

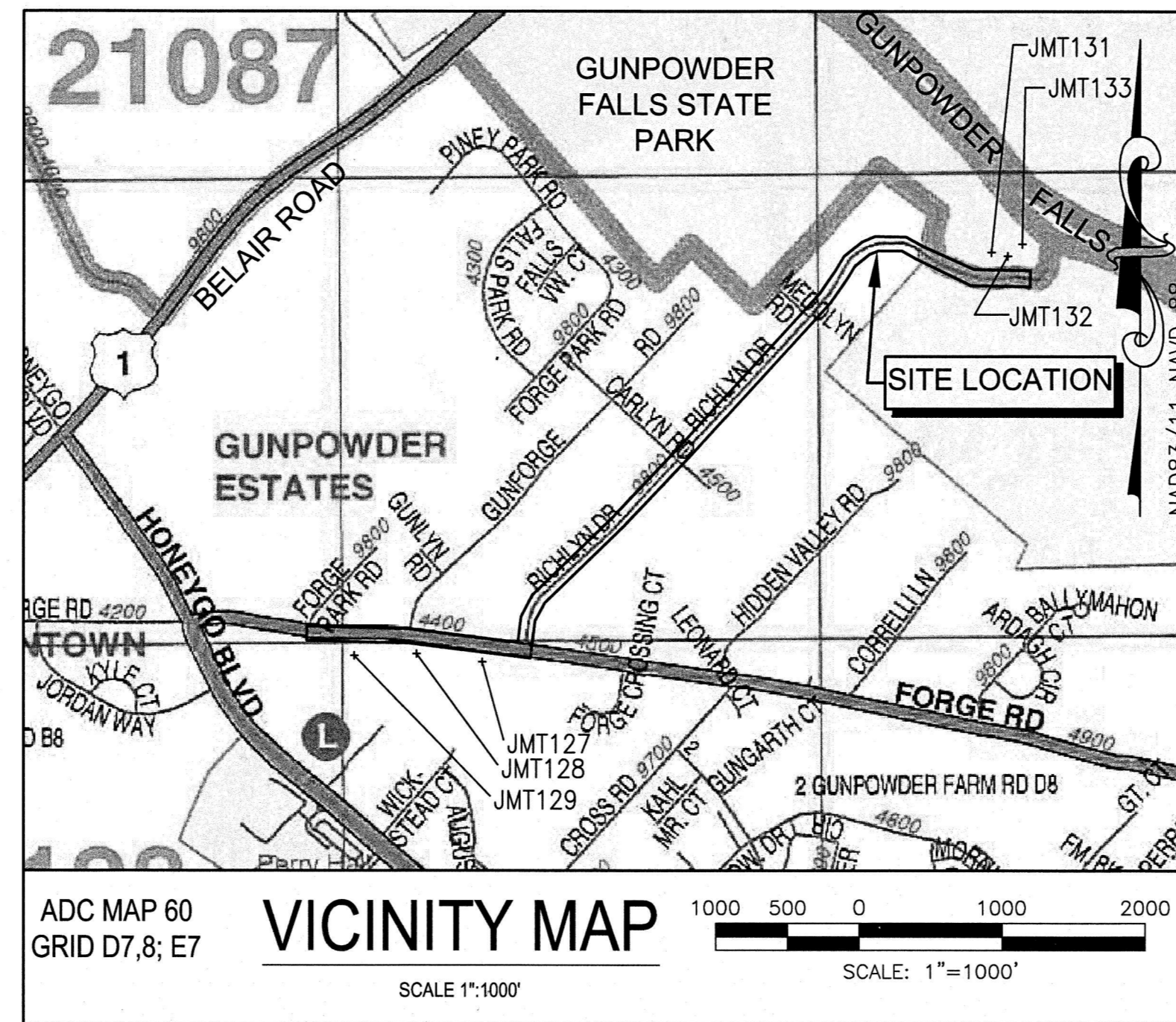
RICHLYN MANOR FORCE MAIN PROJECT NUMBER: PROJ-10000060

CONTRACT NO. 24084SXO BALTIMORE COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION



SHEET INDEX

SHEET NO.	BALTIMORE CO. DRAWING NO.	JMT DWG. NO.	TITLE
1	2024-1136	G-1	COVER SHEET AND SHEET INDEX
2	2024-1137	G-2	GENERAL NOTES AND ABBREVIATIONS
3	2024-1138	C-1	CIVIL LEGEND AND NOTES
4	2024-1139	C-2	OVERALL SITE PLAN
5	2024-1140	C-3	PLAN AND PROFILE - STA. 0+00 TO STA. 0+50
6	2024-1141	C-4	PLAN AND PROFILE - STA. 0+50 TO STA. 4+50
7	2024-1142	C-5	PLAN AND PROFILE - STA. 4+50 TO STA. 7+75
8	2024-1143	C-6	PLAN AND PROFILE - STA. 7+75 TO STA. 13+50
9	2024-1144	C-7	PLAN AND PROFILE - STA. 13+50 TO STA. 17+50
10	2024-1145	C-8	PLAN AND PROFILE - STA. 17+50 TO STA. 21+50
11	2024-1146	C-9	PLAN AND PROFILE - STA. 21+50 TO STA. 25+50
12	2024-1147	C-10	PLAN AND PROFILE - STA. 25+50 TO STA. 29+50
13	2024-1148	C-11	PLAN AND PROFILE - STA. 29+50 TO STA. 33+50
14	2024-1149	C-12	PLAN AND PROFILE - STA. 33+50 TO STA. 38+50
15	2024-1150	C-13	PLAN AND PROFILE - STA. 38+50 TO STA. 43+50
16	2024-1151	C-14	PLAN AND PROFILE - STA. 43+50 TO STA. 44+46
17	2024-1152	C-15	CIVIL DETAILS
18	2024-1153	C-16	CIVIL DETAILS
19	2024-1154	ESC-1	EROSION AND SEDIMENT CONTROL COVER SHEET
20	2024-1155	ESC-2	EROSION AND SEDIMENT CONTROL PLAN
21	2024-1156	ESC-3	EROSION AND SEDIMENT CONTROL PLAN
22	2024-1157	ESC-4	EROSION AND SEDIMENT CONTROL PLAN
23	2024-1158	ESC-5	EROSION AND SEDIMENT CONTROL PLAN
24	2024-1159	ESC-6	EROSION AND SEDIMENT CONTROL PLAN
25	2024-1160	ESC-7	EROSION AND SEDIMENT CONTROL PLAN
26	2024-1161	ESC-8	EROSION AND SEDIMENT CONTROL PLAN
27	2024-1162	ESC-9	EROSION AND SEDIMENT CONTROL PLAN
28	2024-1163	ESC-10	EROSION AND SEDIMENT CONTROL PLAN
29	2024-1164	ESC-11	EROSION AND SEDIMENT CONTROL PLAN
30	2024-1165	ESC-12	EROSION AND SEDIMENT CONTROL PLAN
31	2024-1166	ESC-13	EROSION AND SEDIMENT CONTROL PLAN
32	2024-1167	ESC-14	EROSION AND SEDIMENT CONTROL PLAN
33	2024-1168	ESC-15	EROSION AND SEDIMENT CONTROL DETAILS
34	2024-1169	ESC-16	EROSION AND SEDIMENT CONTROL NOTES
35	2024-1170	ESC-17	EROSION AND SEDIMENT CONTROL NOTES
36	2024-1171	ESC-18	EROSION AND SEDIMENT CONTROL NOTES
37	2024-1172	MOT-1	MAINTENANCE OF TRAFFIC - GENERAL NOTES/TYPICAL
38	2024-1173	MOT-2	FORGE ROAD - DETOUR PLAN
39	2024-1174	MOT-3	RICHLYN DRIVE - DETOUR PLAN



OWNER'S/DEVELOPER'S CERTIFICATION - GRADING

I/WE CERTIFY THAT ALL GRADING ON THIS SITE WILL BE DONE IN ACCORDANCE WITH THE CURRENT GRADING REQUIREMENTS AS SET FORTH BY THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND WITH THE REQUIREMENTS SPECIFIED IN ARTICLE 33, TITLE 5 OF THE BALTIMORE COUNTY CODE.

Joak Kulubj 8-26-2025
SIGNATURE OF OWNER/DEVELOPER DATE

Lisa K. Eicholtz
PRINT NAME

BALTIMORE COUNTY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND SUSTAINABILITY
APPROVED FOR GRADING
[Signature] 09.16.25.
Date

STORMWATER MANAGEMENT PERMIT
NOT REQUIRED

~~APPROVED: _____ Chief
STORMWATER ENGINEERING
BALTO. CO. DEPT. OF
ENVIRONMENTAL PROTECTION
AND SUSTAINABILITY~~

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL 9-8-25
Date
Jeffery P. West 120-2942-25
DISTRICT OFFICIAL PLAN NO.
Technical Review for the District by:
Stuart Darley
The plan approval will expire three (3) years from the approval date.

FORCE MAIN PRESSURES	
TEST PRESSURE	150 PSI
WORKING PRESSURE	350 PSI
OPERATING PRESSURE	97 PSI

CONTRACT COMPLETION BOX
CONTRACTOR: _____
DATE COMPLETED: _____
INSPECTOR: _____
PIPE MATERIAL (Pressure Only): _____

PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 31273 EXPIRATION DATE 1/16/2027 ENGINEER: JOHNSON, MERRAN & THOMPSON 40 WIGHT AVENUE HUNT VALLEY, MD 21030 AS-BUILT PER RECORD PRINT BY: _____ DATE: 7/23/2025	CONTRACT COMPLETION BOX							APPROVED BY: <i>Joak Kulubj</i> PER DIRECTOR DATE: 8-14-2025
	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	REVIEWED BY: JGS	VRC		RLZ	AEB	EAM	KRB	APPROVED BY: <i>[Signature]</i> CHIEF DATE: 8/13/25
	DATE REVIEWED: 8/13/25	8/13/25		8/12/25	8/8/25	8/13/25	8/12/25	

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
COVER SHEET AND SHEET INDEX

SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
G-1	24084SXO
	PROJECT NUMBER
	PROJ-10000060
	SHEET 1 OF 39
	DRAWING NUMBER
	2024-1136
	FILE NO.:

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH BALTIMORE COUNTY'S "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" AND "STANDARD DETAILS FOR CONSTRUCTION", LATEST EDITIONS.
- THE LOCATION OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE GROUND FIELD OBSERVATIONS AND RECORD DRAWINGS. ADDITIONAL BURIED UTILITIES OR STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE UNDERGROUND UTILITIES BY TEST PITS TO HIS SATISFACTION. NO ADDITIONAL COST OR TIME WILL BE PROVIDED FOR VERIFICATION OF UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION AND SHALL PROTECT THEM DURING CONSTRUCTION. IN CASE OF BREAKAGE OF ANY EXISTING WATER/SEWER PIPE, RESULTANT SEWER OVERFLOW AND/OR SPILL SHALL IMMEDIATELY BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL BE LIABLE FOR ALL SEWER OVERFLOW AND/OR SPILL, CLEAN UP COST INCURRED BY THE OWNER AND/OR STATE OF MARYLAND AND ALSO SHALL BE LIABLE FOR ANY CIVIL AND OR CRIMINAL PENALTIES ASSOCIATED WITH SUCH OVERFLOWS AND/OR SPILLS.
- THE CONTRACTOR SHALL PROTECT ALL TREES FROM DAMAGE WATERING THE LIMITS OF DISTURBANCE. ANY DAMAGE SHALL BE RECTIFIED TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY FOR CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY CHANGES OR CONDITIONS REQUIRED BY ANY PERMIT.
- DO NOT SCALE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO SEEK CLARIFICATION PRIOR TO BID. WHEN CONFLICTS ARISE, IT IS ASSUMED THE CONTRACTOR HAS BASED HIS BID ON THE MORE EXPENSIVE OPTION.
- CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS, SPECIFICATIONS, AND REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT A PROPOSED SEQUENCE OF CONSTRUCTION FOR REVIEW PRIOR TO COMMENCEMENT OF ANY WORK. SEQUENCE OF CONSTRUCTION SHALL INCLUDE SEDIMENT AND EROSION CONTROL SETUP, MAINTENANCE OF TRAFFIC SETUP, CLEARING AND GRUBBING, EXCAVATION SUPPORT AND PROTECTION, DEWATERING, LINE TAPPING AND STOPPING, PIPE AND VALVE SUPPORT, THRUST RESTRAINT, SITE RESTORATION, AND ALL OTHER WORK NECESSARY TO COMPLETE THE FORCE MAIN INSTALLATION.
- THIS DOCUMENT INCLUDES INFORMATION AND DEPICTIONS OF BALTIMORE GAS AND ELECTRIC COMPANY'S ("BGE") ELECTRIC AND/OR GAS UTILITIES LOCATED WITHIN THE PROJECT AREA (THE "BGE UTILITY INFORMATION"), LOCATIONS, DIMENSIONS, DEPTHS, AND OTHER DETAILS OF ANY SUCH UTILITIES MAY NOT BE AS-BUILT, AND THE INFORMATION SHALL NOT BE RELIED UPON WITHOUT FIELD VERIFICATION, EXCAVATORS MUST EMPLOY SAFE DIGGING BEST PRACTICES WHEN APPROACHING BGE ELECTRIC AND GAS UTILITIES AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, INCLUDING, BUT NOT LIMITED TO, THE "MISS UTILITY LAW". NO REPRESENTATION, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY BGE AS TO THE QUALITY, COMPLETENESS, OR ACCURACY THE BGE UTILITY INFORMATION, AND IN ACCEPTING THIS DOCUMENT, THE RECIPIENT EXPRESSLY ACKNOWLEDGES AND AGREES THAT IT IS NOT RELYING ON THE ACCURACY OF THE SAME.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT (800) 257-7777 AT LEAST 5 DAYS PRIOR TO STARTING EXCAVATION. THE CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER AND ALL UTILITY COMPANIES, PIPELINE OWNER AND OTHER PARTIES AFFECTED WITH THE CONSTRUCTION AREA, AT LEAST FORTY-EIGHT (48) HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF WORK.
- FORCE MAIN SHALL BE DUCTILE IRON CLASS 54 WITH ZINC COATING. SEE SPECIFICATIONS. THE ENTIRE LENGTH OF FORCE MAIN SHALL BE RESTRAINED JOINT.
- TEST PITS HAVE BEEN COMPLETED AT TEN LOCATIONS. SEE PLANS FOR LOCATIONS.
- ALL SAFETY MEASURES TO BE IMPLEMENTED DURING THE CONSTRUCTION OF THIS PROJECT ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLANS.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS (410-887-3300) AT LEAST ONE WEEK PRIOR TO THE IMPLEMENTATION OF ANY MAINTENANCE OF TRAFFIC PLANS.
- CONTRACTOR SHALL HAVE A SET OF SPECIFICATIONS AND CONTRACT DOCUMENTS AND A COMPLETE SET OF DRAWINGS ON SITE AT ALL TIMES.
- ALL PROPERTY MARKERS SHOWN ON THE DRAWINGS AND DISTURBED BY THE CONTRACTOR MUST BE RESET IN THE ORIGINAL LOCATION BY THE CONTRACTOR. AFTER CONSTRUCTION IS COMPLETE, ALL COST FOR RESETING PROPERTY MARKERS TO BE INCLUDED IN OTHER ITEMS BID.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING STAGING AND STORAGE AREAS AND FOR MOBILIZATION TO/FROM SUCH AREAS AT NO ADDITIONAL COST TO BALTIMORE COUNTY.
- WHEN CONNECTING TO ANY EXISTING MANHOLE, THE MANHOLE MUST BE CORE DRILLED AND AN "A-LOK" CONNECTOR OR APPROVED EQUAL MUST BE USED FOR CONNECTING THE SEWER. ALL COST TO BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY SEWER PIPE.
- CONNECTION OF THE PROPOSED SEWER FORCE MAIN INTO THE EXISTING MANHOLE SHALL NOT BE MEASURED SEPARATELY AND WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE INSTALLATION OF THE SEWER FORCE MAIN.

GENERAL NOTES (CONTINUED)

- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST BUFFER EASEMENT OR OTHER FOREST RETENTION AREAS, EXCEPT AS PERMITTED BY THE THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY.
- THE PROPERTY LINES AND PROPERTY OWNER ARE BASED OFF OF BALTIMORE COUNTY GIS TAX MAPS. THE PROPERTY OWNER NAME(S) ARE SUBJECT TO CHANGE DURING CONSTRUCTION.
- THE CONTRACTOR UNDERSTANDS THAT BALTIMORE COUNTY SHALL INCUR SIGNIFICANT AND SUBSTANTIAL STIPULATED PENALTIES PURSUANT TO A CONSENT DECREE ENTERED IN U.S. DISTRICT COURT FOR THE DISTRICT OF MARYLAND BY AND AMONG THE UNITED STATES OF AMERICA, THE STATE OF MARYLAND, AND BALTIMORE COUNTY. IN THE EVENT SEWAGE IS DISCHARGED ONTO THE GROUND OR INTO ANY STREAMS IN CONNECTION WITH THIS CONTRACT, ANY DAMAGES INCURRED BY THE COUNTY, ALONG WITH ANY AND ALL OTHER DAMAGES, COSTS, AND EXPENSES OF THE COUNTY, SHALL BE THE LIABILITY AND OBLIGATION OF THE CONTRACTOR UNDER THIS CONTRACT.

SURVEY NOTES:

- THIS SURVEY WAS BASED ON A FIELD-RUN TOPOGRAPHIC SURVEY PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON (JMT) IN DECEMBER 2022 AND REFLECTS SITE CONDITIONS AS OF THAT DATE. INFORMATION OUTSIDE OF THE LIMITS OF SURVEY IS SUPPLEMENTED WITH GIS INFORMATION AS WELL AS FIELD OBSERVATIONS.
- COORDINATES ARE REFERENCED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AS DETERMINED BY GNSS RTN (SMARTNET) OBSERVATIONS IN DECEMBER 2022.
- ALL COORDINATES, DISTANCES, MEASUREMENTS, AND UNITS SHOWN HEREON ARE IN U.S. SURVEY FEET.

