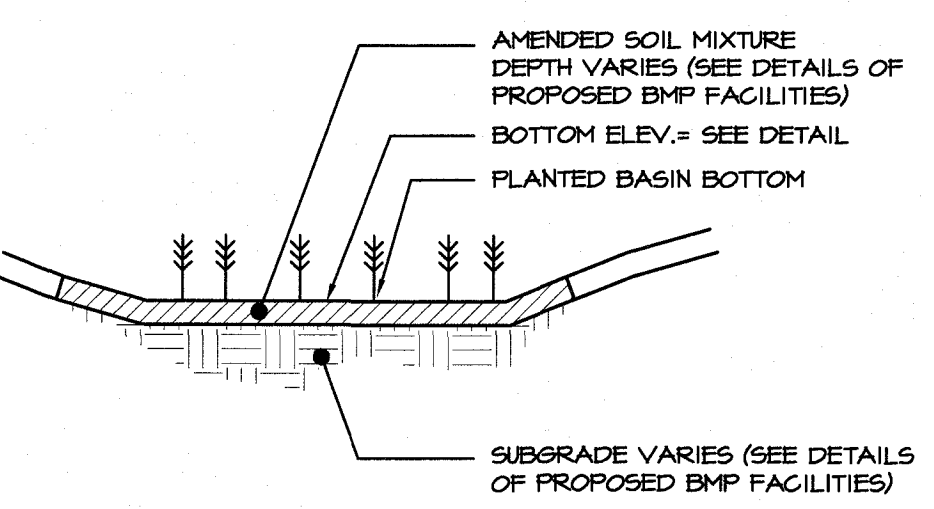
AMENDED SOIL MIXTURE

NO ON-SITE MATERIALS OR MIXING IS PERMITTED.

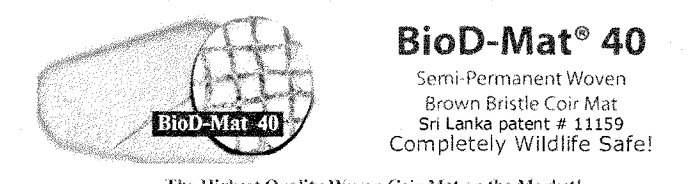
- PROVIDE PRE-MIXED AMENDED SOIL BLEND WITH THE FOLLOWING COMPOSITION:
- 65% SCREENED CLEAN TOPSOIL
 - 25% ASTM C-39 WASHED CONCRETE SAND (STONE DUST NOT PERMITTED)
 - 10% LEAF BASED COMPOST (MEETING PA-DEP'S COMPOST STANDARDS)

NO ON-SITE MATERIALS OR MIXING IS PERMITTED.

THE CONTRACTOR SHALL SUBMIT AN AMENDED SOIL SHOP DRAWING TO ELA GROUP FOR REVIEW PRIOR TO ORDERING. THE SHOP DRAWING SHALL SPECIFY THE SUPPLIER, THE PRE-MIX BLEND (INCLUDING COMPOSITION), SHALL PROVIDE LAB RESULTS FOR SOIL POROSITY, A PARTICLE SIZE ANALYSIS, AND SAND SIEVE SIZE ANALYSIS, AND INDICATE THE QUANTITY TO BE ORDERED.



F BMP AMENDED SOIL MIX AND SEEDING INSTRUCTIONS
NO SCALE



Bio-Mat® 40
Semi-Permanent Woven Brown Bristle Coir Mat
Sp. Length: 11159
Completely Wildlife Safe!

Description
The Bio-Mat 40 blanket is woven from machine-braided bristle coir twines, the best quality coir fiber. This 100% biodegradable, strong and durable blanket provides higher erosion resistance while supporting growth and development of vegetation. These semi-permanent mats have a functional life expectancy of 4 years. If the vegetation fails to establish, the open weave in the mat allows seeding over the mat. Bio-Mat 40 blankets are manufactured to conform to the following physical properties:

Specifications	Test Method	Bio-Mat 40
Weight	ASTM D 3776	13.6 oz/SY (460 g/m ²)
Wide-width tensile strength Wet	ASTM D 4959	672 lbs/foot (9.8 kN/m)
Machine direction		648 lbs/foot (9.8 kN/m)
Cross direction		
Wide-width tensile strength Dry	ASTM D 4959	780 lbs/foot (11.4 kN/m)
Machine direction		748 lbs/foot (10.8 kN/m)
Cross direction		
Elongation at failure Wet	ASTM D 4959	20%
Machine direction		28%
Cross direction		65%
Open area	Calculated	65%
Thickness	ASTM D 1727	0.35 inch (9 mm)
Recommended shear stress		3 lbs./sq. ft. (145 N/m ²)
Recommended flow		8 lbs./24 in. (2.1)
Recommended slope		2:1
Minimum tensile count per foot (40 x 40)		15 x 14

Bio-Mat 40 is available in following roll sizes:
 6.5m x 1.66m (21500' x 2m x 5.5m (150 sq. m))
 9.8m x 1.66m (29500' x 2m x 5.5m (150 sq. m))
 13.1m x 0.9m (22000' x 4m x 2.5m (100 sq. m))

Rolanka International, Inc.
155 Andrew Drive, Stockbridge, GA 30281
1-800-962-9325
Tel: 770-508-9233 Fax: 770-508-0915
Email: rolanka@rolanka.com
www.rolanka.com
DOT 08E Certified