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT131	639675.3842	1471249.6397	96.831	TRAV,R&C
JMT132	639664.7138	1471336.8618	89.886	TRAV,MAG. NAIL
JMT133	639726.4046	1471408.0028	84.507	TRAV,R&C
JMT127	637608.6324	1468194.4954	280.231	TRAV,R&C
JMT128	637654.4383	1467841.4423	297.710	TRAV,R&C
JMT129	637657.0642	1467656.8660	287.316	TRAV,R&C

ABBREVIATIONS

- ABDN = ABANDON, TO BE ABANDONED
- APPROX., ± = APPROXIMATE
- ARV = AIR RELEASE VALVE
- BLDG = BUILDING
- B.M. = BENCH MARK
- CAV = COMBINATION AIR VALVE
- CL, C/L = CENTERLINE
- CI = CAST IRON
- CMP = CORRUGATED METAL PIPE
- C/O, C.O. = CLEAN OUT
- CONC = CONCRETE
- CUYD, CY = CUBIC YARD
- DEG = DEGREE
- DIP = DUCTILE IRON PIPE
- DIA, Ø = DIAMETER
- DR = DRAIN
- DWG = DRAWING
- EL, ELEV = ELEVATION
- EX = EXISTING
- FF = FINISHED FLOOR
- FM = FORCE MAIN
- FT = FOOT/FEET
- GV = GATE VALVE
- HB = HORIZONTAL BEND
- HZ = HORIZONTAL
- INV = INVERT
- LF = LINEAR FEET
- LOD = LIMITS OF DISTURBANCE
- LVB = LOWER VERTICAL BEND
- MAX = MAXIMUM
- MH = MANHOLE
- MIN = MINIMUM
- NO = NUMBER
- OH = OVERHEAD ELECTRIC
- PC = POINT OF CURVATURE
- PROP = PROPOSED
- PT = POINT OF TANGENCY
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- RED = REDUCED, REDUCING, REDUCER
- ROW = RIGHT OF WAY
- SAN = SANITARY
- SCH = SCHEDULE
- SD = STORM DRAIN
- SF = SILT FENCE, SQUARE FEET
- SHC = SANITARY HOUSE CONNECTION
- SHT = SHEET
- SPEC = SPECIFICATION
- SOFT = SQUARE FEET
- SRC = STATE ROAD COMMISSION
- SS = STAINLESS STEEL / SANITARY SEWER
- SSFM = SANITARY SEWER FORCE MAIN
- STA = STATION
- TOW = TOP OF WALL
- TYP = TYPICAL
- UE = UNDERGROUND ELECTRIC
- UNK = UNKNOWN
- UVB = UPPER VERTICAL BEND
- UW = UTILITY WATER
- V, VLV = VALVE
- VCP = VITRIFIED CLAY PIPE
- W = WATER
- W/ = WITH
- WM = WATER METER / WATER MAIN

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. <u>31273</u> EXPIRATION DATE <u>1/16/2027</u>		AS-BUILT / REVISION BY: _____ DATE: _____ P.W.A. NO. _____ KEY SHEET _____ POSITION SHT _____ DRAWING SCALE _____ DPW AND TRANSPORTATION _____
	ENGINEER: JOHNSON, MIRMIRAN & THOMPSON 40 WIGHT AVENUE HUNT VALLEY, MD 21030 AS-BUILT PER RECORD PRINT		R.O.W NO. _____ QSE _____ CONTRACT COMPLETION BOX _____ BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC _____ HIGHWAYS _____ STRUCTURES _____ STORM DRAINS _____ SEWER _____ WATER _____ FIELD ENGINEER _____ BUR. OF ENGINEERING & CONSTRUCTION
	DGN BY: <u>DSC</u> DWN BY: <u>CKW</u> BY: _____ DATE: _____ CHKD BY: <u>DSC</u>		REVIEWED BY: _____ DATE REVIEWED: _____ SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES		

MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 88		SHEET DESIGNATION G-2	CONTRACT NUMBER 24084SXO
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN GENERAL NOTES AND ABBREVIATIONS			
SUBDIVISION: RICHLYN MANOR		PERRY HALL, MD	
ELECTION DIST. NO.: 11C5		SHEET 2 OF 39 DRAWING NUMBER 2024-1137 FILE NO.: _____	

DWG. FILENAME:

LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	EXISTING EASEMENT
	EXISTING SETBACK
	EXISTING BUILDING
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING CURB
	EXISTING CURB & GUTTER
	EXISTING ROADWAY
	EXISTING CONCRETE PAVING
	EXISTING GRAVEL
	EXISTING ASPHALT PAVING
	EXISTING FENCELINE
	EXISTING MAILBOX
	EXISTING BOLLARD
	EXISTING SIGN
	EXISTING ELECTRIC HANDBOX
	EXISTING ELECTRIC MANHOLE
	EXISTING OVERHEAD ELECTRIC
	EXISTING UNDERGROUND ELECTRIC
	EXISTING UNDERGROUND CONDUIT
	EXISTING GAS LINE
	EXISTING GAS VALVE
	EXISTING SANITARY FORCE MAIN
	EXISTING SANITARY LINE
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY CLEANOUT
	EXISTING TELEPHONE LINE
	EXISTING UNDERGROUND TELEPHONE
	EXISTING FIBER OPTIC LINE
	EXISTING CABLE TELEVISION LINE
	EXISTING ELECTRIC LINE
	EXISTING STORMDRAIN LINE
	EXISTING STORMDRAIN INLET
	EXISTING STORMDRAIN MANHOLE
	EXISTING DOWNSPOUT
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING ABANDONED WATER LINE
	EXISTING SOILS
	EXISTING TREELINE
	EXISTING FOREST BUFFER
	WATERS OF THE U.S.
	EXISTING TREE
	ABANDONED WATER LINE TO BE REMOVED
	CURB TO BE REMOVED AND REPLACED
	CONCRETE TO BE REMOVED AND REPLACED
	LIMIT OF SAWCUT/EXCAVATION
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED SANITARY FORCE MAIN
	PROPOSED SANITARY SEWER GRAVITY MAIN
	PROPOSED ASPHALT PAVING
	TEST PIT LOCATION
	SOIL BORING LOCATION

LIST OF ABBREVIATIONS

ABAND.	ABANDONED
WHC	WATER HOUSE CONNECTION
SHC	SEWER HOUSE CONNECTION
S.D.	STORM DRAIN
FHC	FIRE HYDRANT CONNECTION

GENERAL CIVIL NOTES:

- EXISTING UNDERGROUND UTILITIES DESIGNATED ON THE PLANS ARE BASED ON CURRENTLY AVAILABLE INFORMATION AND ARE SHOWN FOR REFERENCE ONLY. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEYOND THE DESIGNATION INDICATED. THE QUALITY LEVEL DESIGNATED IS IN ACCORDANCE WITH ASCE "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" (CI/ASCE 38-02). THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THOSE STANDARDS PRIOR TO ANY RELIANCE ON THE INFORMATION SHOWN ON THESE PLANS. PRIOR TO ANY EXCAVATION, IN THE ABSENCE OF QUALITY LEVEL A OR B DESIGNATION, THE CONTRACTOR SHALL VERIFY, TO HIS OWN SATISFACTION, THE EXISTENCE, DEPTH, SIZE, MATERIAL, AND LOCATION OF ALL UNDERGROUND UTILITIES, AND DETERMINE WHETHER THOSE UTILITIES ARE LIVE. ANY EARTHWORK IN LOCATIONS WHERE UTILITIES ARE POSSIBLE SHALL BE DONE WITH EXTREME CAUTION. THE GIVING OF INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO SUPPORT AND PROTECT ALL DESIGNATED OR UNDESIGNATED EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITY BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
- LIVE UNDERGROUND UTILITIES EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- CONTRACTOR SHALL PROTECT ALL AREAS BEYOND THE LIMIT OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION. SEE EROSION AND SEDIMENT CONTROL PLAN FOR LIMITS OF DISTURBANCE.
- CONTRACTOR SHALL FURNISH SHORING, SHEATHING, OR OTHERWISE SUPPORT EXCAVATIONS TO PROTECT EXCAVATIONS FROM CAVE-INS UNTIL BACKFILL PLACEMENT IS COMPLETE PER SPECIFICATIONS.
- INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS. CONTRACT IS TO INCLUDE ALL DEMOLITION REQUIRED TO COMPLETE JOB. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SITE VISIT(S) TO VERIFY DEMOLITION REQUIREMENTS PRIOR TO BIDDING. CONTRACTOR IS DIRECTED TO REVIEW ALL PLANS, DETAILS, AND SPECIFICATIONS OF PROJECT RELATIVE TO THE EXTENT OF DEMOLITION REQUIRED. CONTRACTOR'S BID SHALL BE BASED ON THE RESULTS OF HIS OBSERVATION AS TO THE EXTENT OF DEMOLITION REQUIRED.
- DEMOLITION ITEMS ARE TO INCLUDE ALL WORK REQUIRED TO REMOVE AND DISPOSE OF ITEMS FROM SITE COMPLETELY.
- NO ITEMS ARE TO BE BURNED OR BURIED ON THE SITE.
- PERMITS AND FEES REQUIRED FOR ANY DEMOLITION/DISPOSAL WORK MUST BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE.
- CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF ALL UTILITY OUTAGES NECESSARY FOR CONSTRUCTION. UTILITIES CRITICAL TO OPERATIONS AND SECURITY SHALL HAVE TEMPORARY SERVICE CONNECTED TO PROVIDE UNINTERRUPTED SERVICE WHERE DEEMED NECESSARY BY THE OWNER.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY DISTURBANCE OR DEMOLITION. ALL PROTECTIVE DEVICES SHALL BE INSTALLED PRIOR TO ANY DISTURBANCE OR DEMOLITION.
- CONTRACTOR SHALL STABILIZE ALL UNINTENTIONALLY DISTURBED AREAS OUTSIDE OF THE L.O.D. BY THE END OF THE SAME WORKING DAY.
- CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED AND DELETERIOUS MATERIALS NOT TO BE SALVAGED FOR REUSE ON SITE IN A SAFE AND LEGAL MANNER.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
- CONTRACTOR SHALL PROVIDE COMPACTED BACKFILL PER THE LATEST BALTIMORE COUNTY STANDARDS IN ALL EXCAVATED AREAS, AND UTILIZE FLOWABLE BACKFILL AT ALL CRITICAL UTILITY CROSSINGS WERE SUFFICIENT COMPACTION CANNOT BE ACHIEVED.
- CONTRACTOR SHALL PROVIDE SUPPORT AND PROTECTION FROM DAMAGE AT ALL FACILITIES AND UTILITIES TO REMAIN (INCLUDING EXISTING UTILITIES AT ALL FORCE MAIN CROSSINGS) WHETHER SHOWN HEREON OR NOT. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING ANY AND ALL DAMAGES INCURRED AS A RESULT OR CONSTRUCTION AT THEIR OWN COST.
- ALL SUB-BASE MATERIAL ASSOCIATED WITH ANY EXISTING MATERIALS TO BE REMOVED SHALL BE REMOVED AND DISCARDED.
- ALL PAVEMENT SHALL BE SAWCUT PRIOR TO REMOVAL WHERE EXISTING CURB IS BEING REMOVED AND/OR THERE IS ADJOINING PAVEMENT TO REMAIN. ALL SAWCUTS ARE TO BE NEAT, CLEAN AND STRAIGHT.
- CONTRACTOR TO GRIND ALL STUMPS OF TREES / SHRUBS TO BE REMOVED.
- REFER TO ESC 1 THROUGH ESC-18 FOR DETAILED EROSION & SEDIMENT CONTROL DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE OWNER, AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL REPAIR OR REPLACE SURFACES DAMAGED BY ALL CONSTRUCTION ACTIVITY INCLUDING AREAS USED AS CONTRACTOR'S STAGING OR STORAGE AREAS TO A LIKE NEW CONDITION TO THE OWNER'S SATISFACTION.
- CONTRACTOR SHALL FURNISH TRAFFIC CONTROL AND PEDESTRIAN CONTROL DEVICES IN ACCORDANCE WITH THE APPROVED MAINTENANCE OF TRAFFIC PLANS.
- ALL FORCE MAIN AND DISCHARGE PIPING JOINTS SHALL BE RESTRAINED.
- FURNISH AND INSTALL ALL ADAPTERS, COUPLINGS, GLANDS, RETAINERS, GASKETS, BOLTS, AND OTHER MISCELLANEOUS MATERIALS NECESSARY TO MAKE FINAL TIE-IN TO FORCE MAIN. PROVIDE CORE DRILL A-LOCK AND A-LOCK GASKET WHEN CORING INTO MANHOLES. FINAL TIE-IN MUST BE WITNESSED BY BALTIMORE COUNTY. ALL COSTS TO BE INCLUDED WITH UNIT PRICE FOR PIPING.
- EVERY DISCHARGE MANHOLE MUST BE EPOXY-LINED.
- FIELD VERIFY GRAVITY SEWER ELEVATION AT THE PROPOSED CONNECTION TO EXISTING MANHOLE 69669.
- CONTRACTOR SHALL PROVIDE SPECIFIED LAY SCHEDULE PRIOR TO ANY INSTALLATION.

SITE PAVING NOTES:

- CONTRACTOR SHALL REFERENCE BALTIMORE COUNTY DETAILS G-6 & R-38 (AND ANY OTHER ASSOCIATED TRENCH PAVING DETAILS) FOR REPAVING OF TRENCHED AREAS. FOR MILL & OVERLAY OF ASPHALT PAVING NOT ASSOCIATED WITH TRENCHING ACTIVITY, REFERENCE MDSA OVERLAY ENGINEERING ACCESS PERMITS DETAILS.
- ALL CONCRETE, ASPHALT PAVING, AND CURBS TO BE REMOVED SHALL BE REPLACED WITH EQUAL OR BETTER MATERIAL AS REQUIRED AND AS DIRECTED BY THE ENGINEER IN THE FIELD.
- ALONG FORGE ROAD, THE CONTRACTOR SHALL PERFORM FULL DEPTH PAVEMENT REPAIR FOR THE FULL WIDTH OF THE ROAD WITHIN THE LIMITS OF FORCE MAIN INSTALLATION.
- ALONG THE ACCESS ROAD, THE CONTRACTOR SHALL PERFORM FULL DEPTH PAVEMENT REPAIR FOR THE FULL WIDTH OF THE ROAD WITHIN THE LIMITS OF FORCE MAIN INSTALLATION.
- THE CONTRACTOR SHALL PERFORM FULL DEPTH PAVEMENT REPAIR WITHIN THE LIMITS OF TRENCHING FOR THE FORCE MAIN INSTALLATION ALONG RICHLYN DRIVE.

GENERAL CONSTRUCTION NOTES:

- CONTRACTOR TO FIELD VERIFY SIZE, DEPTH, LOCATION, AND MATERIAL OF ALL EXISTING UTILITY CROSSINGS.
- UNLESS OTHERWISE INDICATED ON THE PROFILE, THE CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE BETWEEN THE FORCE MAIN AND ALL WATER UTILITY CROSSINGS, AND MAINTAIN 18" VERTICAL SEPARATION BETWEEN THE FORCE MAIN AND ALL PARALLEL WATER AND SEWER PIPING WITHIN TEN (10) HORIZONTAL FEET OF THE FORCE MAIN.
- UNLESS OTHERWISE STATED, UTILITY CROSSINGS ARE ASSUMED TO HAVE THE FOLLOWING COVER:
WATER CROSSINGS: 4'-0"
GAS CROSSINGS: 3'-0"
ELECTRIC CROSSING: 3'-0"
CABLE CROSSINGS: 3'-0"
COMMUNICATION CROSSINGS: 3'-0"
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE FOOT VERTICAL CLEARANCE WHEN CROSSING ABOVE OR BELOW EXISTING UTILITIES UNLESS OTHERWISE NOTED.
- UNLESS OTHERWISE NOTED ON THE PLANS, MAXIMUM VERTICAL DEFLECTION BETWEEN PIPE JOINTS SHALL BE NO GREATER THAN 50% OF MANUFACTURER'S ALLOWANCE.
- TWELVE INCH (12") ABANDONED WATER MAIN IS PARTIALLY SHOWN FOR REFERENCE PURPOSES. THE COMPLETE ALIGNMENT IS NOT SHOWN FOR CLARITY. THE ABANDONED WATER MAIN RUNS IN CLOSE PROXIMITY AND IN THE SAME ALIGNMENT OF THE PROPOSED GRAVITY SEWER AND SANITARY FORCE MAIN. THE IMPACTED SEGMENTS GENERALLY BEGIN AT PROPOSED SSMH 75328 (GRAVITY STATION 0+33.45 THROUGH 2+18.95) AND FORCE MAIN STATION (0+00 THROUGH 7+00). PER THE DIRECTION OF THE FIELD ENGINEER, THE CONTRACTOR SHALL REMOVE THE ABANDONED WATER MAIN TO PERMIT INSTALLATION OF THE NEW SANITARY FORCE MAIN. WHERE REMOVED, THE REMAINING PIPE SHALL BE CAPPED AND ABANDONED IN PLACE. REFER TO BALTIMORE COUNTY DRAWINGS 2018-1394, 2018-1395, 1955-1802, AND 1955-1803 FOR ABANDONED WATER MAIN CONSTRUCTION DETAILS.
- WORK ASSOCIATED WITH THE REMOVAL AND ABANDONMENT OF THE EXISTING WATER MAIN IS CONSIDERED INCIDENTAL TO THE WORK BEING PERFORMED.
- FOR THE ACTIVE WATER MAINS THAT ARE TO REMAIN, PROVIDE THRUST RESTRAINT AND/OR BUTTRESSES ALONG ANY PORTIONS OF THE ABANDONED WATER MAIN TO BE REMOVED. INSTALL THRUST RESTRAINT AND BUTTRESSES IN ACCORDANCE WITH BALTIMORE COUNTY BUTTRESS AND THRUST BLOCK DETAILS.

SITE GRADING NOTE:

- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

BALTIMORE COUNTY GRADING NOTES:

- THE PROPOSED GRADING SHOWN ON THIS PLAN MEETS THE REQUIREMENTS SET FORTH BY BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND COMPLIES WITH ARTICLE 33, TITLE 5 OF THE BALTIMORE COUNTY CODE. HOWEVER, DUE TO BUILDING TYPES AND LAYOUT, SOME FIELD ADJUSTMENTS MAY BE REQUIRED. ALL CHANGES MUST COMPLY WITH THE ABOVE MENTIONED REQUIREMENTS.
- ALL SWALES HAVE BEEN DESIGNED BY THE ENGINEER TO CONVEY RUNOFF ACCORDING TO BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS DESIGN STANDARDS.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, OR DISTURBANCE OF VEGETATION IN THE FOREST BUFFER EASEMENT OR OTHER FOREST RETENTION AREAS, EXCEPT AS PERMITTED BY THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY.
- STORMWATER MANAGEMENT HAS BEEN ADDRESSED THROUGH A STORMWATER MANAGEMENT VARIANCE.

STORMWATER MANAGEMENT NOTE:

- THE DISTURBED AREA WILL BE RETURNED TO THE EXISTING HYDROLOGIC CONDITION. STORM WATER MANAGEMENT HAS BEEN ADDRESSED VIA A LINEAR UTILITY WAIVER (PROJECT I.D. M230188, TRACKING NUMBER 05-24-428).

UTILITY DESCRIPTION:

QUALITY LEVEL D (QL-D):

INCLUDES UTILITIES DESIGNATED THROUGH RECORD DOCUMENTS. THIS DATA COULD BE DIGITAL RECORDS, PAPER RECORDS, OR GIS DATA. THE AVAILABLE DATA COULD BE LIMITED AND NOT PRODUCE A COMPLETE PICTURE OF WHAT IS ONSITE. THE COMPLETENESS AND ACCURACY OF THE INFORMATION COULD BE COMPROMISED. HOWEVER, THE DATA COLLECTED IS SHOWN AND DESIGNATED SO AS TO REFLECT THE POTENTIAL FOR THE EXISTENCE OF UTILITIES.

QUALITY LEVEL C (QL-C):

INCLUDES UTILITIES DESIGNATED THROUGH THE PROCESS OF SURVEYING THE VISIBLE UTILITY SURFACE FEATURES. THIS DATA IS COMPILED WITH THE QUALITY LEVEL D DATA TO PROVIDE AN INCREASED, NOT ABSOLUTE, LEVEL OF HORIZONTAL POSITION ACCURACY FOR UNDERGROUND, NON-VISIBLE, QUALITY LEVEL D INFORMATION.

QUALITY LEVEL B (QL-B):

INCLUDES DESIGNATING THE UNDERGROUND UTILITIES BY MARKINGS PROVIDED THROUGH AN 811 CALL, BY CONTACTING AN INDIVIDUAL UTILITY COMPANY, OR PERFORMING TRACING OR GROUND PENETRATING RADAR. THE DESIGNATED UTILITY MARKINGS ARE THEN SURVEYED AND ADDED TO THE DRAWING. THIS DATA IS ADDED TO THE DATA COLLECTED FROM QUALITY LEVELS D AND C TO PROVIDE AN INCREASED LEVEL OF HORIZONTAL POSITION ACCURACY FOR UNDERGROUND, NON-VISIBLE UTILITIES.

QUALITY LEVEL A (QL-A):

INVOLVES PHYSICALLY LOCATING THE ACTUAL UTILITY BY MEANS OF TEST PITTING OR OTHER METHODS OF EXPOSURE. ONCE THE UTILITY IS EXPOSED IT IS LOCATED HORIZONTALLY AND VERTICALLY BY SURVEY MEASUREMENTS.

UTILITIES SHOWN WITHIN ACCESS ROADWAY ARE BASED ON SURVEYED INFORMATION AND SUPPLEMENTED WITH GIS AND ANY AVAILABLE RECORD DRAWINGS. A RECORD DRAWING LIST CAN BE FOUND BELOW:

BALTIMORE COUNTY DPW JOB ORDER NO.	DATE
1-18-6 60-566	1960

TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-1	639,755.66	1,470,592.8303	6.08 FT.	15.92' (L)	185.72	8" C.I. WATER
TP-2	639,744.42	1,470,358.4641	6.15 FT.	15.60' (L)	187.81	8" C.I. WATER
TP-3	639,661.23	1,470,257.1372	5.20 FT.	6.98' (L)	195.88	8" C.I. WATER
TP-4	638,610.94	1,469,332.0983	5.95 FT.	6.27' (L)	225.33	8" C.I. WATER
TP-5	638,598.02	1,469,321.9860	3.25 FT.	4.28' (L)	228.67	2" STL. GAS
TP-6	638,138.92	1,468,877.0546	5.54 FT.	17.59' (L)	235.82	8" C.I. WATER
TP-7	637,848.50	1,468,582.7637	4.49 FT.	8.06' (L)	253.82	8" C.I. WATER
TP-8	637,624.02	1,468,525.8736	4.88 FT.	0.00	271.11	8" C.I. WATER
TP-9	637,640.62	1,468,128.8917	3.90 FT.	3.56' (L)	279.74	12" STL. WATER
TP-10	637,685.54	1,467,590.5001	4.17 FT.	3.56' (R)	278.95	12" STL. WATER

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-1	639,585.80	1,471,148.32
SB-2	639,701.19	1,470,666.51
SB-3	639,730.30	1,470,366.38
SB-4	639,389.11	1,470,079.55
SB-5	639,055.57	1,469,751.04
SB-6	638,767.91	1,469,483.48
SB-7	638,404.80	1,469,145.43
SB-8	638,117.65	1,468,869.00
SB-9	637,628.37	1,468,521.09
SB-10	637,632.10	1,468,135.29
SB-11	637,679.88	1,467,598.25

NOTE: REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL SOIL BORING INFORMATION.

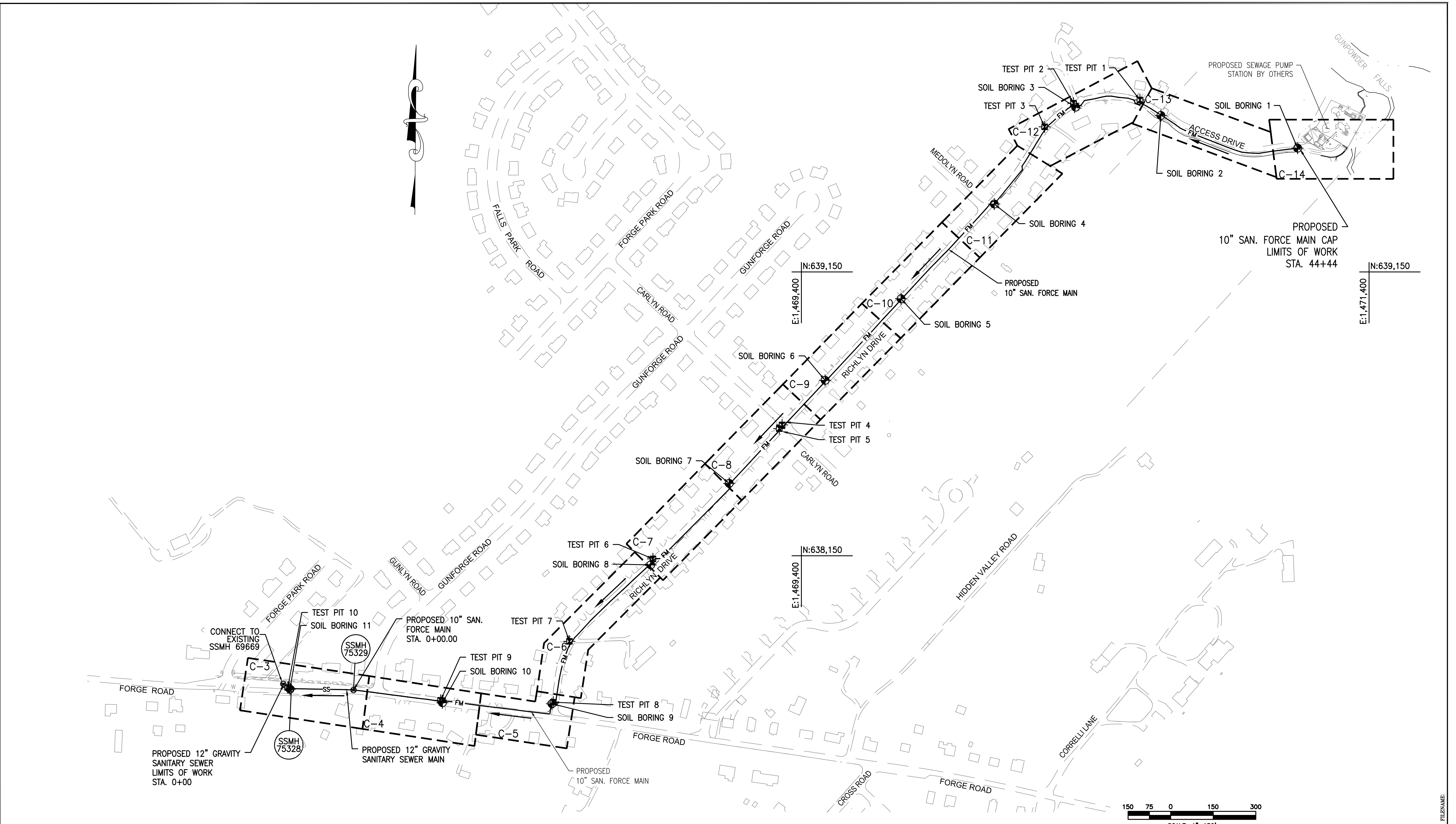
PROJECT LIMIT OF DISTURBANCE = 50,000 S.F. (1.15 ac.)
PROJECT EARTHWORK CALCULATIONS:
CUT: 14,000 C.Y.
FILL: 14,000 C.Y.
FOR PERMITTING USE ONLY. NOT FOR CONTRACTOR.

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

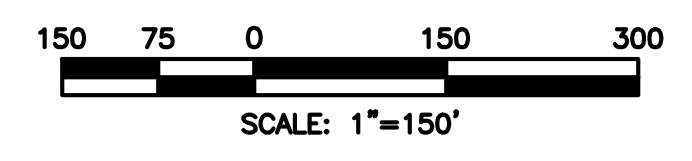
SHEET DESIGNATION	CONTRACT NUMBER
C-1	24084SX0
SHEET 3 OF 39	
DRAWING NUMBER 2024-1138	
FILE NO.:	

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHI	DRAWING SCALE	DPW AND TRANSPORTATION	
	CONTRACT COMPLETION BOX					R.O.W. NO.	QSE	44N232 44N233 45N233 46N233 46N234	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	SEE DRAWING 2024-1138 FOR ORIGINAL SIGNATURES	
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7423 SUITE 105, HUNTSVILLE, MD 21091 INFO@CEENGINEERING.COM		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	AS-BUILT PER RECORD PRINT BY: _____ DATE: _____ DWN BY: MJE, MJP CHKD BY: CMS		REVIEWED BY: _____ DATE REVIEWED: _____		SEE DRAWING 2024-1138 FOR ORIGINAL SIGNATURES						

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION		
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN		
CIVIL LEGEND & NOTES		
SUBDIVISION: RICHLYN MANOR	PERRY HALL, MD	ELECTION DIST. NO.: 11C5



OVERALL PLAN
SCALE: 1"=150'-0"



MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/26/2027		AS-BUILT / REVISION CONTRACT COMPLETION BOX	BY DGN BY: MJE, MJP DWN BY: MJE, MJP CHKD BY: CMS	DATE DATE REVIEWED:	P.W.A. NO. R.O.W. NO.	KEY SHEET QSE	POSITION SHIT 44N22 44N23 45N23 46N23 46N24	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	DPW AND TRANSPORTATION SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7423 SUITE 100, HUNTSVILLE, MD 21031 INFO@CEENGINEERING.COM		BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	AS-BUILT PER RECORD PRINT		REVIEWED BY:	DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	DATE: 7/21/2025		DATE REVIEWED:	DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN OVERALL SITE PLAN SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5	
---	--

SHEET DESIGNATION C-2	CONTRACT NUMBER 24084SX0
PROJECT NUMBER PROJ-10000060	SHEET 4 OF 39
DRAWING NUMBER 2024-1139	FILE NO.:

DWG. FILENAME:

SANITARY SEWER MANHOLE SCHEDULE					
SSMH NO.	NORTHING	EASTING	RIM	INVERT IN	INVERT OUT
48" SSMH 75328	637,681.85	1,467,603.26	284.00	276.60 (12")	276.40 (12")
48" SSMH 75329	637,676.78	1,467,822.24	294.56	282.90 (10")	282.80 (12")

FITTING TABLE		
NO.	DESCRIPTION	SIZE
250'	SDR-35 PVC PIPE	12"
50'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
1	DROP CONNECTION AT EXISTING SANITARY MANHOLE 69669 (DISCHARGE MANHOLE)	12"
1	SANITARY MANHOLE 75328	48"
1	SANITARY MANHOLE 75329	48"

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-11	637679.88	1467598.25

TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-10	637,685.54	1,467,590.50	4.17 FT.	3.56' (R)	278.95	12" STL. WATER

SITE GRADING NOTE:

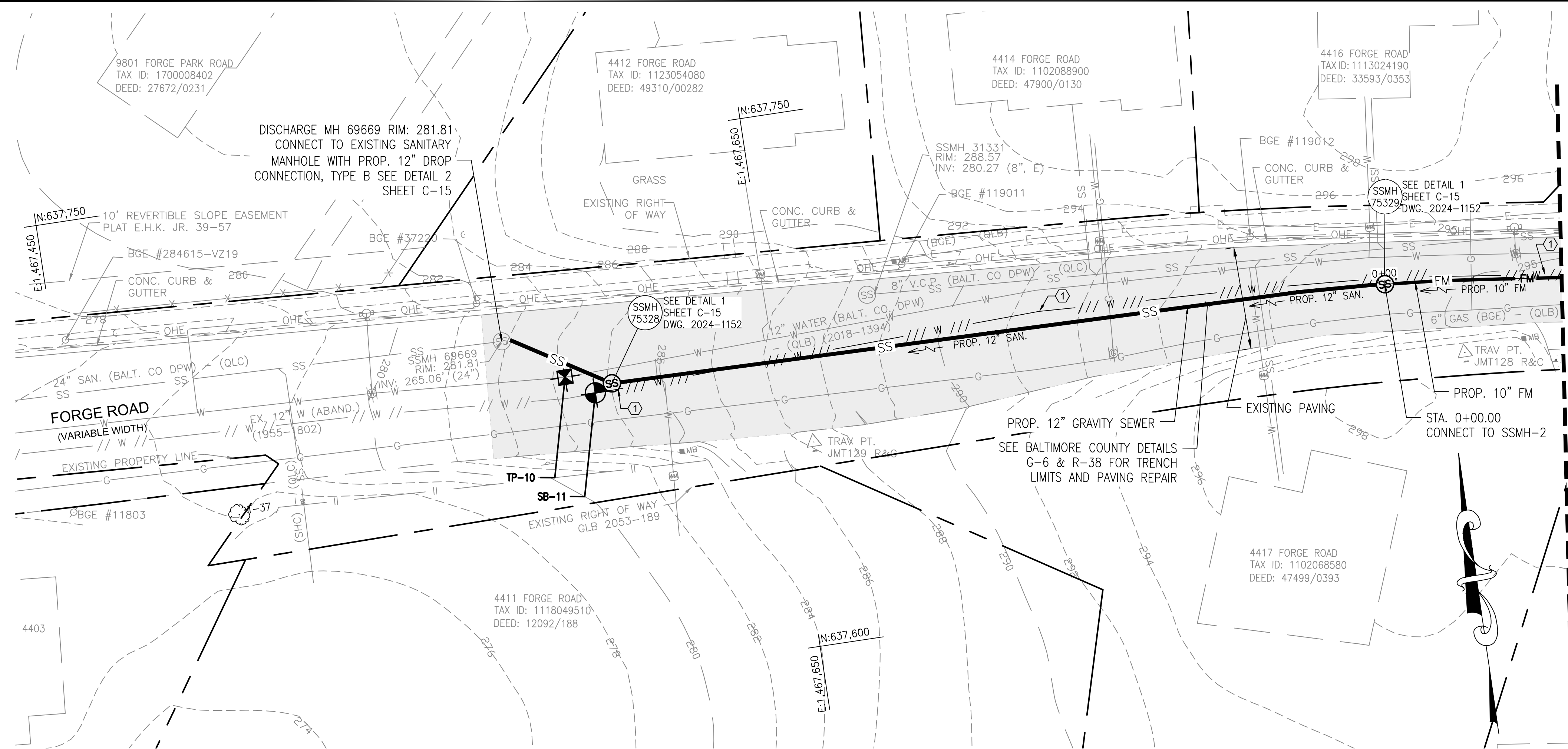
- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

SITE DEMOLITION NOTES:

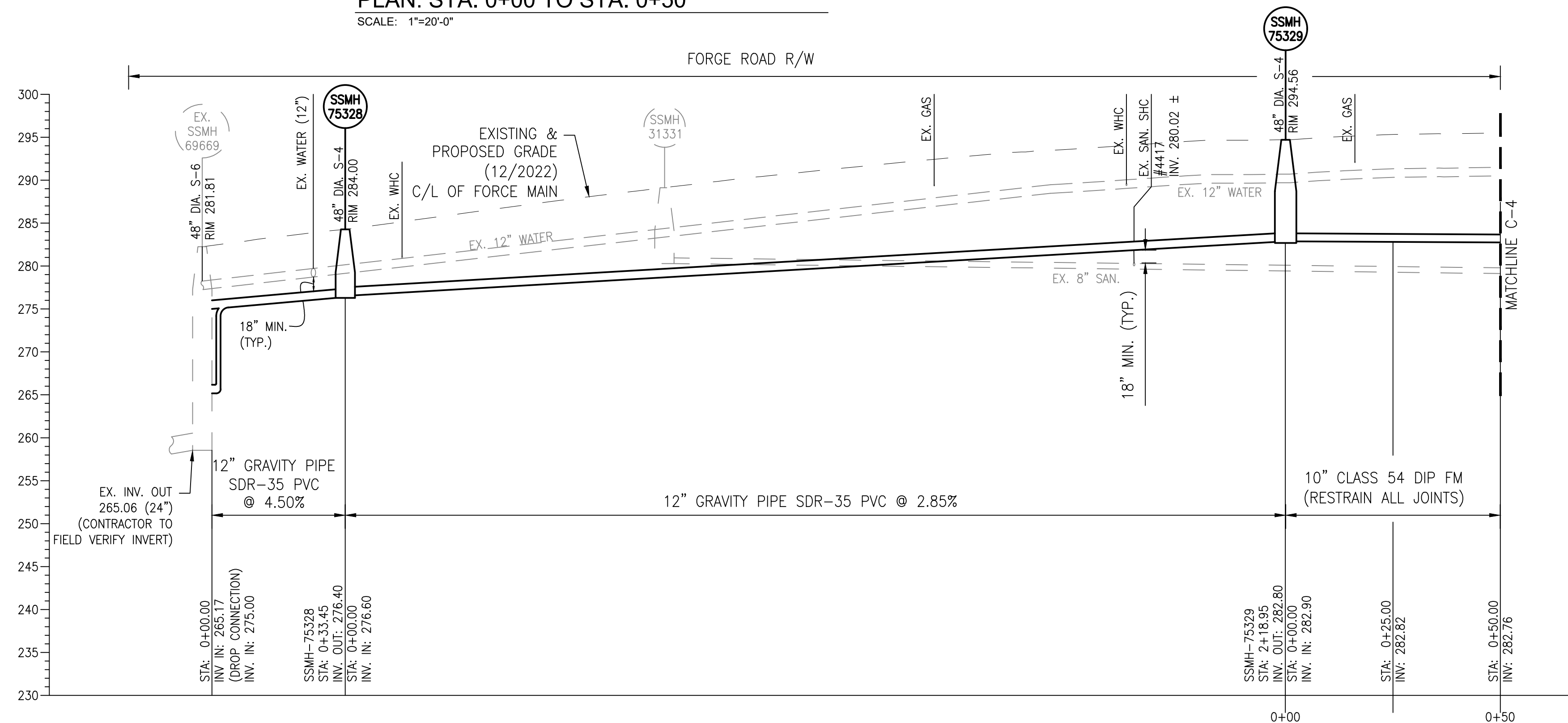
- PER THE DIRECTION OF THE FIELD ENGINEER, REMOVE ABANDONED WATER LINE TO FACILITATE THE INSTALLATION OF THE SANITARY SEWER PIPING. REFER TO GENERAL CONSTRUCTION NOTE 6 ON SHEET C-1.

SHEET NOTES:

- REFER TO GENERAL CONSTRUCTION NOTE 8 ON SHEET C-1 REGARDING BUTTRESS AND THRUST RESTRAINT INSTALLATION.



PLAN: STA. 0+00 TO STA. 0+50
SCALE: 1"=20'-0"



PROFILE: STA. 0+00 TO STA. 0+50
HORIZ. 1"=20'
VERT. 1"=10'



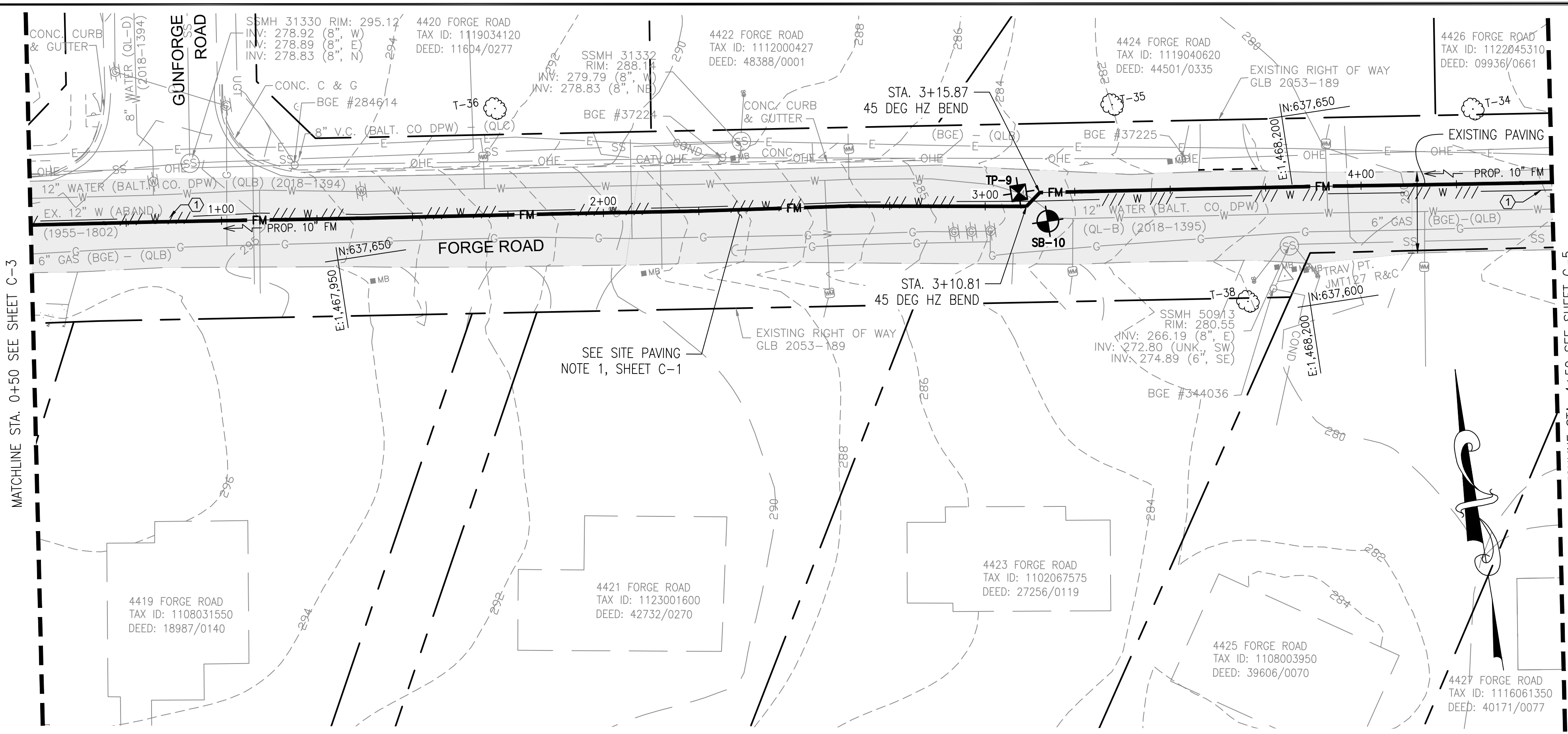
MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	SHEET	DRAWING SCALE	DPW AND TRANSPORTATION
		CONTRACT COMPLETION BOX	REVISION								
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/26/2027 ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7423 SUITE 100, HUNTS VALLEY, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT BY: MJE, MJP DATE: 7/21/2025 CHKD BY: CMS	CONTRACT COMPLETION BOX BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER		DGN BY: MJE, MJP DWN BY: MJE, MJP REVIEWED BY: DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION				
		BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 0+00 TO STA. 0+50 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD									