SEEDING SPECIFICATION FOR BMP BASINS

1. THE BASIN BOTTOMS, ONCE PLANTED, MUST BE MAINTAINED TO PERMANENTLY ESTABLISH THE REQUIRED VEGETATION. MAINTENANCE MUST INCLUDE WATERING, WEEDING, OVER SEEDING, RESEEDING AND ALL OTHER REQUIRED MAINTENANCE.
2. THE SEED MIXTURE AND/OR PLUG PLANTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LANDSCAPE PLAN AND ASSOCIATED PLANTING SCHEDULE FOUND ON THE LANDSCAPE PLAN.
3. THE ENTIRE BASIN BOTTOM SHALL BE MATTED WITH Rolanka Bio-Mat 40, OR APPROVED EQUAL. PLUGS SHALL BE PLANTED DIRECTLY THROUGH THE OPENINGS IN THE MATTING AND SEEDING CAN OCCUR BEFORE OR AFTER MATTING IS PLACED.
4. IF AN ERSNT MIX IS SPECIFIED, A NURSE CROP SHALL ALSO BE PROVIDED WITH THE ERSNT MIX. IF PLANTING OCCURS BETWEEN MAY 1 AND AUGUST 31, 10 LB/ACRE OF JAPANESE MILLET SHALL BE INSTALLED. IF PLANTING IS OCCURS BETWEEN SEPTEMBER 1 AND APRIL 31, 30 LB/ACRE OF CEREAL RYE SHALL BE INSTALLED.
5. WHERE A PERMANENT EROSION CONTROL MATTING IS SPECIFIED WITHIN THE BMP SEEDING LIMITS (EMERGENCY SPILLWAYS, ETC), A THIN LAYER OF TOP SOIL SHALL BE PROVIDED OVER THE LINING PRIOR TO SEEDING TO ALLOW FOR A GERMINATION OF THE SEED MIX.

SOIL INSTALLATION & COMPACTION NOTES FOR BMP

1. CONTRACTOR TO SELECT EQUIPMENT TO MINIMIZE COMPACTION OF THE REQUIRED AMENDED SOILS WITHIN THE BMP AREA.
2. PLACE AMENDED SOIL MIXTURE AT 12" MAX. LIFTS. PRESOAK LIFTS WITH LIGHT WATERING TO ENCOURAGE NATURAL COMPACTION OR IF CONSTRUCTION SCHEDULE PERMITS, ALLOW FOR NATURAL SETTLEMENT WITH THE HELP OF RAIN EVENT TO PRESOAK THE SOIL MEDIUM.
3. THE CONTRACTOR SHALL BACKFILL AN APPROPRIATE AMOUNT ABOVE THE SPECIFIED BMP BOTTOM INVERT TO ACCOUNT FOR NATURAL SETTLEMENT.

REVISIONS PER:	DATE:	BY:
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-

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LITITZ, PA 17543
(717) 626-7271
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POST CONSTRUCTION STORMWATER MANAGEMENT

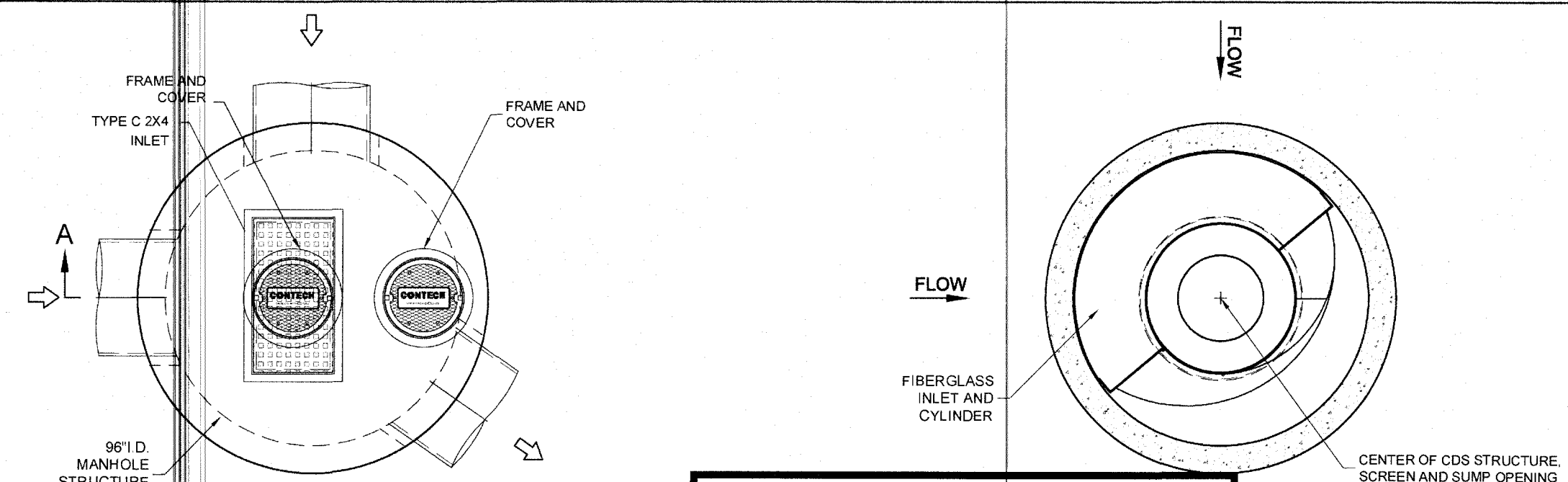
DERRICK JAMES MUSSER
REGISTERED PROFESSIONAL ENGINEER
No. PE004416

STORMWATER MANAGEMENT PLAN
SUBJECT: BMP BASIN CROSS SECTION & DETAILS
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