SHEET DESIGNATION	CONTRACT NUMBER
C-3	24084SX0
PROJECT NUMBER PROJ-10000060 SHEET 5 OF 39 DRAWING NUMBER 2024-1140 FILE NO.:	



DWG. FILENAME:



PLAN: STA. 0+50 TO STA. 4+50
SCALE: 1"=20'-0"

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 3+10.81	45' HB	637,636.78	1,468,130.34
STA. 3+15.87	45' HB	637,639.84	1,468,134.36

FITTING TABLE		
NO.	DESCRIPTION	SIZE
400'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
2	45 DEG. HZ BEND	10"

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-10	637632.10	1468135.29

TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-9	637,640.62	1,468,128.89	3.90 FT.	3.56' (L)	279.74	12" STL. WATER

SITE GRADING NOTE:

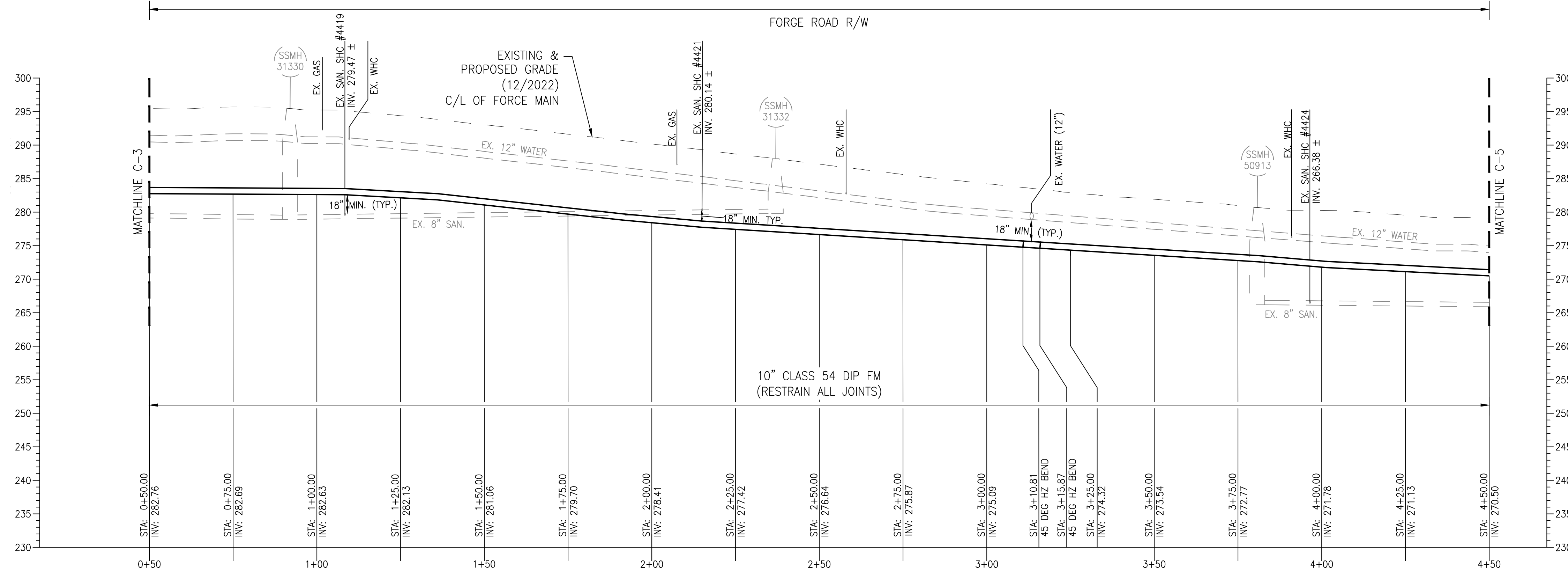
- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

SITE DEMOLITION NOTES:

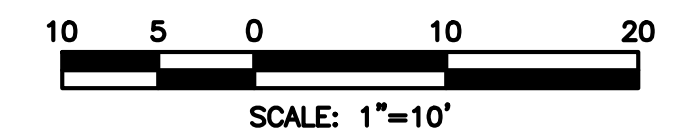
- PER THE DIRECTION OF THE FIELD ENGINEER, REMOVE ABANDONED WATER LINE TO FACILITATE THE INSTALLATION OF THE SANITARY SEWER PIPING. REFER TO GENERAL CONSTRUCTION NOTE 6 ON SHEET C-1.

SHEET NOTES:

- REFER TO GENERAL CONSTRUCTION NOTE 8 ON SHEET C-1 REGARDING BUTTRESS AND THRUST RESTRAINT INSTALLATION.



PROFILE: STA. 0+50 TO STA. 4+50
HORIZ. 1"=20'
VERT. 1"=10'



SCALE: 1"=20'

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.					R.O.W. NO.	QSE	44N32 44N33 45N33 46N33 46N34	AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
	LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		CONTRACT COMPLETION BOX							HORIZ: 1"=20' VERT: 1"=10'	BUR. OF ENGINEERING & CONSTRUCTION
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7483 SUITE 100, HUNTSVILLE, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT		DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
BY: _____ DATE: _____ CHKD BY: CMS		DWN BY: MJE, MJP	REVIEWED BY:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES							

SHEET DESIGNATION		CONTRACT NUMBER
C-4		24084SX0
PROJECT NUMBER		PROJ-10000060
SHEET 6 OF 39		
DRAWING NUMBER		2024-1141
FILE NO.:		

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 PLAN & PROFILE STA. 0+50 TO STA. 4+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 6+95.15	45° HB	637,592.81	1,468,510.70
STA. 7+00.14	45° HB	637,595.90	1,468,514.63
STA. 7+34.61	45° HB	637,630.02	1,468,519.45
STA. 7+54.47	45° HB	637,641.72	1,468,535.50

FITTING TABLE		
NO.	DESCRIPTION	SIZE
325'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
4	45 DEG. HZ BEND	10"

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-9	637628.37	1468521.09

TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-8	637,624.02	1,468,525.87	4.88 FT.	0.00	271.11	8" C.I. WATER

SITE GRADING NOTE:

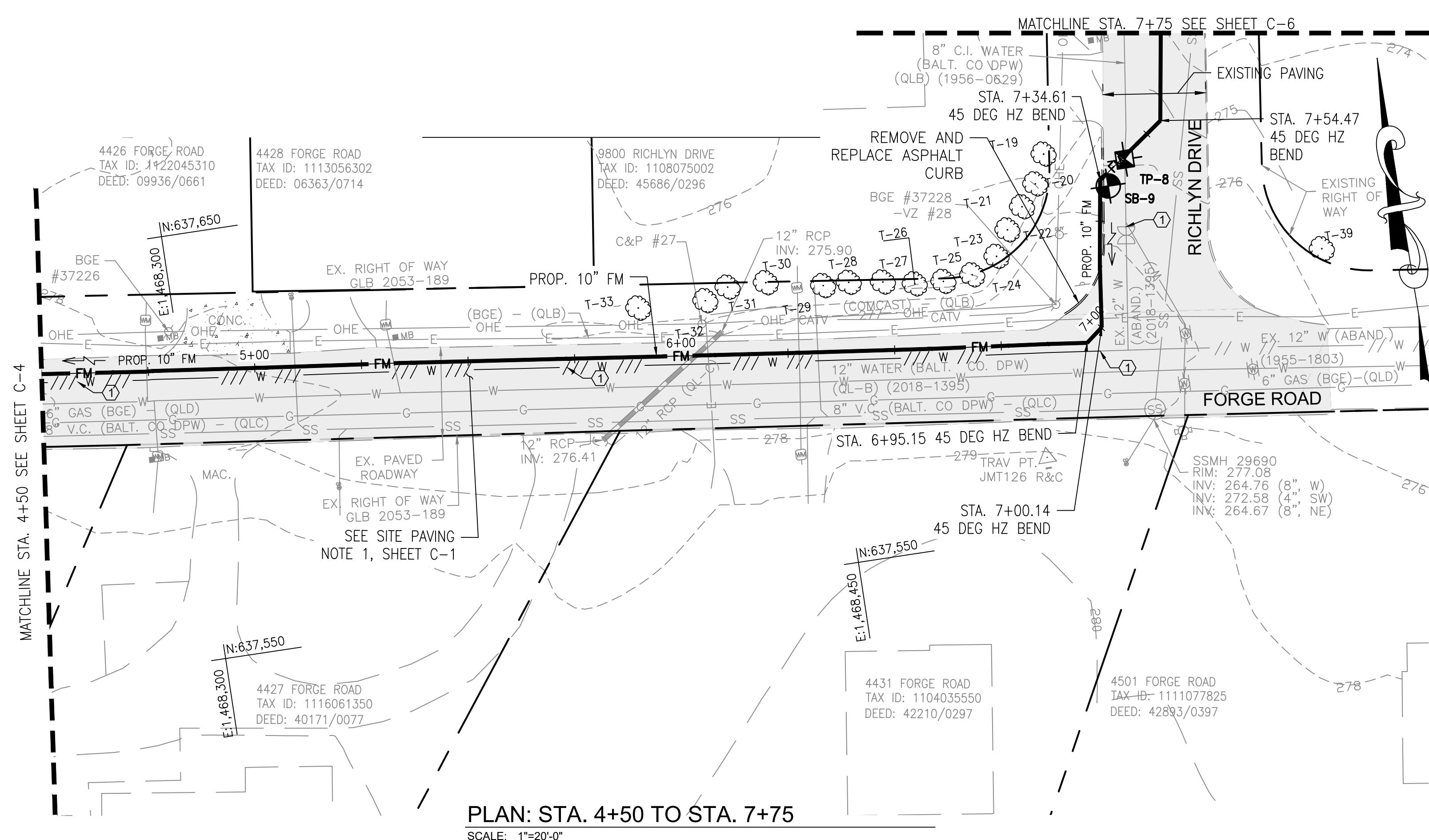
- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

SITE DEMOLITION NOTES:

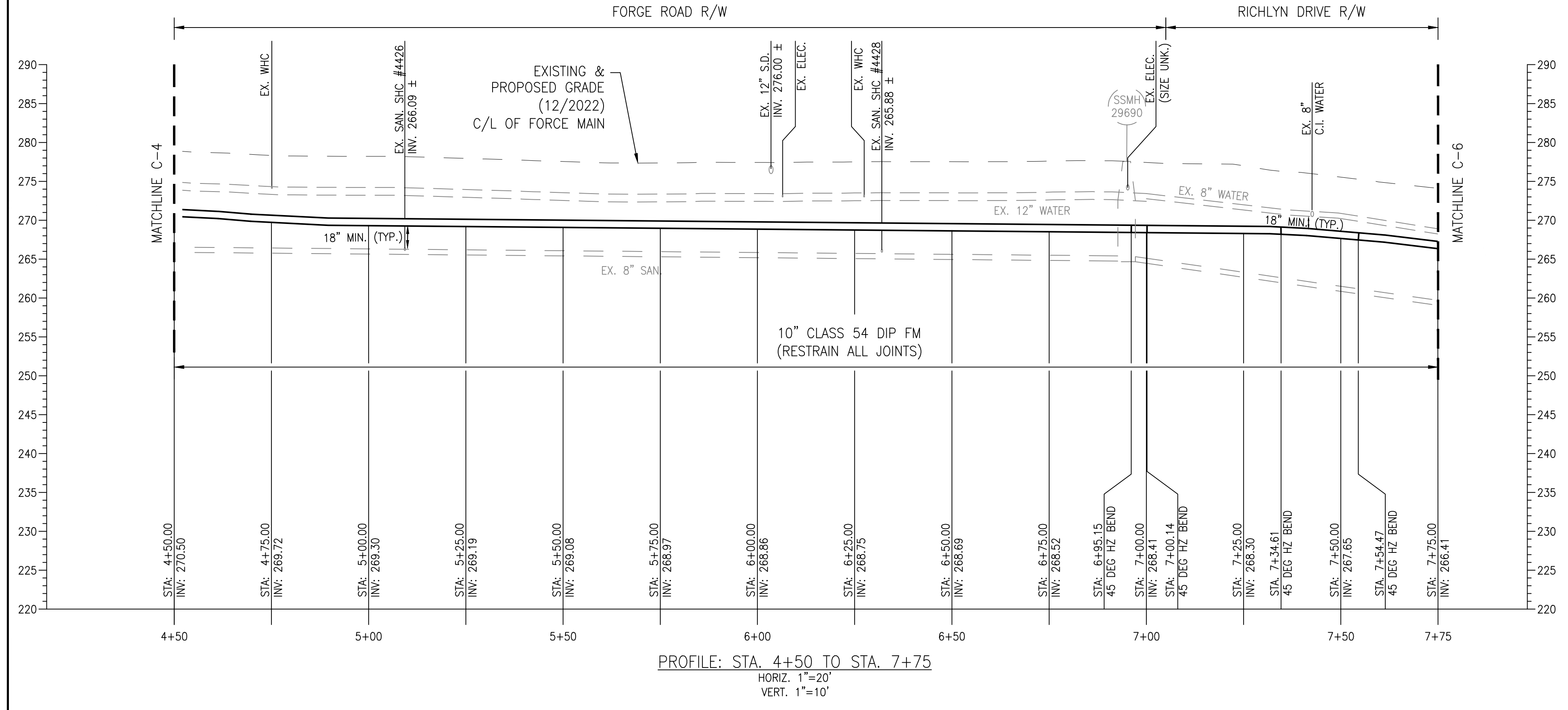
- PER THE DIRECTION OF THE FIELD ENGINEER, REMOVE ABANDONED WATER LINE TO FACILITATE THE INSTALLATION OF THE SANITARY SEWER PIPING. REFER TO GENERAL CONSTRUCTION NOTE 6 ON SHEET C-1.

SHEET NOTES:

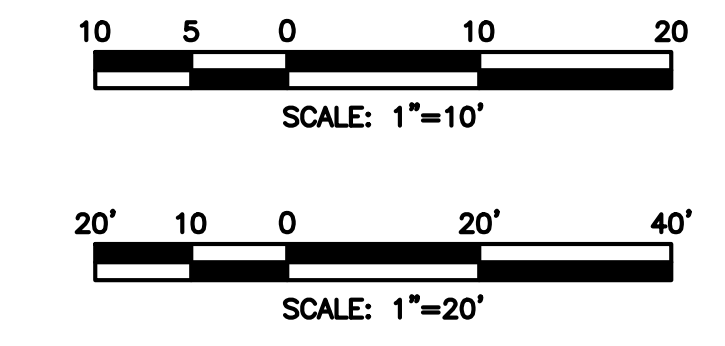
- CONTRACTOR SHALL PROVIDE THRUST BLOCK AT REMAINING PIPE INTERSECTION SHOULD IT BE DETERMINED THAT THERE ARE RESIDUAL LATERAL FORCES IN THE ABANDONED WATER MAIN FROM THE ACTIVE PORTION TO THE NORTH. REFER TO GENERAL CONSTRUCTION NOTE 8 ON SHEET C-1 REGARDING BUTTRESS AND THRUST RESTRAINT INSTALLATION.



PLAN: STA. 4+50 TO STA. 7+75
SCALE: 1"=20'-0"



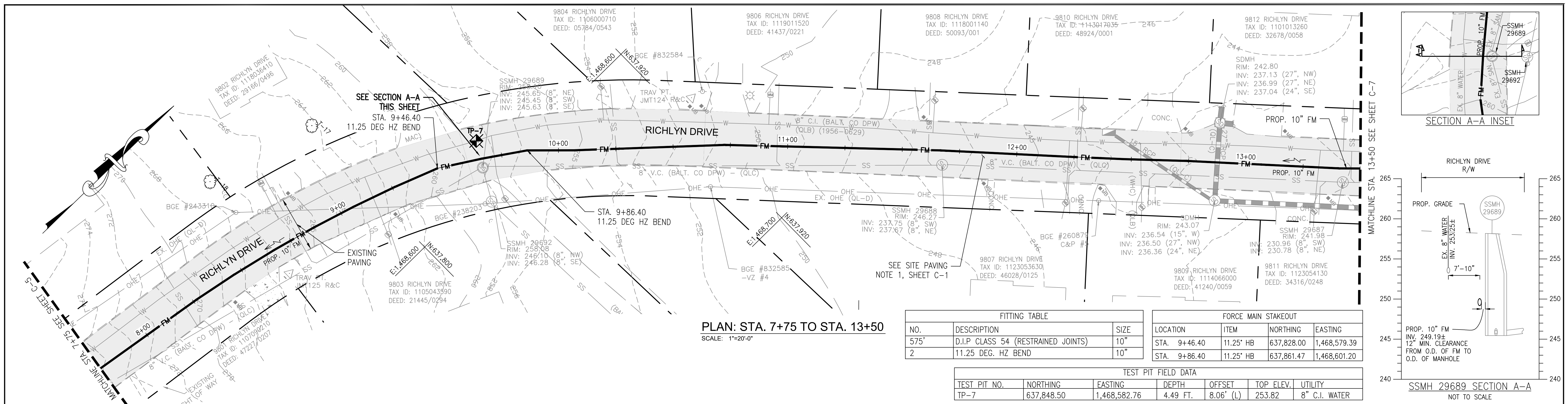
PROFILE: STA. 4+50 TO STA. 7+75
HORIZ. 1"=20'
VERT. 1"=10'



	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	DRAWING SCALE	DPW AND TRANSPORTATION
	LICENSE NO. 14446 EXPIRATION DATE 5/26/2027		CONTRACT COMPLETION BOX			R.O.W. NO.	QSE	44N32 44N33 45N33 46N33 46N34	AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7423 SUITE 100 HUNTS VALLEY, MD 21031 INFO@CEENGINEERING.COM	DGN BY: MJE, MJP DWN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER						1"=20'	1"=10'
	DATE: 7/21/2025		CHECKED BY: CMS DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES						

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 4+50 TO STA. 7+75		SHEET DESIGNATION C-5	CONTRACT NUMBER 24084SX0
SUBDIVISION: RICHLYN MANOR PERRY HALL, MD		PROJECT NUMBER PROJ-10000060	SHEET 7 OF 39 DRAWING NUMBER 2024-1142
ELECTION DIST. NO.: 11C5		FILE NO.:	

DWG. FILENAME:

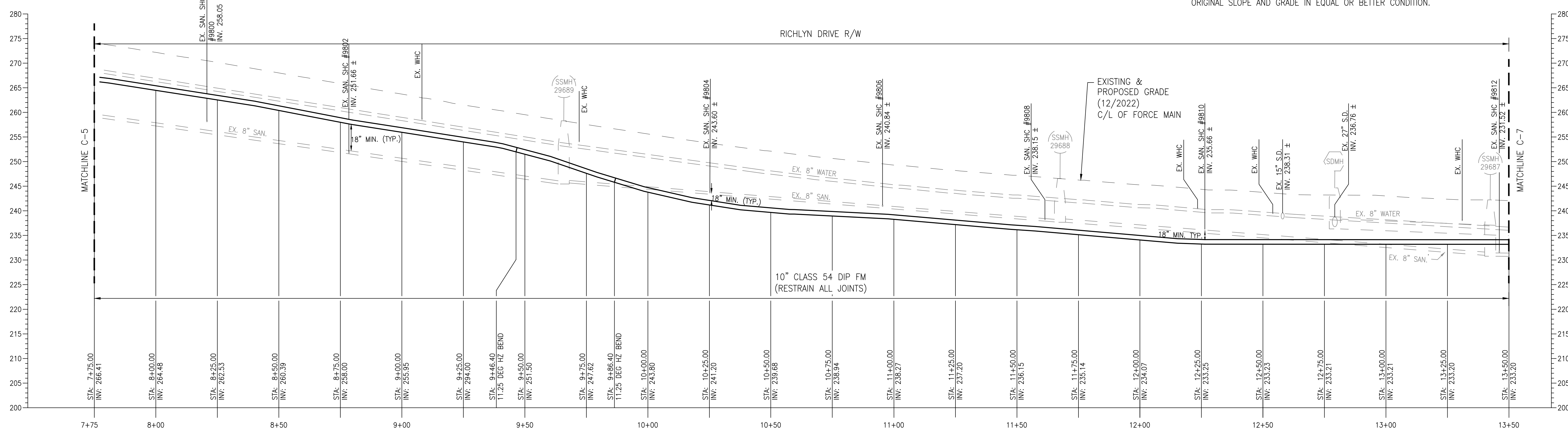


PLAN: STA. 7+75 TO STA. 13+50
SCALE: 1"=20'-0"