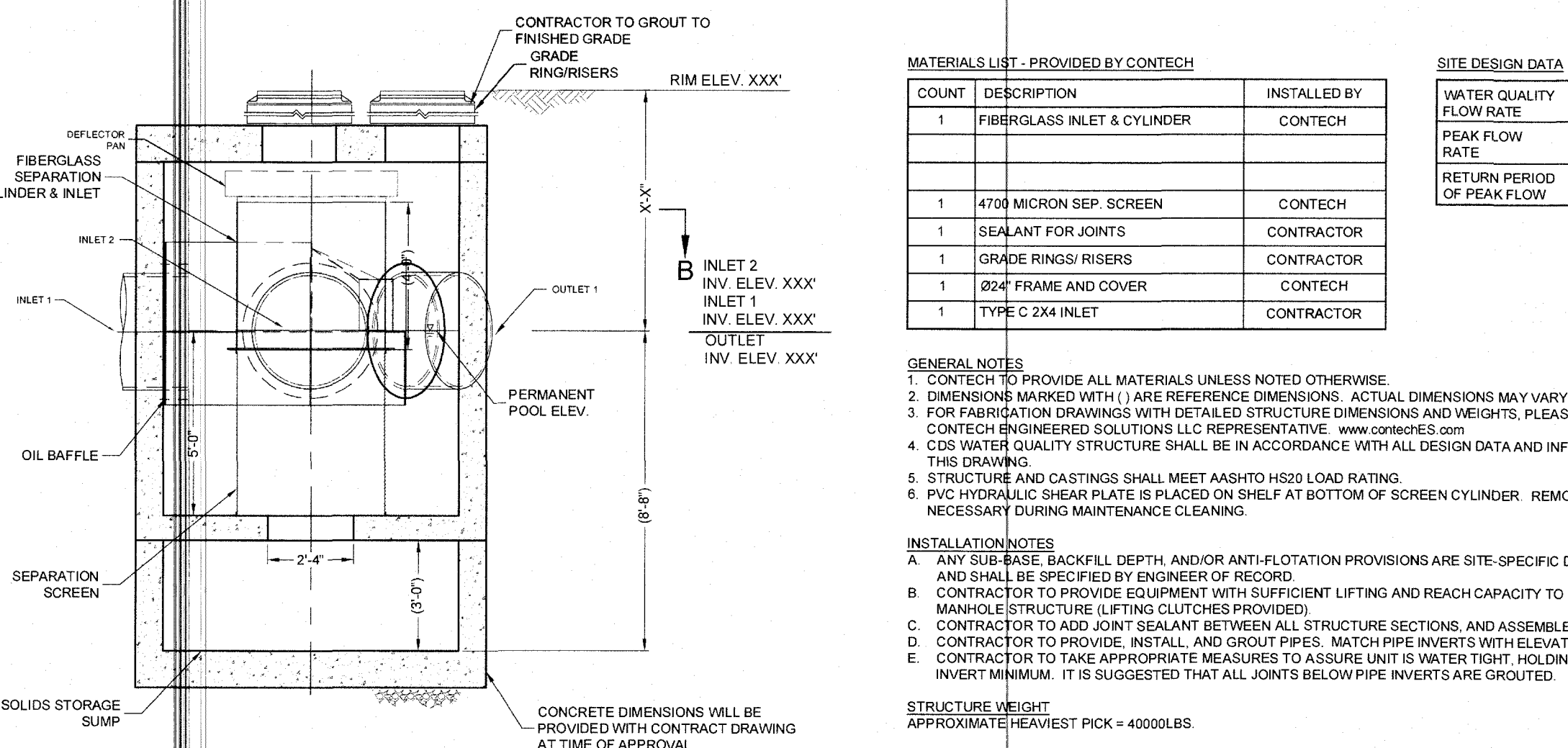
CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO.:	953-028
DRAWN BY:	TRS	SCALE:	AS SHOWN

DRAWING: C:\Users\strasburger\Documents\ELA_Group\B3-02b\Phase 1 - Quadrant 3 Storm Improvements\Project Files\CAD Data\Land Development\DETAILS\dwg - PLOTTED: Apr 24, 2025 10:35 am



SHOP DRAWINGS SHALL BE APPROVED BY THE BOROUGH PRIOR TO ORDERING STRUCTURE.



MATERIALS LIST - PROVIDED BY CONTECH		
COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET & CYLINDER	CONTECH
1	475# MICRON SEP. SCREEN	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1	GRADE RINGS RISERS	CONTRACTOR
1	2x4 FRAME AND COVER	CONTECH
1	TYPE C 2X4 INLET	CONTRACTOR

GENERAL NOTES
 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 2. DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
 3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERING SOLUTIONS LLC REPRESENTATIVE. WWW.CONTECH.COM
 4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 5. STRUCTURE AND CASTINGS SHALL MEET AASHTO HS20 LOAD RATING.
 6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
 A. ANY SUB-BASE BACKFILL DEPTH AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CAPACITY PROVIDED).
 C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
 D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
 E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
 APPROXIMATE HEAVIEST PICK = 4000LBS.