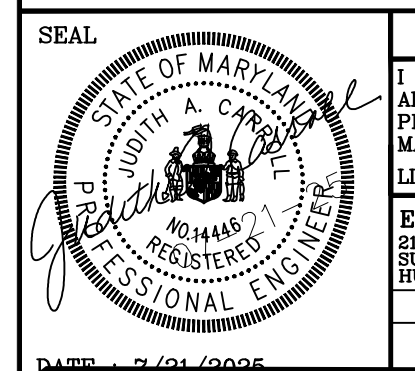
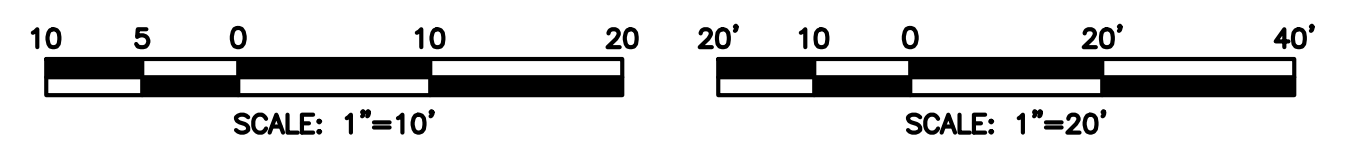
FITTING TABLE			FORCE MAIN STAKEOUT			
NO.	DESCRIPTION	SIZE	LOCATION	ITEM	NORTHING	EASTING
575'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"	STA. 9+46.40	11.25' HB	637,828.00	1,468,579.39
2	11.25 DEG. HZ BEND	10"	STA. 9+86.40	11.25' HB	637,861.47	1,468,601.20

TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-7	637,848.50	1,468,582.76	4.49 FT.	8.06' (L)	253.82	8" C.I. WATER

SITE GRADING NOTE:
1. CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

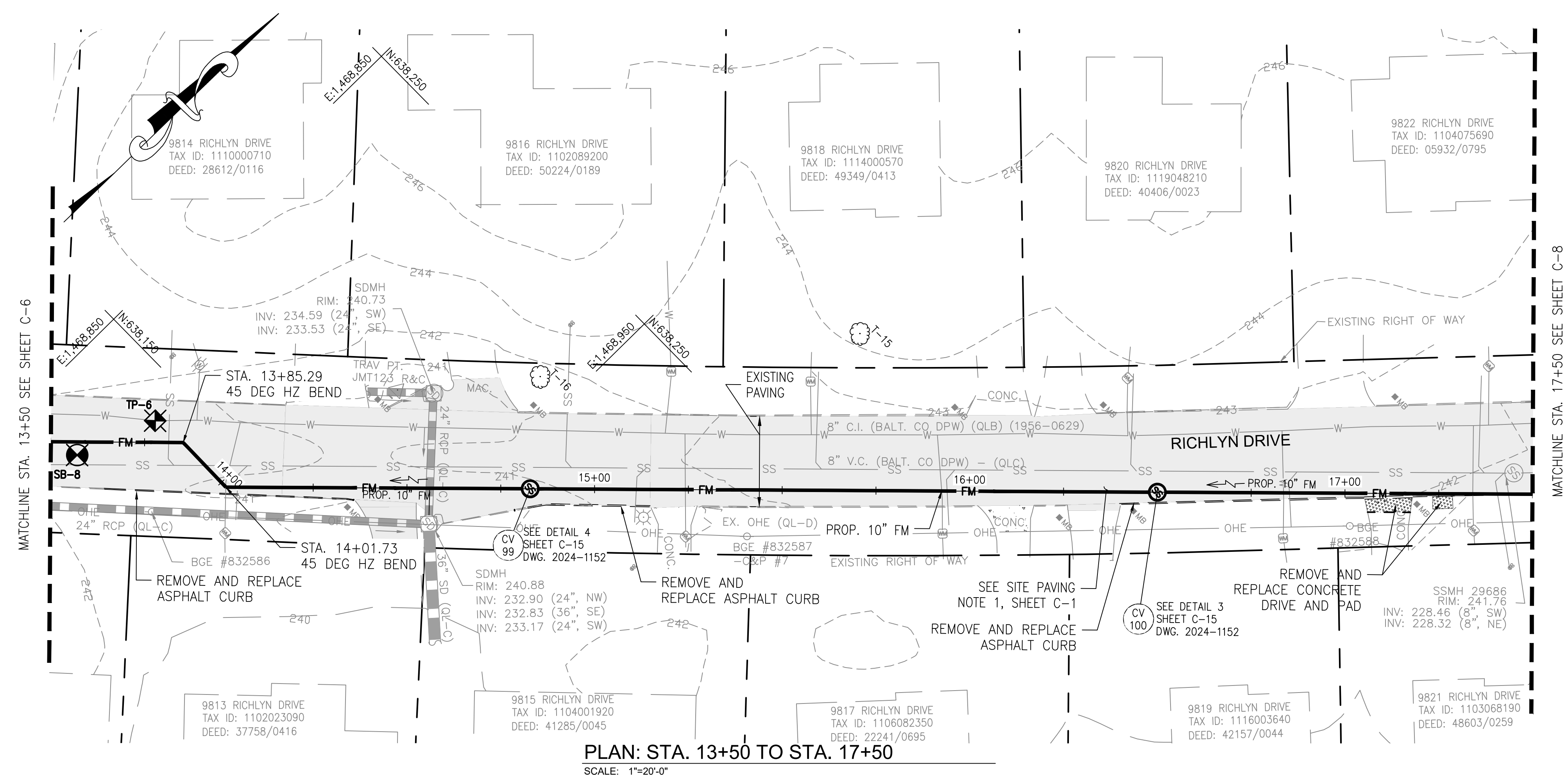


PROFILE: STA. 7+75 TO STA. 13+50
HORIZ. 1"=20'
VERT. 1"=10'



PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/26/2027		AS-BUILT / REVISION BY: _____ DATE: _____ P.W.A. NO. _____ KEY SHEET POSITION SH# _____ DRAWING SCALE _____ DPW AND TRANSPORTATION _____
ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7483 SUITE 100, HUNTS VALLEY, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT BY: _____ CHKD BY: CMS	DGN BY: MJE, MJP BUR. OF ENGINEERING & CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION REVIEWED BY: _____ DATE REVIEWED: _____	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 7+75 TO STA. 13+50 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5		SHEET DESIGNATION C-6	CONTRACT NUMBER 24084SX0
		PROJECT NUMBER PROJ-10000060	SHEET 8 OF 39
DWG. FILENAME:		DRAWING NUMBER 2024-1143	FILE NO.:



PLAN: STA. 13+50 TO STA. 17+50
SCALE: 1"=20'-0"

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 13+85.29	45' HB	638,140.18	1,468,886.42
STA. 14+01.73	45' HB	638,139.96	1,468,884.54
STA. 14+82.85	CV99	638,197.52	1,468,902.87
STA. 16+50.00	CV100	638,316.12	1,469,077.79

FITTING TABLE		
NO.	DESCRIPTION	SIZE
400'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
2	45 DEG. HZ BEND	10"

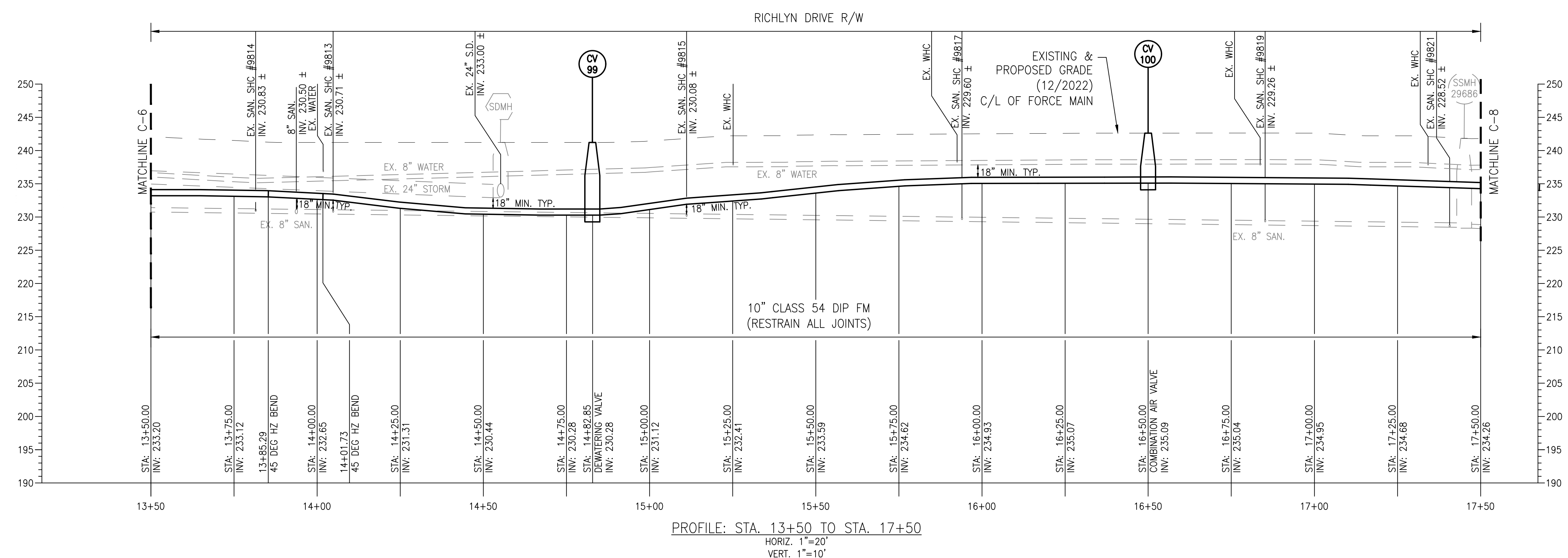
STRUCTURE TABLE			
VAULT NO.	DESCRIPTION	RIM	INVERT
CV99	30" SANITARY MANHOLE (DEWATERING VALVE AND VAULT)	240.89	230.28
CV100	30" SANITARY MANHOLE (COMBINATION AIR/ VACUUM RELIEF VALVE AND VAULT)	242.70	235.09

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-8	638117.65	1468869.00

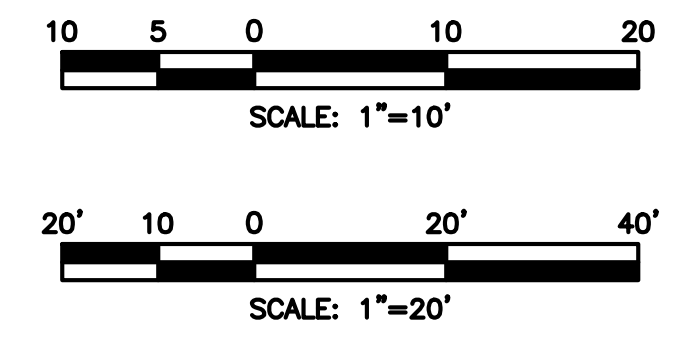
TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-6	638,138.92	1,468,877.05	5.54 FT.	17.59' (L)	235.82	8" C.I. WATER

SITE GRADING NOTE:

- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.



PROFILE: STA. 13+50 TO STA. 17+50
HORIZ. 1"=20'
VERT. 1"=10'



MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.					R.O.W. NO.	QSE	PLAN SCALE: AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
	LICENSE NO. 14446 EXPIRATION DATE 5/26/2027		CONTRACT COMPLETION BOX						PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	
	ENGINEER: CARROLL ENGINEERING, INC. 215 SCHILLING CIRCLE, PH. 410-795-7483	DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
BY: DATE:	CHKD BY: CMS	REVIEWED BY:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES							

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION	
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN	
PLAN & PROFILE STA. 13+50 TO STA. 17+50	
SHEET DESIGNATION C-7	CONTRACT NUMBER 24084SX0
PROJECT NUMBER PROJ-10000060	
SHEET 9 OF 39	
DRAWING NUMBER 2024-1144	
FILE NO.:	
SUBDIVISION: RICHLYN MANOR	PERRY HALL, MD
ELECTION DIST. NO.: 11C5	

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 17+51.13	45° HB	638,387.88	1,469,149.04
STA. 17+67.64	45° HB	638,404.39	1,469,148.49

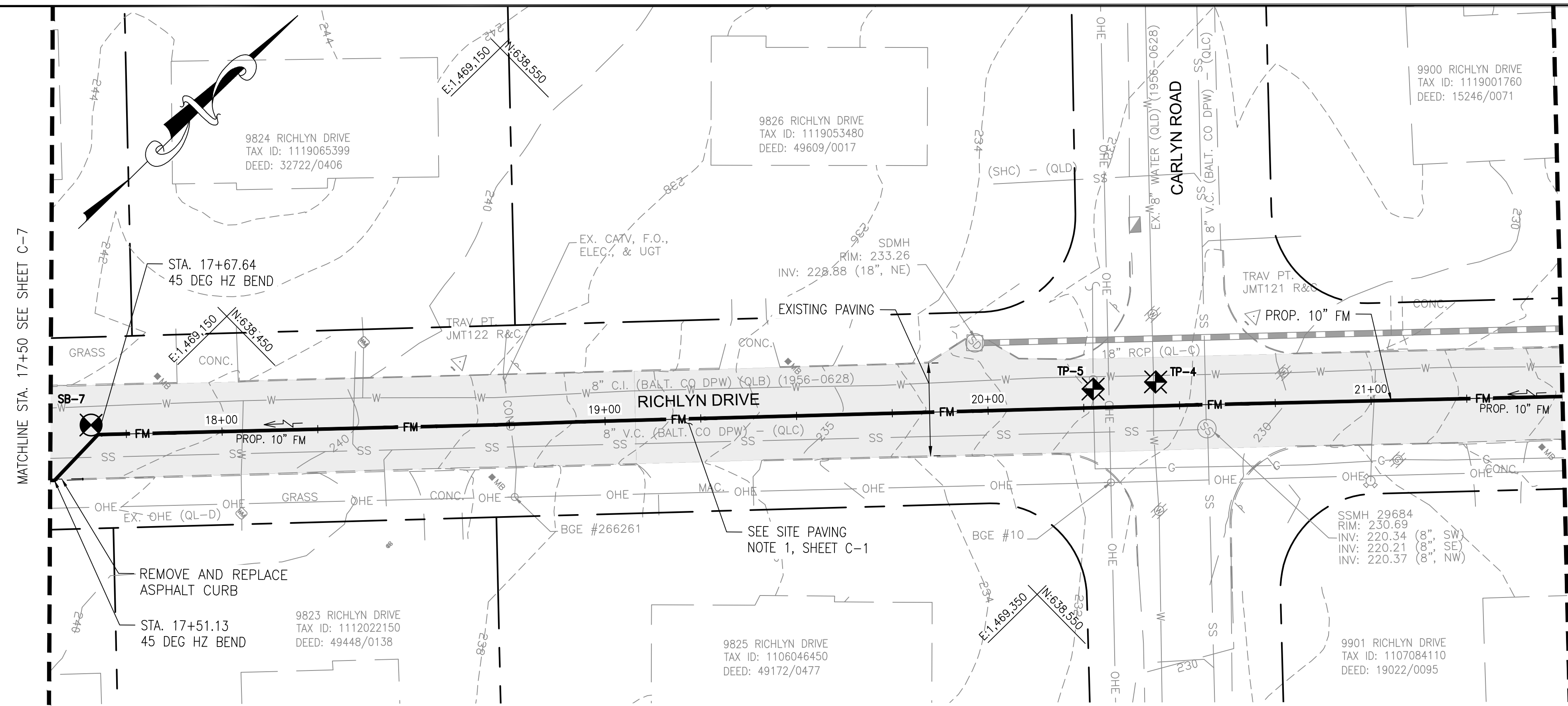
FITTING TABLE		
NO.	DESCRIPTION	SIZE
400'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
2	45 DEG. HZ BEND	10"

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-7	638404.80	1469145.43

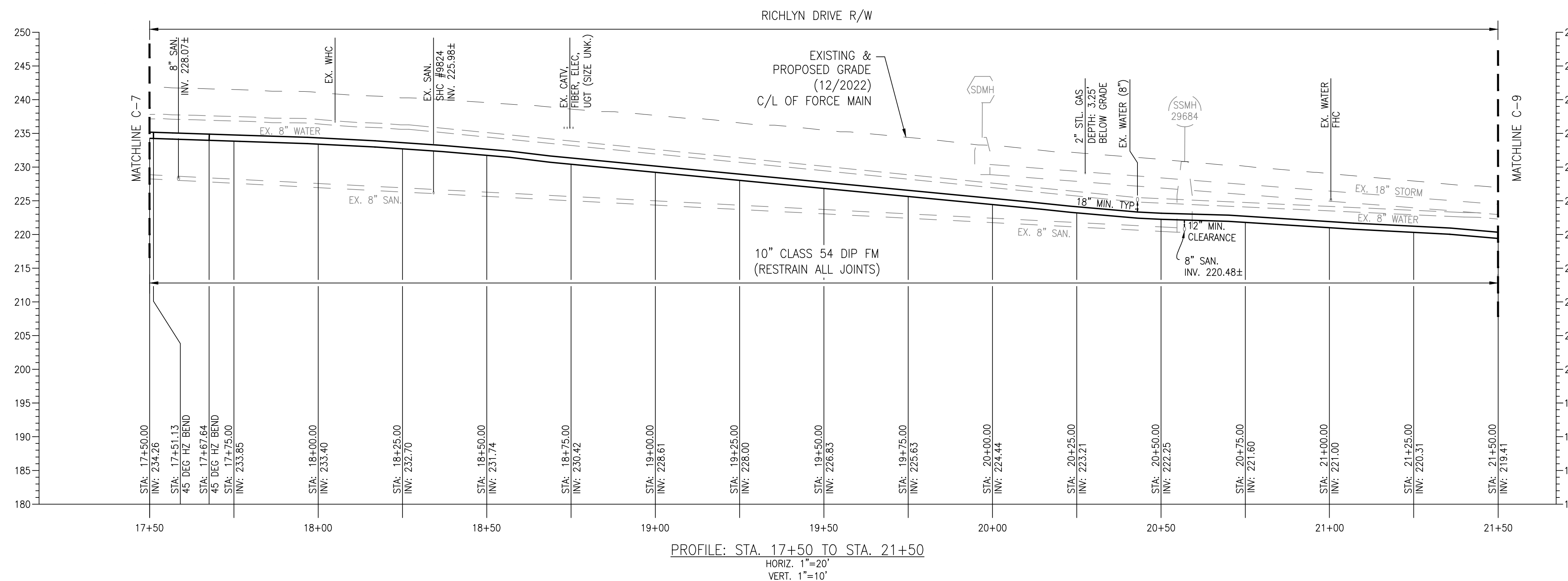
TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-4	638,610.94	1,469,332.09	5.95 FT.	6.27' (L)	225.33	8" C.I. WATER
TP-5	638,598.02	1,469,321.98	3.25 FT.	4.28' (L)	228.67	2" STL. GAS

SITE GRADING NOTE:

- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.