CONTECH ENGINEERING SOLUTIONS LLC
 3100 BIRCHWOOD DRIVE, SUITE 100
 STRASBURG, PA 17574
 TEL: 717.628.7271
 WWW.CONTECH.COM

DATE: 9/14/2023
DESIGNED BY: CNP
CHECKED BY: APPROVED
PROJECT NO.: 771858
REVISION NO.: 15
SHEET: 1 OF 1

INSPECTION ACTIVITY	SCHEDULE
NEARLY ESTABLISHED VEGETATION SHOULD BE INSPECTED SEVERAL TIMES TO DETERMINE IF ANY LANDSCAPE MAINTENANCE (RESEEDING, IRRIGATION, ETC.) IS NECESSARY.	AFTER CONSTRUCTION
INSPECT FOR THE FOLLOWING ISSUES: SIGNS OF WEEDS OR STANDING WATER, DAMAGE TO STRUCTURES, EROSION OF THE BASIN FLOOR, DEAD OR DYING GRASS ON THE BOTTOM, CONDITION OF RIPRAP, DRAIN TIME, SIGNS OF PETROLEUM HYDROCARBON CONTAMINATION, TRASH AND DEBRIS, SEDIMENT ACCUMULATION, SLOPE STABILITY, ETC.	SEMI-ANNUAL AND AFTER EXTREME EVENTS
MAINTENANCE ACTIVITIES	SCHEDULE
KEEP ONCE MONTHLY DURING THE FIRST TWO GROWING SEASONS, AS REQUIRED.	AFTER CONSTRUCTION
MAINTENANCE OF THE MEADOW MIX SHALL BE IN ACCORDANCE WITH THE ERNST SEED GUIDELINES. FOR THE FIRST GROWING SEASON, WHENEVER OVERALL VEGETATION REACHES A HEIGHT OF 18"-24", USE A BRUSH HOV MOWER OR STRING TRIMMER TO TRIM THE MEADOW TO A HEIGHT OF 8". (NOTE: A LAWN MOWER IS NOT RECOMMENDED AS THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED). MOWING SHOULD CEASE BY MID-SEPTEMBER. PROBLEM WEEDS AND INVASIVES SHOULD BE HAND PULLED OR A FLAME WEEDER FOR REMOVAL OF WEEDS.	FIRST & SUBSEQUENT GROWING SEASON MAINTENANCE
REPLANT ERODED OR BARREN SPOTS TO PREVENT EROSION AND ACCUMULATION OF SEDIMENT.	STANDARD MAINTENANCE (AS NEEDED)
REPAIR UNDERGUT OR ERODED AREAS AT INFLOW AND OUTFLOW STRUCTURES.	
REMOVE LITTER AND DEBRIS.	
REMOVE SEDIMENT.	
REPAIR OUTFLOW STRUCTURES.	SEMI-ANNUAL
UN-CLOS UNDERDRAIN AND TRASH RACKS.	
REMOVE WEEDS AND INVASIVE VEGETATION AND REPLACE DEAD AND DISEASED VEGETATION.	

GROWING SEASON MAINTENANCE FOR BMP PLANTINGS / ERSNT MIXES

FIRST GROWING SEASON
 WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18"-24", USE A BRUSH HOV MOWER OR STRING TRIMMER TO TRIM THE MEADOW TO A HEIGHT OF 8" (NOTE: A LAWN MOWER IS NOT RECOMMENDED AS THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED). THIS WILL REDUCE COMPETITION FOR SUNLIGHT, WATER AND NUTRIENTS NEEDED BY SLOW-GROWING PERENNIAL NATIVES. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS ARE USED ON THE SITE, MOWING SHOULD BE ABOVE THE NEW GROWTH OF THESE MATERIALS. MOWING SHOULD CEASE BY MID-SEPTEMBER. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE (SUCH AS RODEO™).

SECOND GROWING SEASON
 PRIOR TO NEW SPRING GROWTH REACHING A HEIGHT OF 2' (E.G. SHORTLY AFTER FORSYTHIA OR REDBUD BLOOMS), TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2"). THIS WILL ALLOW THE SOIL TO WARM MORE QUICKLY, WHICH WILL STIMULATE THE EMERGENCE AND GROWTH OF NATIVE SEEDLINGS. IT WILL ALSO REDUCE THE LIKELIHOOD OF THE MEADOW BEING INVADDED BY SHRUBS. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE OR SEED OF SHRUBS/TREES WERE PART OF THE MIX, THE SITE SHOULD NOT BE TRIMMED AFTER THE ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT-SPRAYED.

THIRD GROWING SEASON
 PRIOR TO NEW SPRING GROWTH REACHING A HEIGHT OF 2' (E.G. SHORTLY AFTER FORSYTHIA OR REDBUD BLOOMS), TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2"). THIS WILL ALLOW THE SOIL TO WARM MORE QUICKLY, WHICH WILL STIMULATE THE EMERGENCE AND GROWTH OF NATIVE SEEDLINGS. IT WILL ALSO REDUCE THE LIKELIHOOD OF THE MEADOW BEING INVADDED BY SHRUBS. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE OR SEED OF SHRUBS/TREES WERE PART OF THE MIX, THE SITE SHOULD NOT BE TRIMMED AFTER THE ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT-SPRAYED.

AFTER THIRD GROWING SEASON
 MOWING AND OTHER MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE THIRD GROWING SEASON MAINTENANCE GUIDELINES (SEE ALSO "GENERAL MAINTENANCE" BELOW FOR ADDITIONAL GUIDANCE).

SPECIAL CIRCUMSTANCES
 IF YOU NOTICE A HEAVY INFESTATION OF RASHWEED OR FOXTAIL IN THE SECOND GROWING SEASON, TRIM THE MEADOW TO A HEIGHT OF 8" IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED, TRIMMING SHOULD BE ABOVE OR AROUND NEW GROWTH OF THE PLANTS. TRIMMING SHOULD CEASE AFTER MID-SEPTEMBER.

GENERAL MAINTENANCE
 IN ADDITION TO STRUCTURAL MAINTENANCE, SILTATION NEEDS TO BE REMOVED AS NEEDED, CLOSE MOWING OR EXTENSIVE CHEMICAL USE IS NOT CONDUCTIVE TO WATER QUALITY IMPROVEMENT AND WILDLIFE HABITAT.

OWNERSHIP AND MAINTENANCE BASIN

INSPECTION SCHEDULE, DEDICATED FACILITIES AND OWNERSHIP RESPONSIBILITIES				
GENERAL INFORMATION			OPERATION AND MAINTENANCE	
BMP NAME	FACILITY DESCRIPTION	LOCATION	INSPECTION AND MAINTENANCE FREQUENCY	RESPONSIBLE PARTY
N/A	STORM CONVEYANCE SYSTEMS AND STRUCTURES	PUBLIC ROW	PER BOROUGH SOPs	BOROUGH AUTHORITY
CDS UNIT	WATER QUALITY DEVICE	PUBLIC ROW	SEE SPECIFIC O&M DETAILS	BOROUGH AUTHORITY
BMP-1	PLANTED BIORETENTION BASIN	PRIVATE PROPERTY	SEE SPECIFIC O&M DETAILS	BOROUGH AUTHORITY
N/A	STORM CONVEYANCE SYSTEMS AND STRUCTURES	PRIVATE PROPERTY	SEE SPECIFIC O&M DETAILS	BOROUGH AUTHORITY

- CATCH BASINS, INLETS, AND WATER QUALITY INLETS**
 1. STRUCTURES SHALL BE CLEANED AND INSPECTED AND CLEANED AT A MINIMUM ANNUALLY TO REMOVE ACCUMULATED SEDIMENT, FLUIDS, GREASE, OILS, AND TRASH.
 2. STRUCTURES SHALL BE INSPECTED AFTER SIGNIFICANT RAIN EVENTS TO DETERMINE IF MAINTENANCE IS REQUIRED OR AT LEAST ONE A MONTH.
 3. AVOID OR MINIMIZE SEDIMENT AND POLLUTANT DISCHARGES FROM THE WORK AREA.
 4. PREVENT PARKING AREAS, ROADS, DRAINAGE SYSTEMS, FACILITIES AND PROPERTY FROM BECOMING POLLUTANT SOURCES.
 5. PERIODICALLY INSPECT THE CATCH BASIN AND SURROUNDING AREAS FOR POLLUTANTS SUCH AS LEAKS FROM DUMPSTERS, MINOR SPILLS, AND OIL DUMPING. ACT TO HAVE THE POLLUTANT SOURCE REMOVED.
 6. CLEAN CATCH BASINS WHEN THEY BECOME ONE THIRD FULL TO MAINTAIN SEDIMENT-TRAPPING CAPACITY.
 7. CATCH BASIN AND MANHOLE CLEANING SHOULD BE PERFORMED IN A MANNER THAT KEEPS REMOVED SEDIMENT AND WATER FROM BEING DISCHARGED BACK INTO THE STORM SEWER.
 8. CLEAN PUTRID MATERIALS FROM CATCH BASINS WHEN DISCOVERED OR REPORTED.
 9. KEEP THE INLET CLEARED OF DEBRIS AND LITTER.
 10. WORK INSIDE UNDERGROUND STRUCTURES REQUIRES SPECIAL OSHA-REQUIRED CONFINED SPACE EQUIPMENT AND PROCEDURES. THE MOST PRACTICAL OPTION MAY BE TO CONTRACT WITH A SEWER-CLEANING CONTRACTOR.
 11. DISPOSAL OF WASTE FROM MAINTENANCE OF DRAINAGE FACILITIES SHALL BE CONDUCTED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
 12. REPAIR ANY DAMAGES THAT PREVENT THE CATCH BASIN FROM FUNCTIONING AS DESIGNED.
- MANHOLES**
 1. INSPECT THE MANHOLE ONCE PER YEAR. CHECK THE FRAME AND LID FOR CRACKS AND WEAR SUCH AS ROCKING LIDS OR LIDS MOVED BY TRAFFIC.
 2. PERIODICALLY INSPECT THE MANHOLE AND SURROUNDING AREAS FOR POLLUTANTS SUCH AS LEAKS FROM DUMPSTERS, MINOR SPILLS, AND OIL DUMPING. TAKE ACTION TO HAVE THE POLLUTANT SOURCE REMOVED.
 3. CLEAN MANHOLES WHEN THERE IS A BLOCKAGE OF A WATER FLOW PATH. CLEANING SHOULD BE PERFORMED IN A WAY THAT ENSURES REMOVED SEDIMENT AND WATER IS NOT DISCHARGED BACK INTO THE STORM SEWER.
 4. WORK INSIDE UNDERGROUND STRUCTURES REQUIRES SPECIAL OSHA-REQUIRED CONFINED SPACE EQUIPMENT AND PROCEDURES. THE MOST PRACTICAL OPTION MAY BE TO CONTRACT WITH A SEWER-CLEANING CONTRACTOR.
 5. DISPOSAL OF WASTE FROM MAINTENANCE OF DRAINAGE FACILITIES SHALL BE CONDUCTED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
 6. REPAIR ALL SECURITY AND ACCESS FEATURES SO THEY ARE FULLY FUNCTIONAL. THIS INCLUDES LOCKING LIDS, COVERS, AND LADDER RUNGS.
 7. REPLACE BROKEN PARTS OR LIDS THAT ROCK OR ARE MOVED BY TRAFFIC.
- STORM PIPE**
 1. STORM PIPES MUST BE CLEAR OF OBSTRUCTIONS AND BREAKS TO PREVENT LOCALIZED FLOODING.
 2. CLEAN PIPES WHEN SEDIMENT AFFECTS THE DESIGNED HYDRAULIC CAPACITY. WHEN CLEANING A PIPE, MINIMIZE SEDIMENT AND DEBRIS DISCHARGES FROM PIPES TO THE STORM SEWER. INSTALL DOWNSTREAM DEBRIS TRAPS (WHERE APPLICABLE) BEFORE CLEANING AND THEN REMOVE MATERIAL.
 3. WORK INSIDE UNDERGROUND STRUCTURES REQUIRES SPECIAL OSHA-REQUIRED CONFINED SPACE EQUIPMENT AND PROCEDURES.
 4. REPAIR OR REPLACE PIPES DAMAGED DETERIORATION OR WHEN DAMAGED.
- DEBRIS BARRIERS/TRASH RACKS**
 1. INSPECT TRASH RACKS AT LEAST ONCE PER YEAR.
 2. CLEAN TRASH RACKS WHEN DEBRIS IS PLUGGING MORE THAN 20 PERCENT OF THE OPENINGS OR WHEN OBSTRUCTIONS TO FISH PASSAGE ARE CREATED.
 3. IMMEDIATELY REPLACE MISSING RACKS AND MISSING BARS.
 4. REPLACE BARS THAT ARE DETERIORATED TO THE POINT WHERE THEY MAY BE EASILY REMOVED.
 5. BEND BENT BARS BACK INTO POSITION.