PLAN: STA. 17+50 TO STA. 21+50
SCALE: 1"=20'-0"



	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/26/2027		AS-BUILT / REVISION CONTRACT COMPLETION BOX	BY DGN BY: MJE, MJP DWN BY: MJE, MJP CHKD BY: CMS	DATE DATE REVIEWED:	P.W.A. NO. R.O.W. NO.	KEY SHEET POSITION SHIT QSE	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	DPW AND TRANSPORTATION SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7483 BUILT IN VALLEY, MD 21031 INFO@CEENGINEERING.COM		BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES					
	AS-BUILT PER RECORD PRINT		SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES						
	DATE: 7/21/2025		SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5						

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 17+50 TO STA. 21+50		SHEET DESIGNATION C-8	CONTRACT NUMBER 24084SX0
		PROJECT NUMBER PROJ-10000060	SHEET 10 OF 39 DRAWING NUMBER 2024-1145
FILE NO.:		DATE:	

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 22+61.87	CV101	638,765.67	1,469,485.74

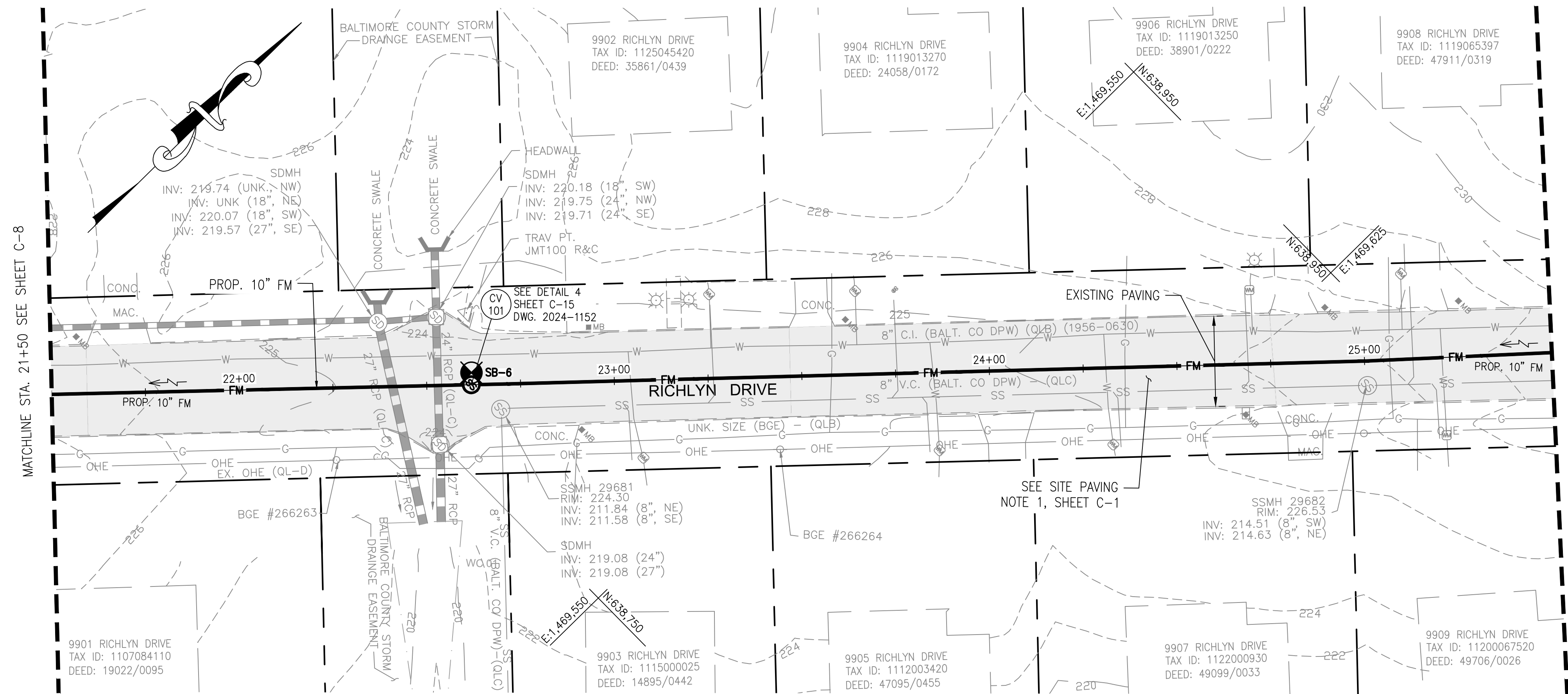
FITTING TABLE		
NO.	DESCRIPTION	SIZE
400'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"

STRUCTURE TABLE			
VAULT NO.	DESCRIPTION	RIM	INVERT
CV101	30" SANITARY MANHOLE (DEWATERING VALVE AND VAULT)	224.62	215.75

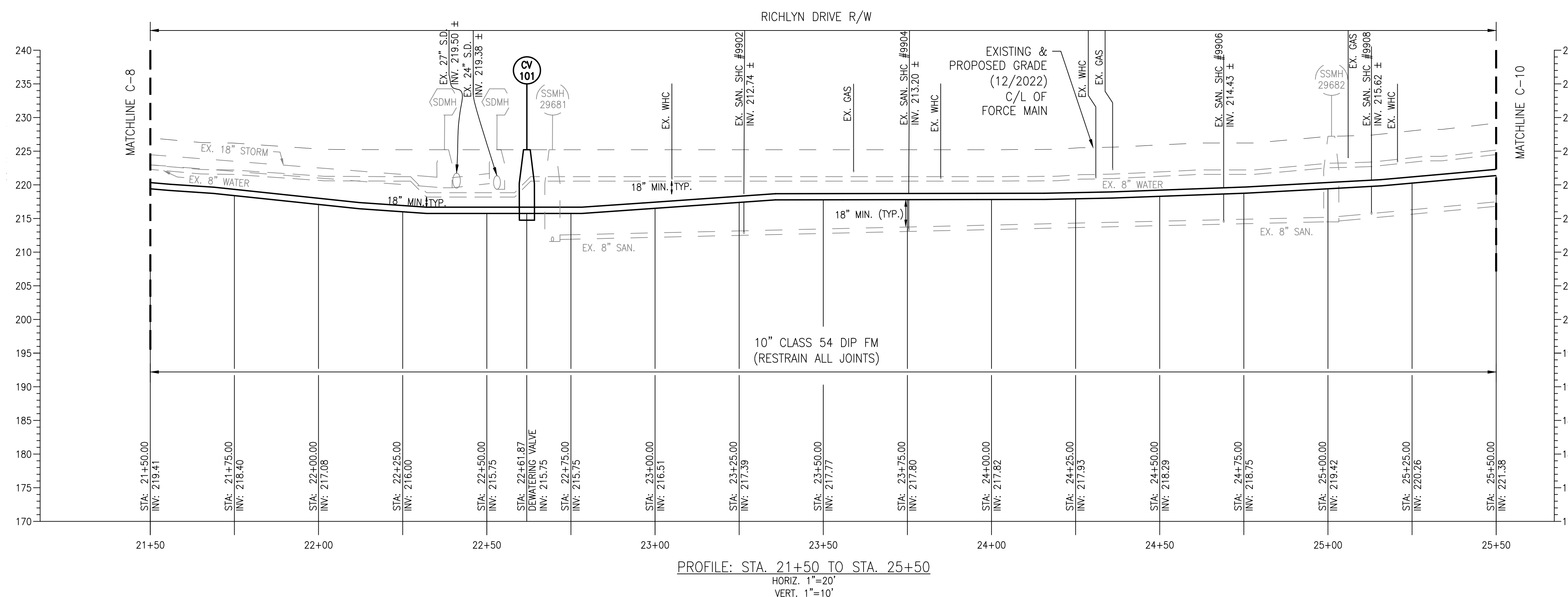
SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-6	638767.91	1469483.48

SITE GRADING NOTE:

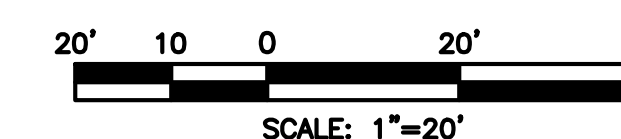
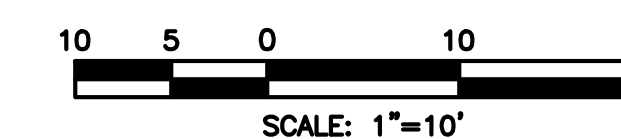
- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.



PLAN: STA. 21+50 TO STA. 25+50
SCALE: 1"=20'-0"



PROFILE: STA. 21+50 TO STA. 25+50
HORIZ. 1"=20'
VERT. 1"=10'



MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

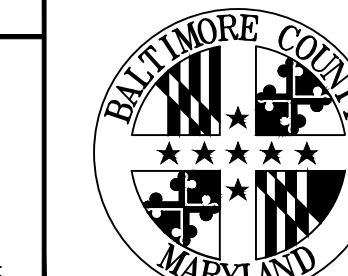
SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION
		CONTRACT COMPLETION BOX	TRAFFIC							
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/26/2027 ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7483 SUITE 200, HUNTS VALLEY, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT	DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
		DWN BY: MJE, MJP	REVIEWED BY:	DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES					

SHEET DESIGNATION		CONTRACT NUMBER
C-9		24084SX0
PROJECT NUMBER		PROJ-10000060
SHEET 11 OF 39		
DRAWING NUMBER		2024-1146
FILE NO.:		

SUBDIVISION: RICHLYN MANOR

PERRY HALL, MD

ELECTION DIST. NO.: 11C5



DWG. FILENAME:

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 28+60.33	CV102	639,203.73	1,469,893.36

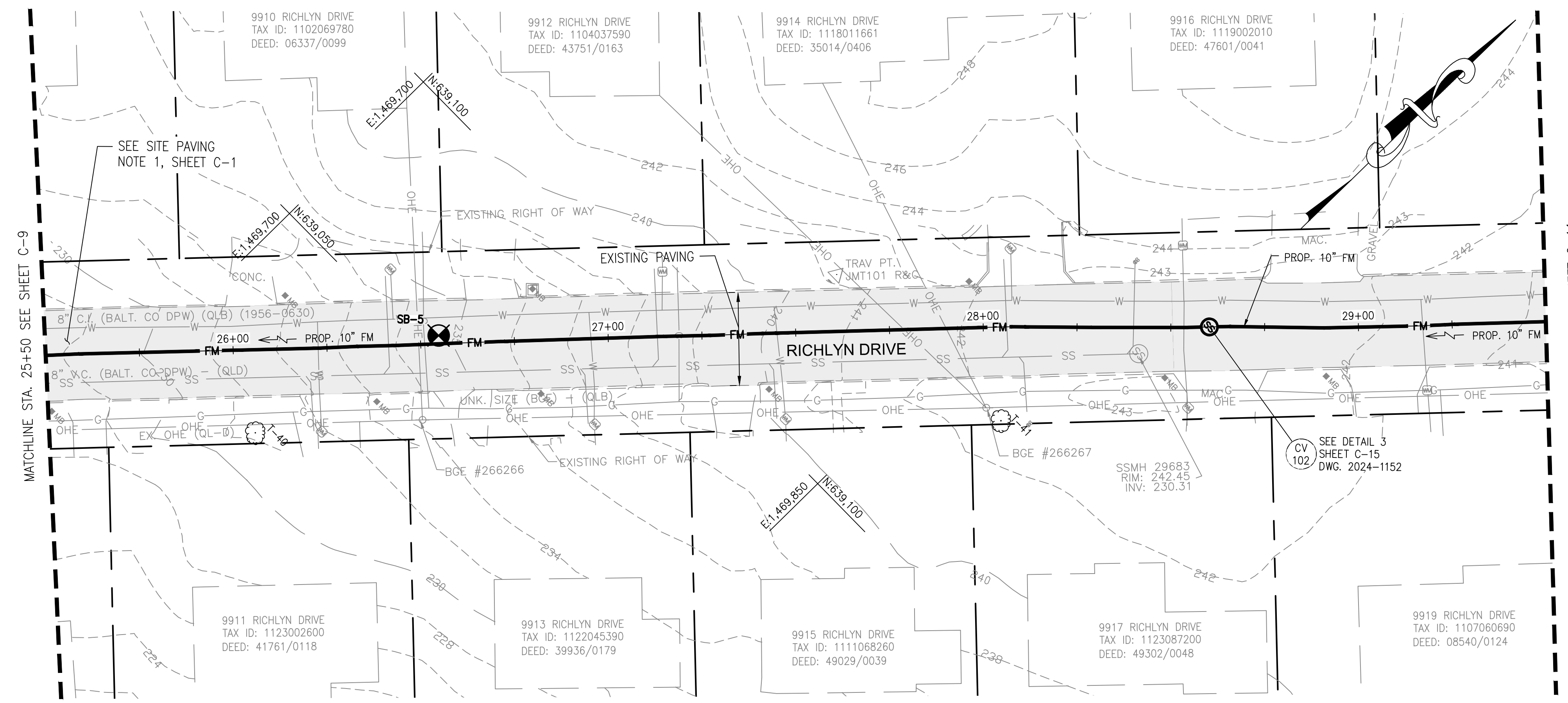
FITTING TABLE		
NO.	DESCRIPTION	SIZE
400'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"

STRUCTURE TABLE			
VAULT NO.	DESCRIPTION	RIM	INVERT
CV102	30" SANITARY MANHOLE (COMBINATION AIR/ VACUUM RELIEF VALVE AND VAULT)	242.61	234.61

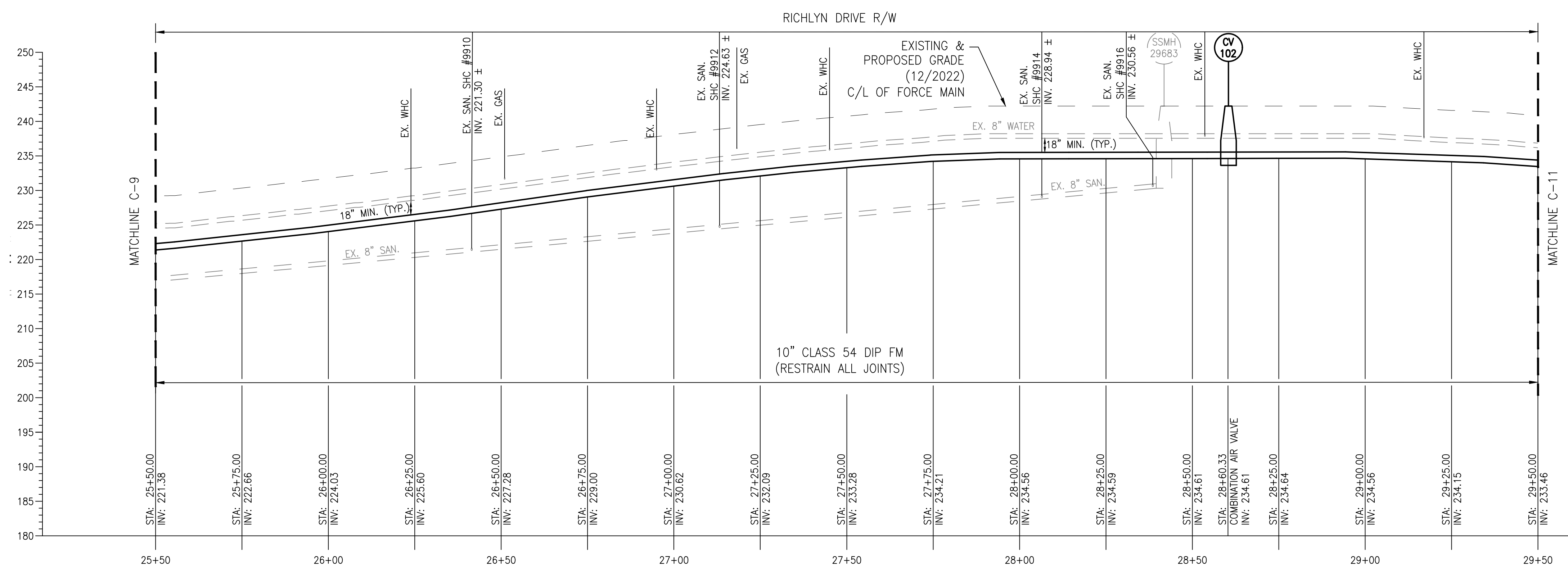
SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-5	639055.57	1469751.04

SITE GRADING NOTE:

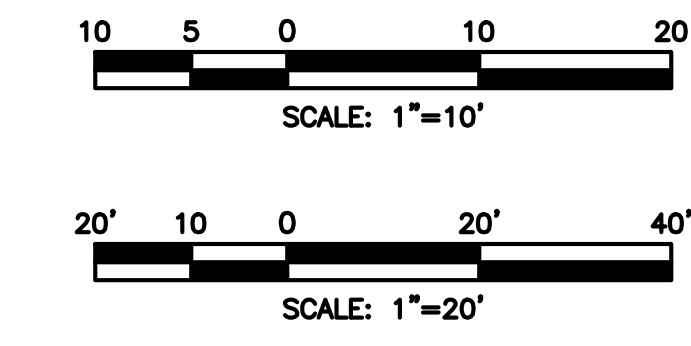
- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.



PLAN: STA. 25+50 TO STA. 29+50
SCALE: 1"=20'-0"



PROFILE: STA. 25+50 TO STA. 29+50
HORIZ. 1"=20'
VERT. 1"=10'



	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 6/26/2027		AS-BUILT / REVISION _____ _____ _____	BY _____ DATE _____	P.W.A. NO. _____ R.O.W. NO. _____	KEY SHEET POSITION SHI 44N32 44N33 45N33 46N33 46N34	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	DPW AND TRANSPORTATION SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
	CONTRACT COMPLETION BOX ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7483 BELT VALLEY, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT		BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER	REVIEWED BY: _____ DATE REVIEWED: _____	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES			
	BY: _____ DATE: _____		CHKD BY: CMS		SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5			
	DATE: 7/21/2025		FILE NAME:		SHEET DESIGNATION: C-10 CONTRACT NUMBER: 24084SX0 PROJECT NUMBER: PROJ-10000060 SHEET 12 OF 39 DRAWING NUMBER: 2024-1147 FILE NO.:			

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 25+50 TO STA. 29+50		
SHEET DESIGNATION: C-10 CONTRACT NUMBER: 24084SX0		
PROJECT NUMBER: PROJ-10000060		
SHEET 12 OF 39 DRAWING NUMBER: 2024-1147		
FILE NO.:		