COLLECTION AND CONVEYANCE O&M
 NO SCALE

Maintenance
 The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection
 Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Inspections should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

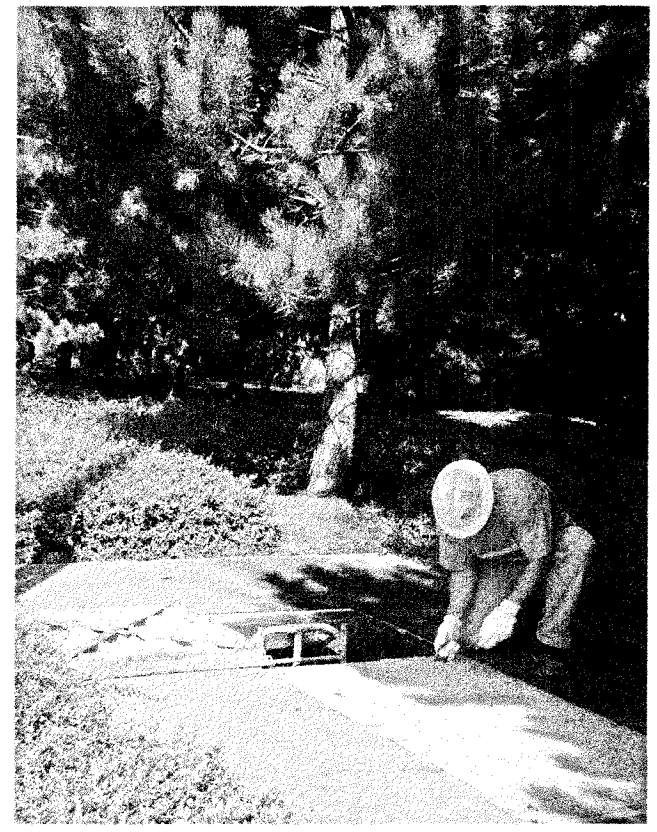
Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allow both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once the measurement is recorded, it should be compared to the as-built drawing for the unit to determine whether the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning
 Cleaning of a CDS system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes.



REVISIONS PER	DATE	BY
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-

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743 S. BROAD ST.
 LITITZ, PA 17543
 (717) 628-7271
 elagroup.com

POST CONSTRUCTION STORMWATER MANAGEMENT




REGISTERED PROFESSIONAL
 DERRICK JAMES MUSSEY
 ENGINEER
 No. 160416
 PENNSYLVANIA

STORMWATER MANAGEMENT PLAN
 SUBJECT:
PCSM O&M DETAILS
 STRASBURG BOROUGH
 PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