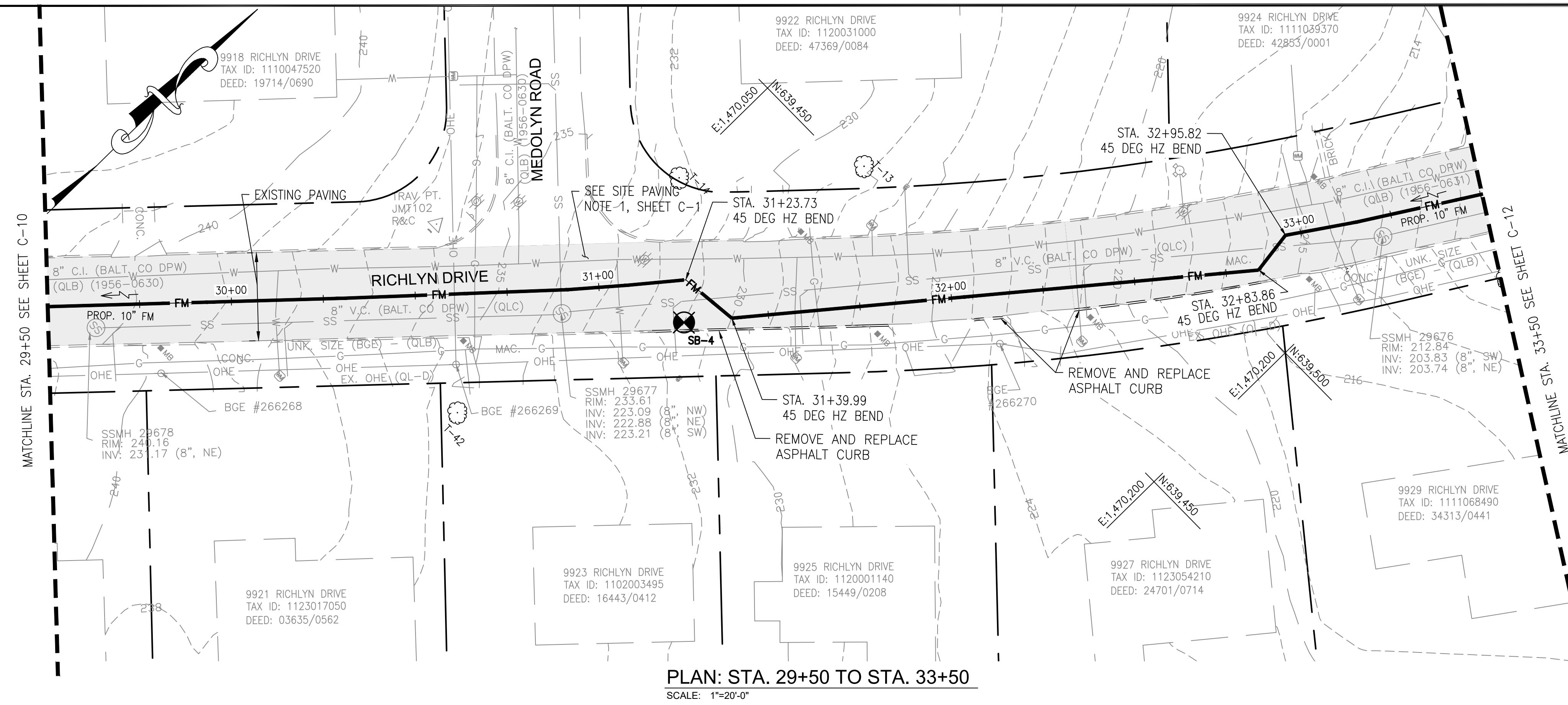
FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 31+07.58	45° HB	639,385.11	1,470,061.40
STA. 31+23.84	45° HB	639,386.73	1,470,077.58
STA. 33+03.33	45° HB	639,525.68	1,470,191.20
STA. 31+16.65	45° HB	639,538.65	1,470,188.17

FITTING TABLE		
NO.	DESCRIPTION	SIZE
400'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
4	45 DEG. HZ BEND	10"

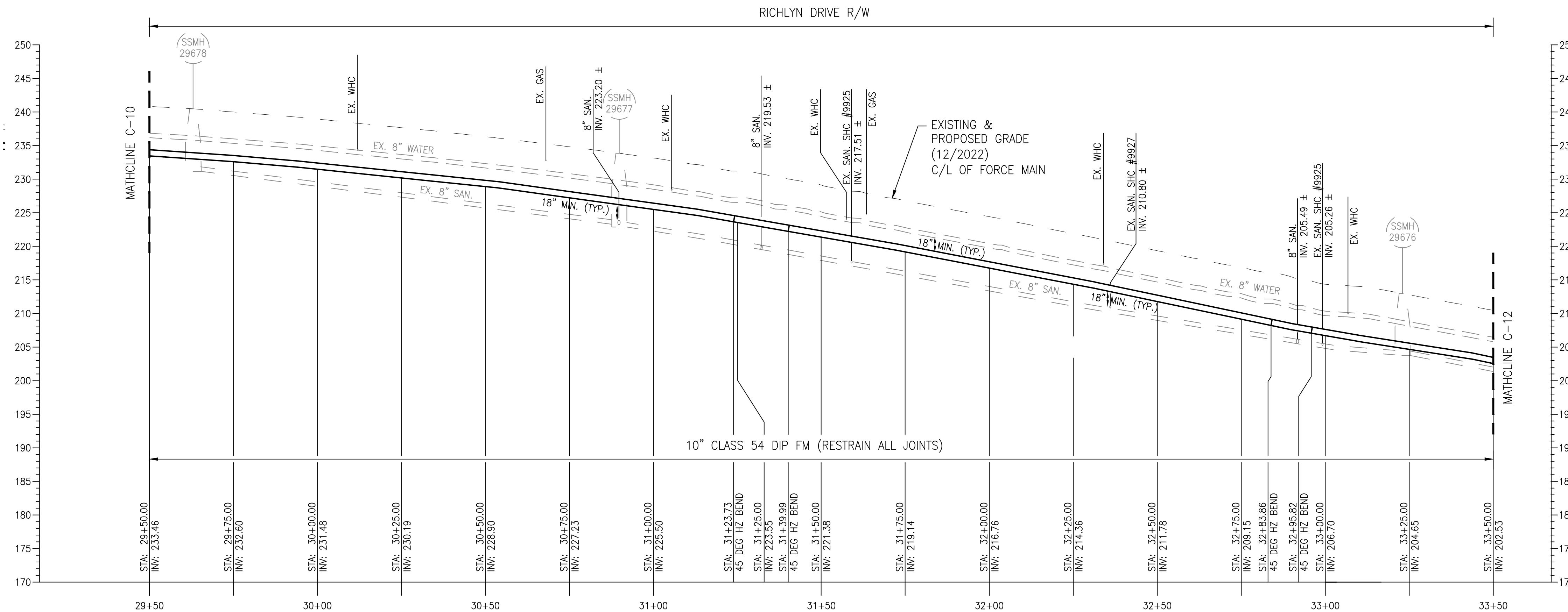
SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-4	639389.11	1470079.55

SITE GRADING NOTE:

- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

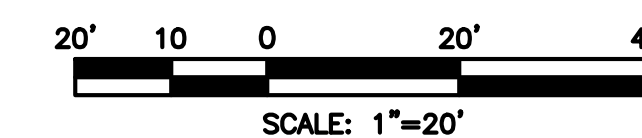


PLAN: STA. 29+50 TO STA. 33+50
SCALE: 1"=20'-0"



PROFILE: STA. 29+50 TO STA. 33+50

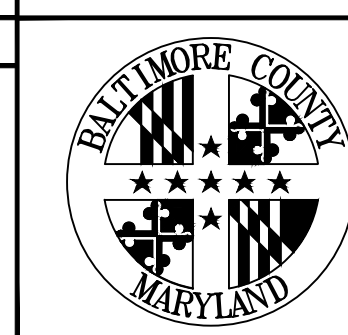
HORIZ. 1"=20'
VERT. 1"=10'



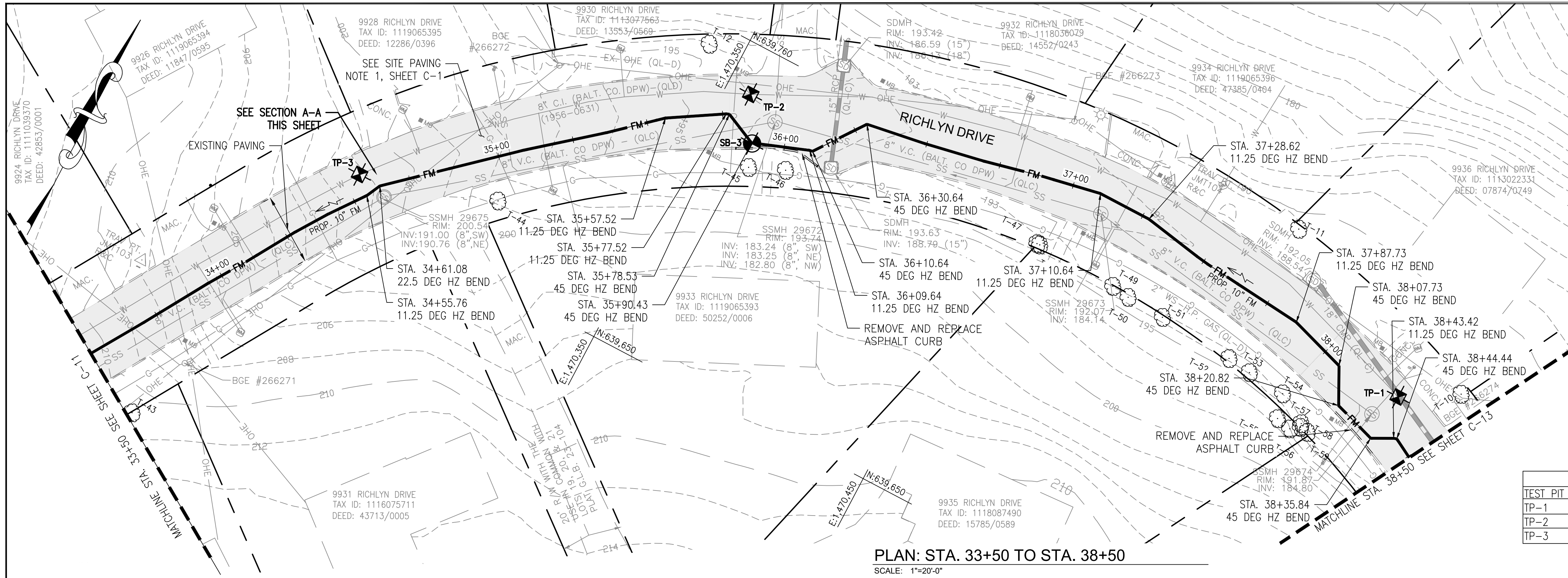
MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET POSITION SH/T	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.					R.O.W. NO.	QSE	PLAN SCALE: AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
	LICENSE NO. 14446 EXPIRATION DATE 5/26/2027		CONTRACT COMPLETION BOX						PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7423 HUNTS VALLEY, MD 21031 INFO@CEENGINEERING.COM	DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
AS-BUILT PER RECORD PRINT	DWN BY: MJE, MJP	REVIEWED BY:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES							
BY: DATE:	CHKD BY: CMS	DATE REVIEWED:								

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION		SHEET DESIGNATION	CONTRACT NUMBER
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN		C-11	24084SX0
PLAN & PROFILE STA. 29+50 TO STA. 33+50		PROJECT NUMBER	PROJ-10000060
		SHEET 13 OF 39	
		DRAWING NUMBER	2024-1148
SUBDIVISION: RICHLYN MANOR		PERRY HALL, MD	ELECTION DIST. NO.: 11C5
		FILE NO.:	



DWG. FILENAME:



PLAN: STA. 33+50 TO STA. 38+50
SCALE: 1"=20'-0"

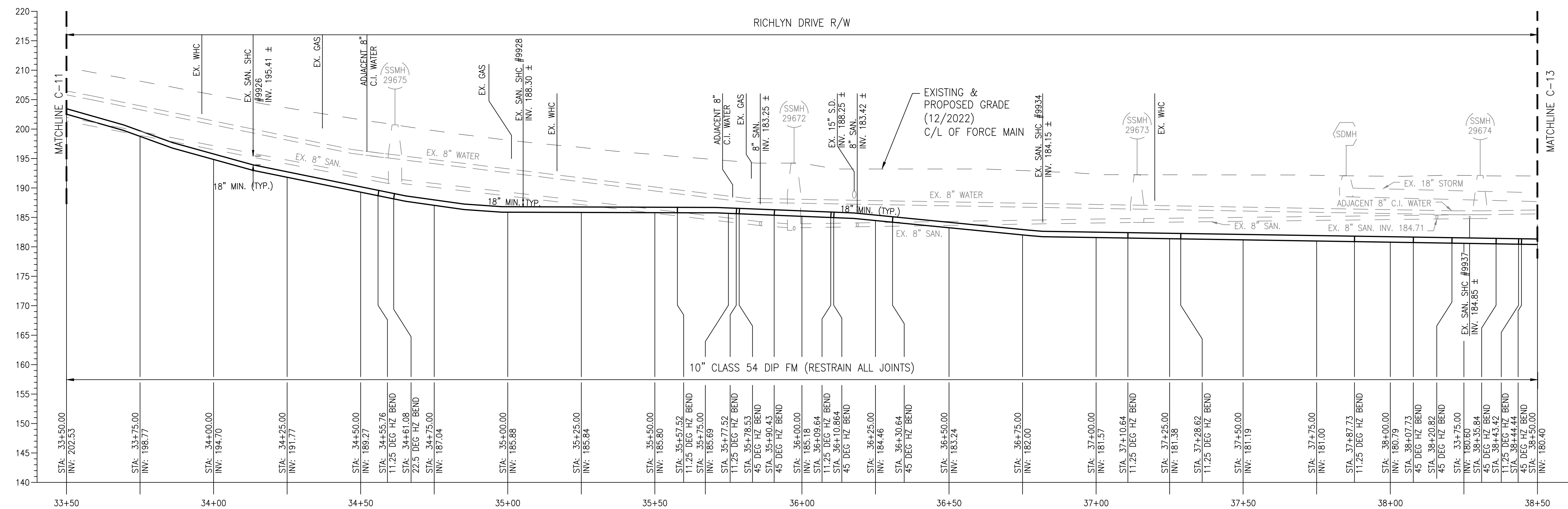
FITTING TABLE		
NO.	DESCRIPTION	SIZE
500'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
8	11.25 DEG. HZ BEND	10"
1	22.5 DEG. HZ BEND	10"
8	45 DEG. HZ BEND	10"

FORCE MAIN STAKEOUT				
LOCATION	ITEM	NORTHING	EASTING	
STA. 34+55.76	11.25' HB	639,656.20	1,470,262.46	
STA. 34+61.08	22.5' HB	639,660.99	1,470,264.78	
STA. 35+57.52	11.25' HB	639,724.49	1,470,337.34	
STA. 35+77.52	11.25' HB	639,735.02	1,470,354.34	
STA. 35+78.53	45' HB	639,735.37	1,470,355.29	
STA. 35+90.43	45' HB	639,730.44	1,470,366.12	
STA. 36+09.64	11.25' HB	639,737.17	1,470,384.11	
STA. 36+10.64	45' HB	639,737.33	1,470,385.10	
STA. 36+30.64	45' HB	639,753.56	1,470,396.79	
STA. 37+10.64	11.25' HB	639,769.16	1,470,475.22	
STA. 37+28.62	11.25' HB	639,769.16	1,470,493.21	
STA. 37+87.73	11.25' HB	639,761.77	1,470,551.81	
STA. 38+07.73	45' HB	639,755.68	1,470,570.86	
STA. 38+20.82	45' HB	639,744.04	1,470,576.86	
STA. 38+35.84	45' HB	639,739.47	1,470,591.16	
STA. 38+43.42	11.25' HB	639,742.99	1,470,597.88	
STA. 38+44.44	45' HB	639,743.27	1,470,598.80	

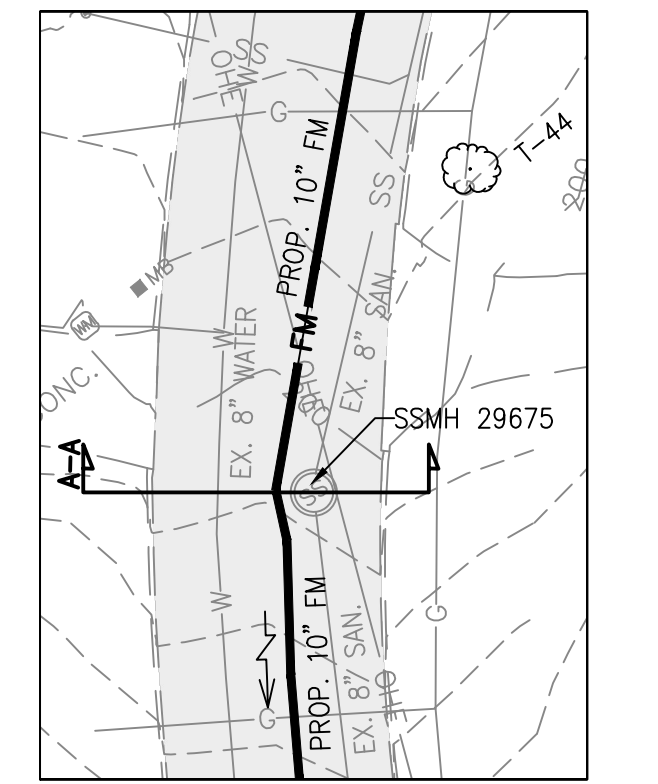
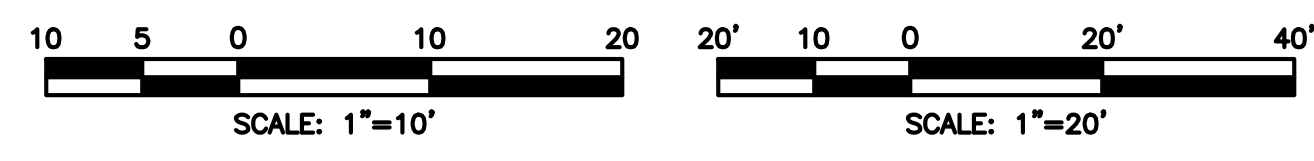
SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-3	639730.30	1470366.38

SITE GRADING NOTE:
1. CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

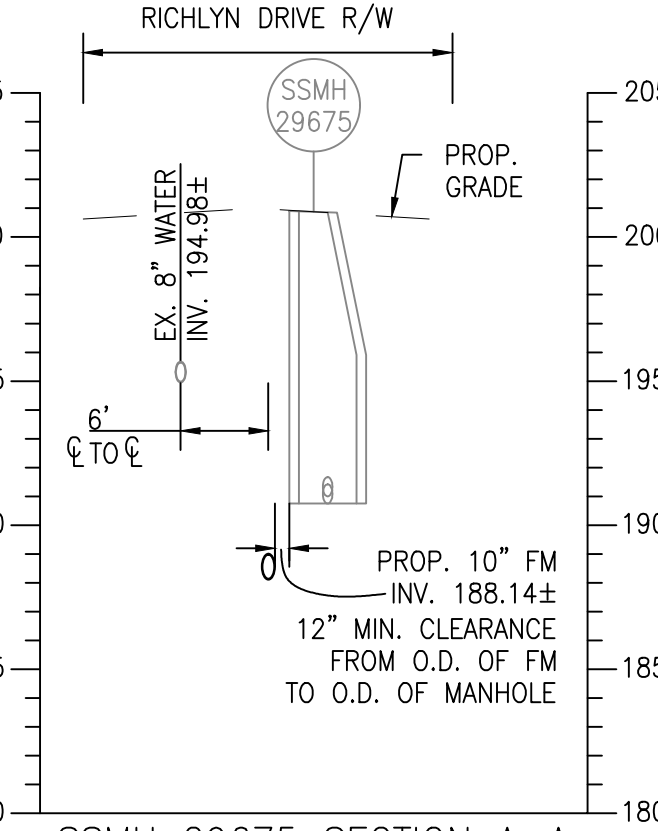
TEST PIT FIELD DATA						
TEST PIT NO.	NORTHING	EASTING	DEPTH	OFFSET	TOP ELEV.	UTILITY
TP-1	639,755.66	1,470,592.83	6.08 FT.	15.92' (L)	185.72	8" C.I. WATER
TP-2	639,744.42	1,470,358.46	6.15 FT.	15.60' (L)	187.81	8" C.I. WATER
TP-3	639,661.23	1,470,257.13	5.20 FT.	6.98' (L)	195.88	8" C.I. WATER



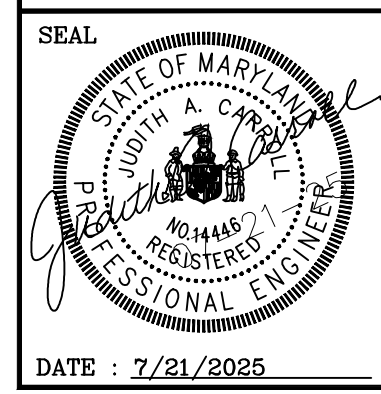
PROFILE: STA. 33+50 TO STA. 38+50
HORIZ. 1"=20'
VERT. 1"=10'



SECTION A-A INSET



SSMH 29675 SECTION A-A
NOT TO SCALE



PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 6/26/2027		AS-BUILT / REVISION BY: _____ DATE: _____ P.W.A. NO.: _____ KEY SHEET POSITION SHIT: _____ DRAWING SCALE: _____ DPW AND TRANSPORTATION: _____
ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7423 SUITE 101, HUNTS VALLEY, MD 21031 INFO@CARROLLENGINEERING.COM AS-BUILT PER RECORD PRINT	DGN BY: MJE, MJP DWN BY: MJE, MJP CHKD BY: CMS	BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION
SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES		