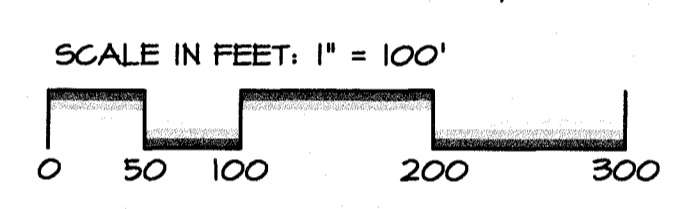
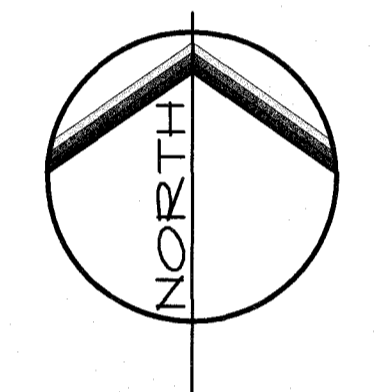
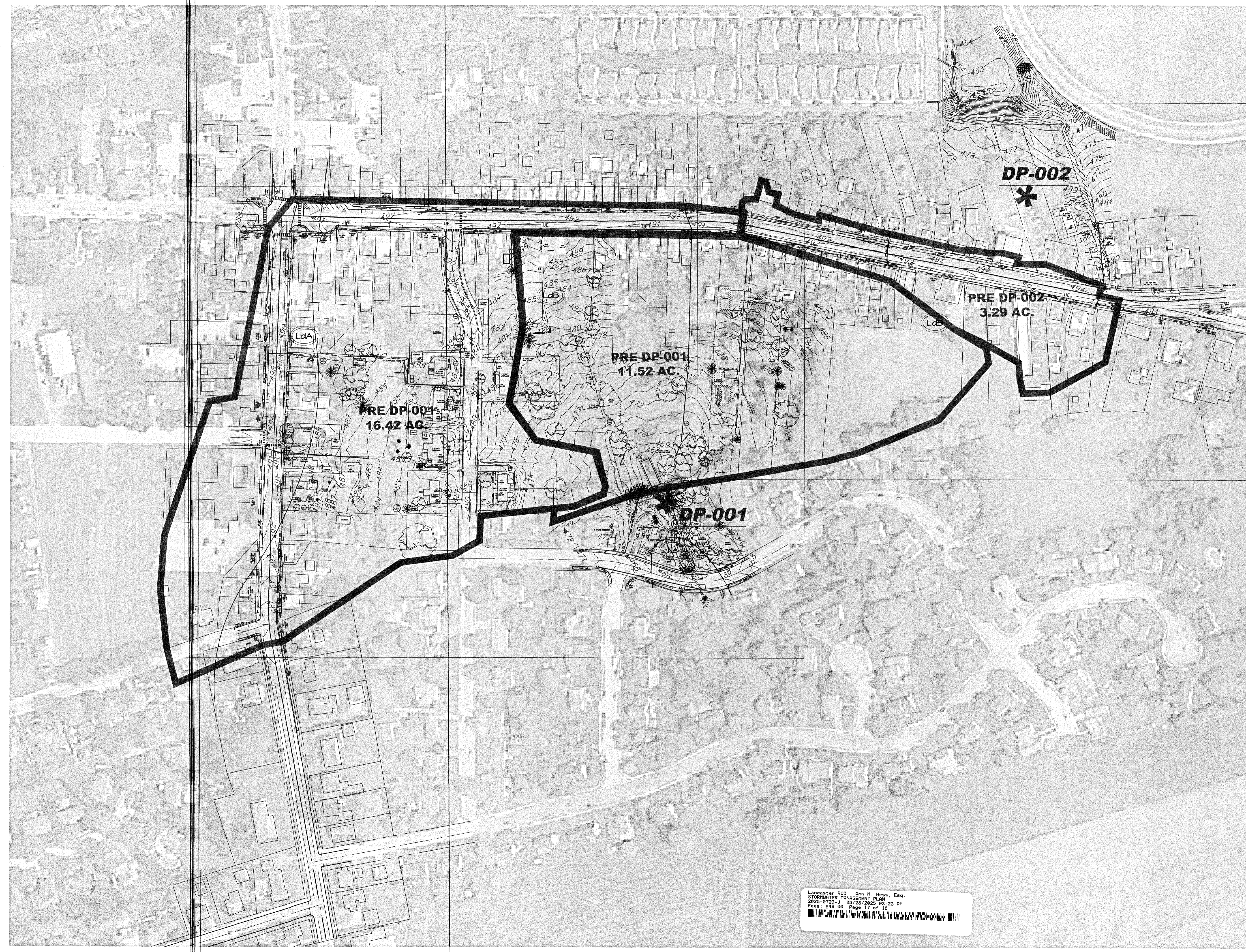
CLIENT:
STRASBURG BOROUGH
 145 PRECISION AVENUE
 STRASBURG, PA 17579
 (717) 887-7732

MANAGER	DLM	DATE	OCTOBER 5, 2023
DESIGNER	DLM	PROJECT NO.	953-028
DRAWN BY	TRS	SCALE	AS SHOWN

WATERSHED LEGEND

-  POINT OF INTEREST
-  WATERSHED BOUNDARY
-  TIME OF CONCENTRATION (T_c) PATH

THESE PLANS ARE FOR WATERSHED DELINEATION PURPOSES ONLY. DISREGARD ALL OTHER INFORMATION.

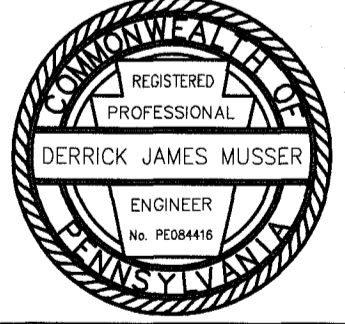


REVISIONS PER:	DATE:	BY:
1. REVISED PER LCCD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3. -	-	-
4. -	-	-
5. -	-	-



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REGISTERED PROFESSIONAL ENGINEER
DERRICK JAMES MUSSER

POST CONSTRUCTION STORMWATER MANAGEMENT

STORMWATER MANAGEMENT PLAN

SUBJECT:
PRE WATERSHED MAP
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

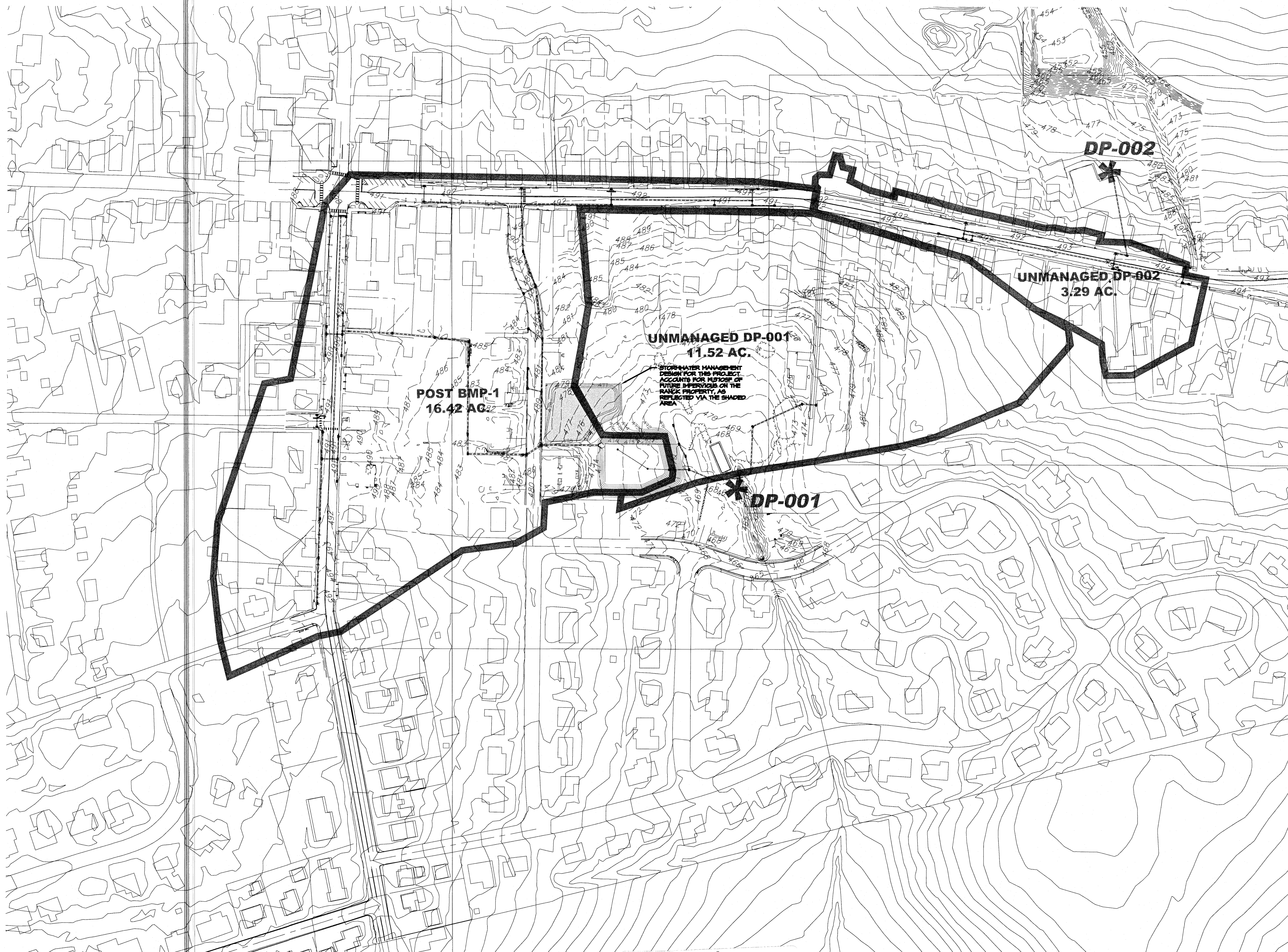
CLIENT:
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STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO.:	953-028
DRAWN BY:	TRS	SCALE:	1" = 50'

DRAWING NO.
16 of 17

Lancaster, ROD Ann H. Hess, Esq.
STORMWATER MANAGEMENT PLAN
2025-0723-J 05/28/2025 03:23 PM
Page 17 of 18

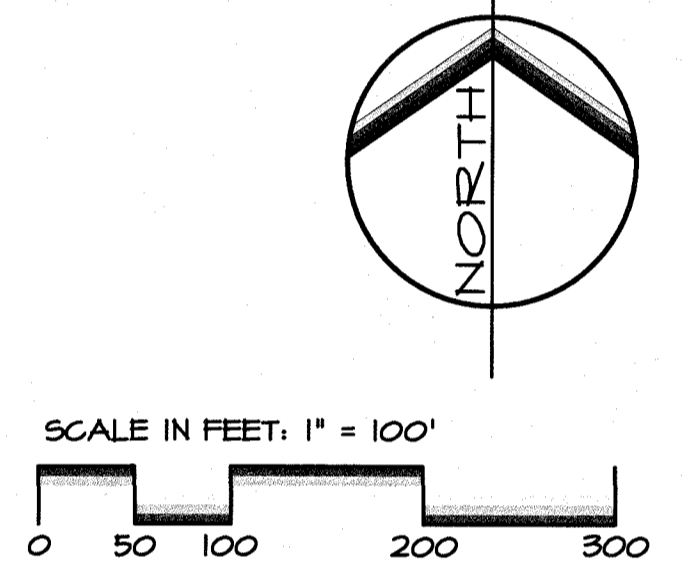
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WATERSHED LEGEND

*	POINT OF INTEREST
—	WATERSHED BOUNDARY
→	TIME OF CONCENTRATION (T _c) PATH

THESE PLANS ARE FOR WATERSHED DELINEATION PURPOSES ONLY. DISREGARD ALL OTHER INFORMATION.



REVISIONS PER	DATE	BY
1. REVISED PER LCDD COMMENTS	1/25/24	MAC
2. PENNDOT AND CLIENT REVISIONS	2/12/24	DJM
3.		
4.		
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REGISTERED PROFESSIONAL
DERRICK JAMES MUSSER
ENGINEER
No. PC08416

POST CONSTRUCTION STORMWATER MANAGEMENT

STORMWATER MANAGEMENT PLAN

SUBJECT:
POST WATERSHED MAP
STRASBURG BOROUGH
PHASE 1 SWM IMPROVEMENTS (SE QUADRANT)

CLIENT:
STRASBURG BOROUGH
145 PRECISION AVENUE
STRASBURG, PA 17579
(717) 687-7732

MANAGER:	DLM	DATE:	OCTOBER 5, 2023
DESIGNER:	DLM	PROJECT NO:	953-028
DRAWN BY:	TRS	SCALE:	1" = 100'

DRAWING NO
17 of 17

Lancaster Rod Ann M. Hess, Esq.
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2025-0723-J 5/28/2025 03:23 PM
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