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 PLAN & PROFILE STA. 33+50 TO STA. 38+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
C-12	24084SX0
PROJECT NUMBER	PROJ-10000060
SHEET 14 OF 39	DRAWING NUMBER
2024-1149	FILE NO.:

DWG. FILENAME:

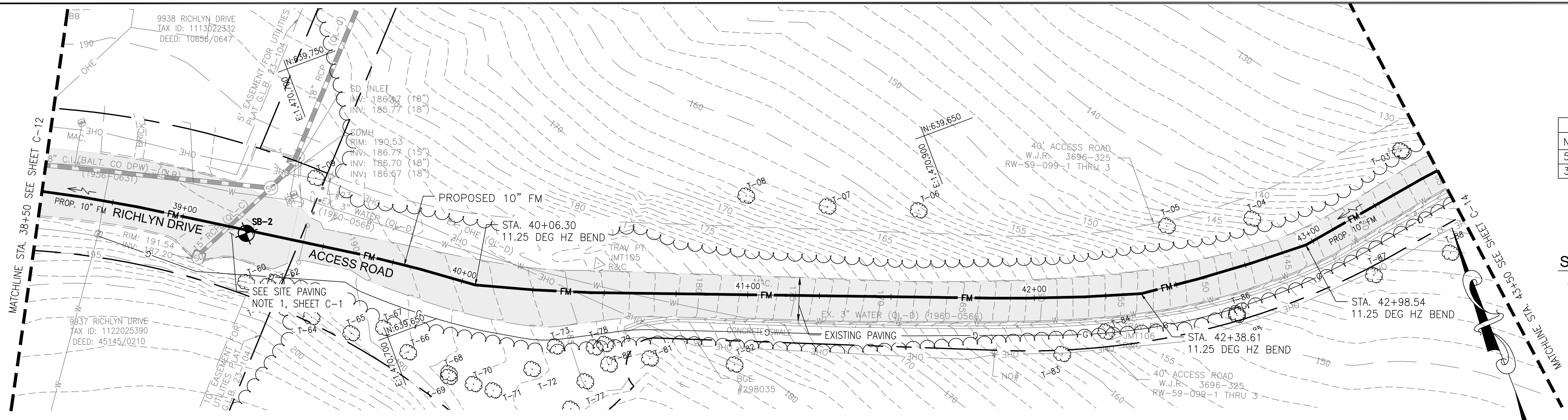
FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 40+06.30	11.25' HB	639,656.25	1,470,735.01
STA. 42+38.61	11.25' HB	639,571.82	1,470,951.47
STA. 42+98.54	11.25' HB	639,567.54	1,471,011.29

FITTING TABLE		
NO.	DESCRIPTION	SIZE
500'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
3	11.25 DEG. HZ BEND	10"

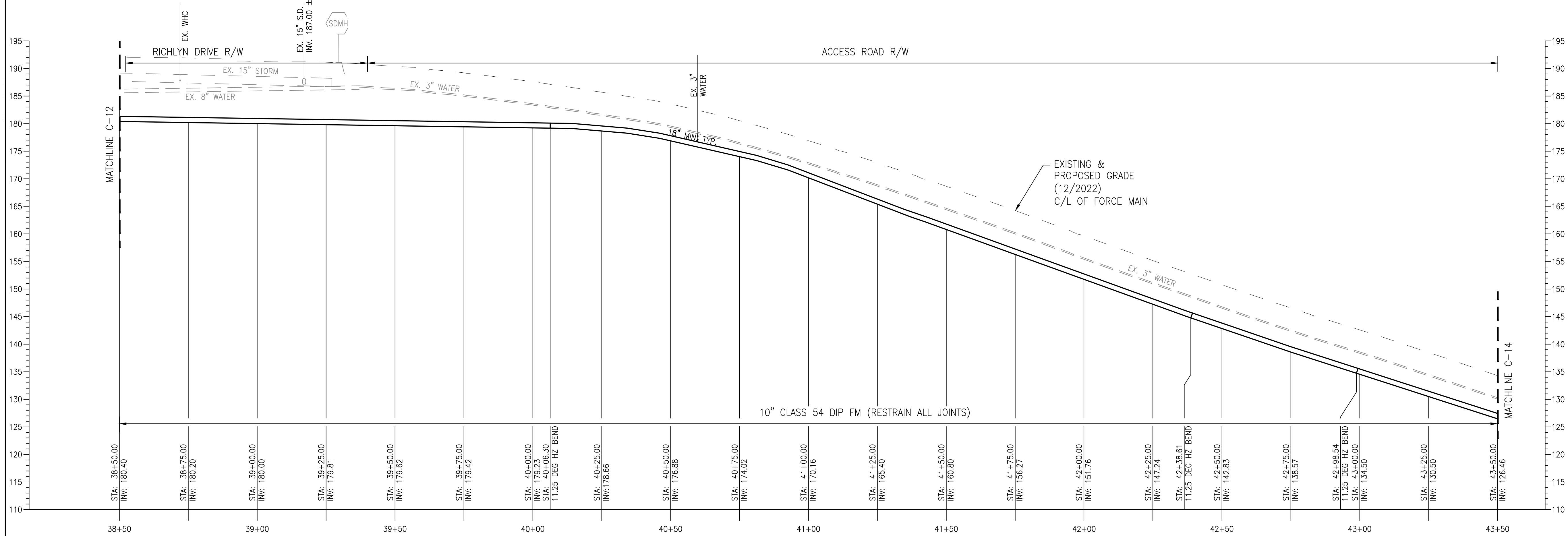
SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-2	639701.19	1470666.51

SITE GRADING NOTE:

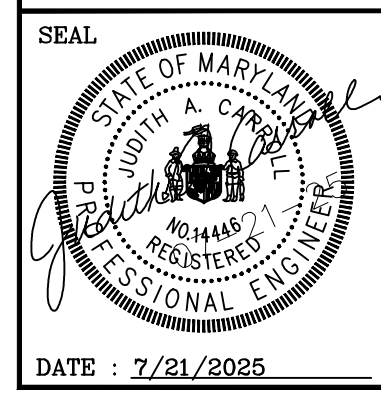
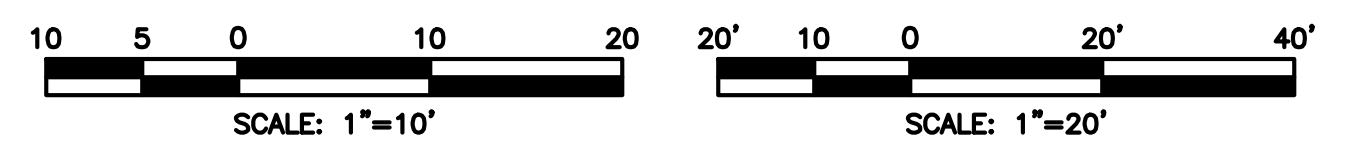
- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.



PLAN: STA. 38+50 TO STA. 43+50
SCALE: 1"=20'-0"



PROFILE: STA. 38+50 TO STA. 43+50
HORIZ. 1"=20'
VERT. 1"=10'



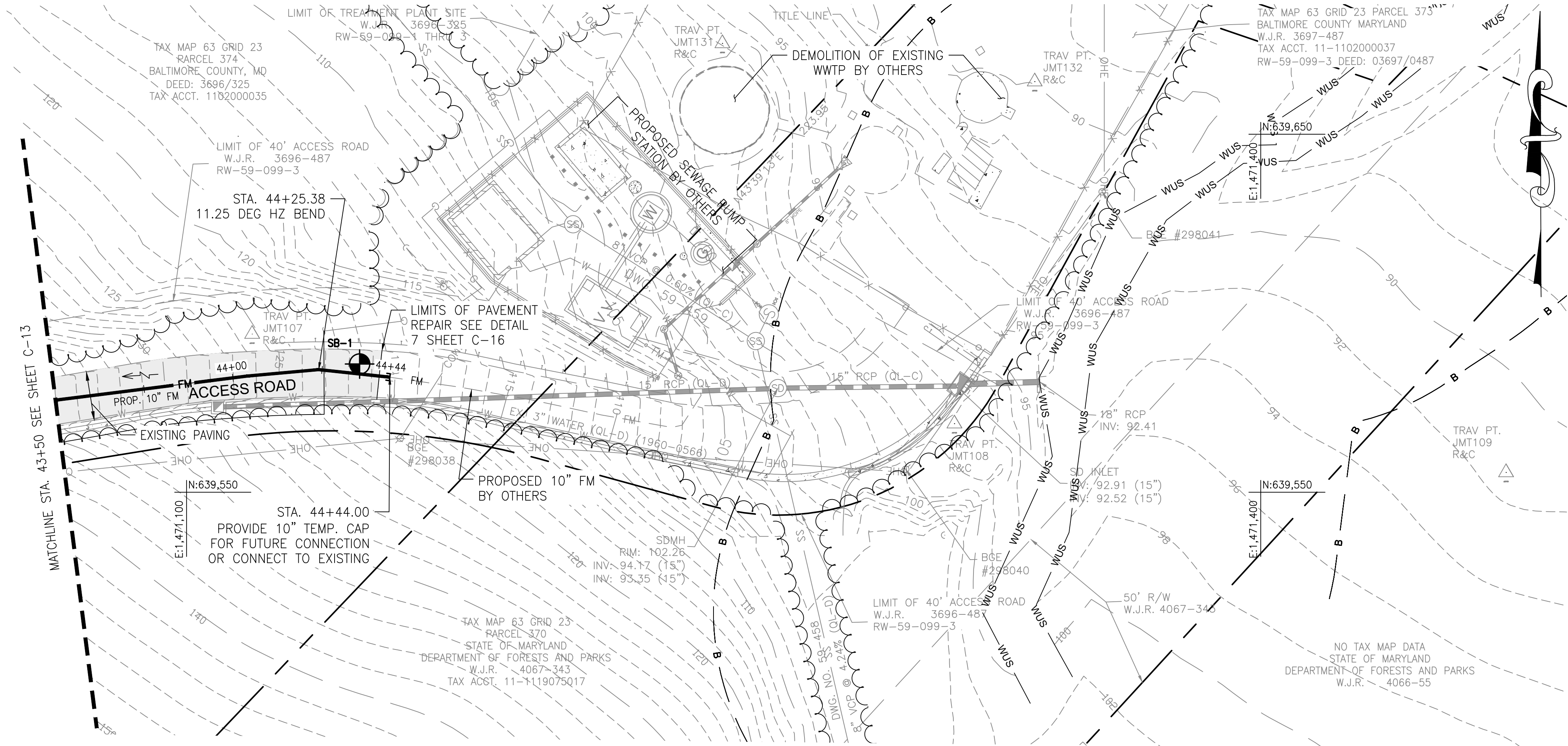
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 14446 EXPIRATION DATE 5/25/2027

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	DPW AND TRANSPORTATION
				R.O.W NO.	QSE	AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
CONTRACT COMPLETION BOX		TRAFFIC		HIGHWAYS		STRUCTURES	
ENGINEER: CARROLL ENGINEERING		DGN BY: MJE, MJP		BUREAU OF ENGINEERING AND CONSTRUCTION		BUR. OF ENGINEERING & CONSTRUCTION	
LICENSE NO. 14446		DWN BY: MJE, MJP		REVIEWED BY:		SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
AS-BUILT PER RECORD PRINT		CHKD BY: CMS		DATE REVIEWED:			

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
PLAN & PROFILE STA. 38+50 TO STA. 43+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
C-13	24084SX0
PROJECT NUMBER	
PROJ-10000060	
SHEET 15 OF 39	
DRAWING NUMBER	
2024-1150	
FILE NO.:	

DWG. FILENAME:



PLAN: STA. 43+50 TO STA. 44+44
SCALE: 1"=20'-0"

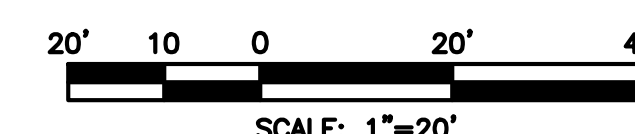
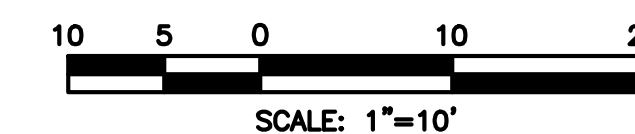
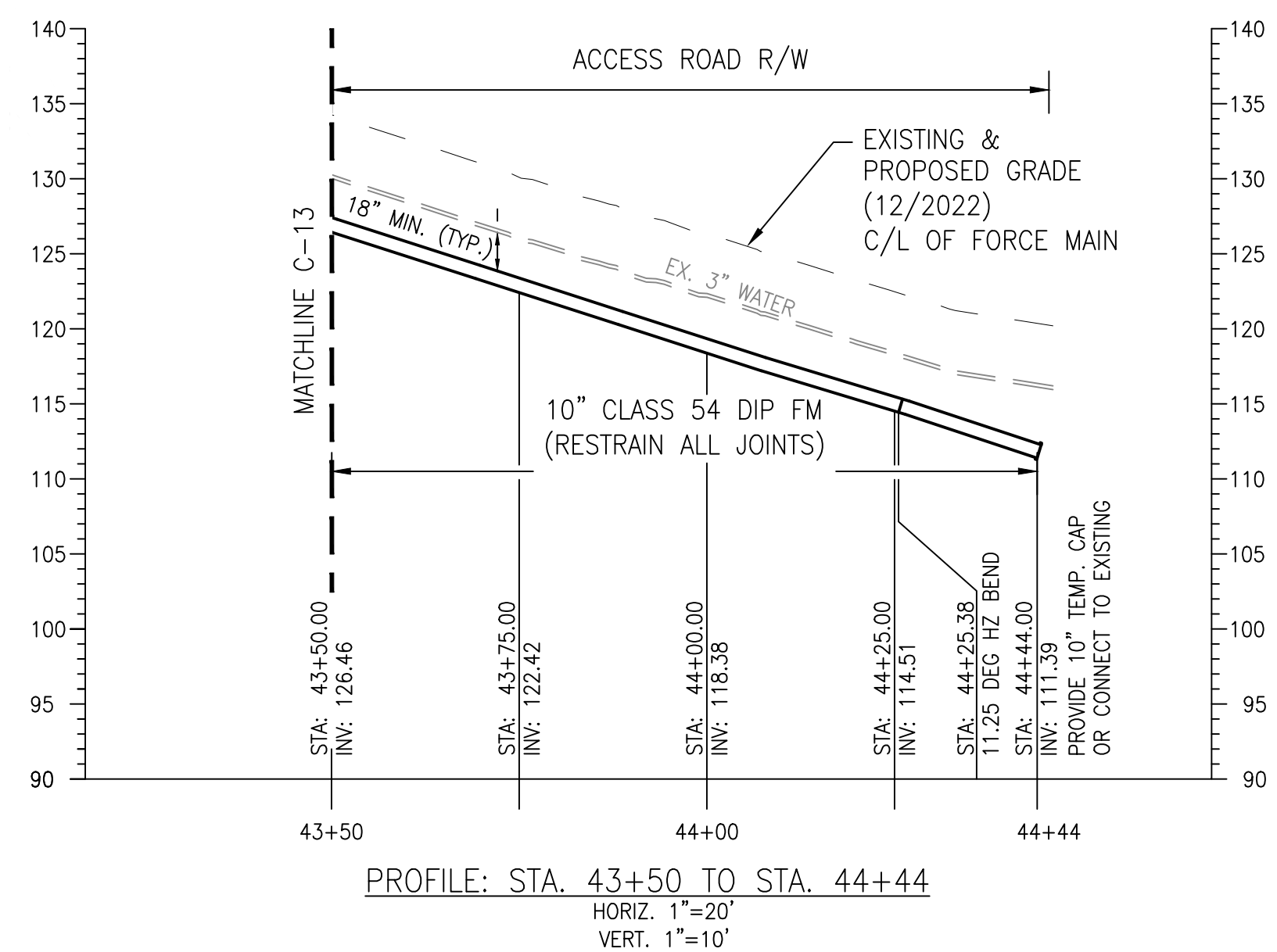
FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 44+25.38	11.25' HB	639,584.25	1,471,136.91

FITTING TABLE		
NO.	DESCRIPTION	SIZE
94'	D.I.P CLASS 54 (RESTRAINED JOINTS)	10"
1	11.25 DEG. HZ BEND	10"

SOIL BORING DATA		
BORING NO.	NORTHING	EASTING
SB-1	639,585.80	1,471,148.32

SITE GRADING NOTE:

- CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

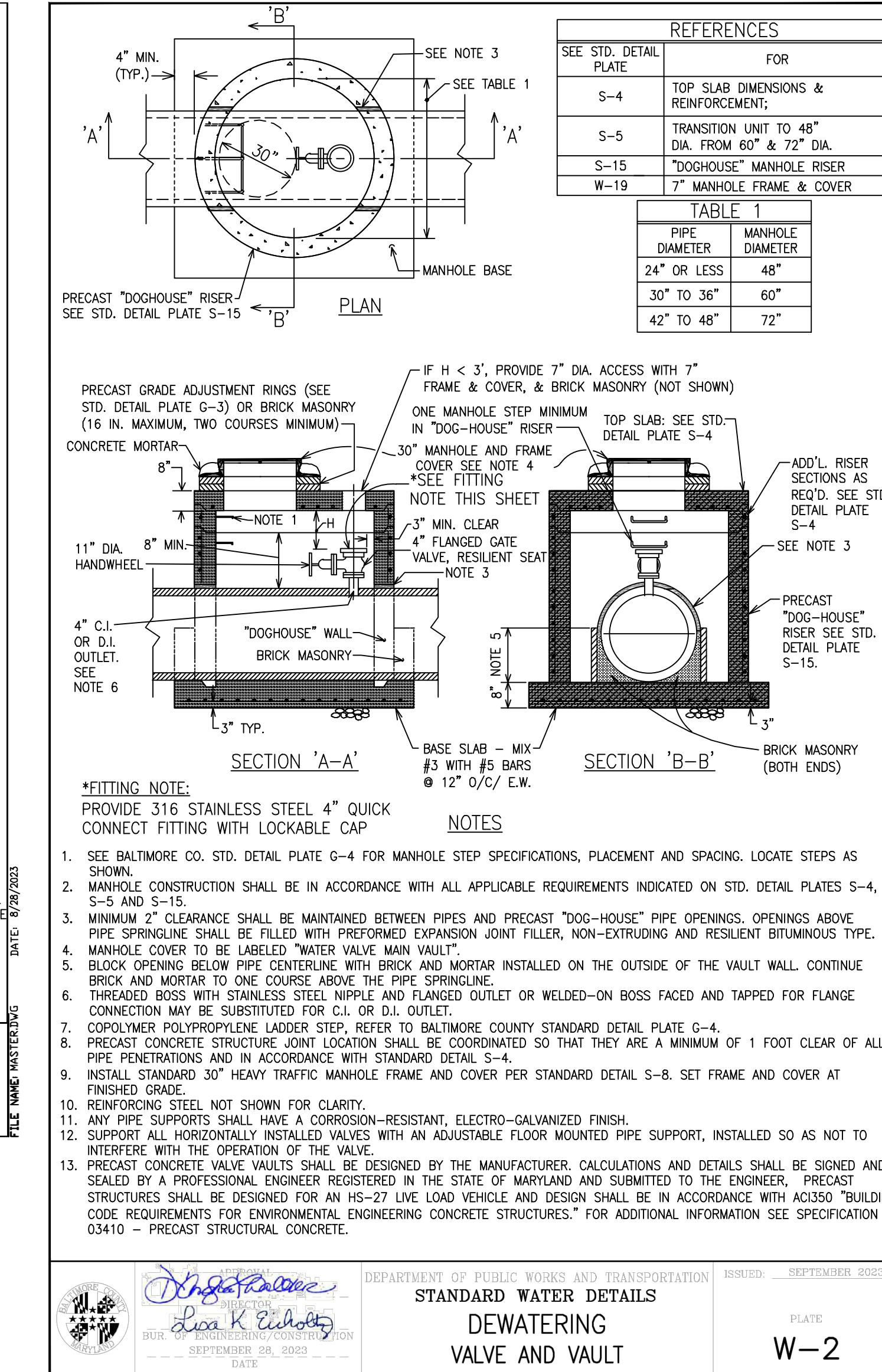
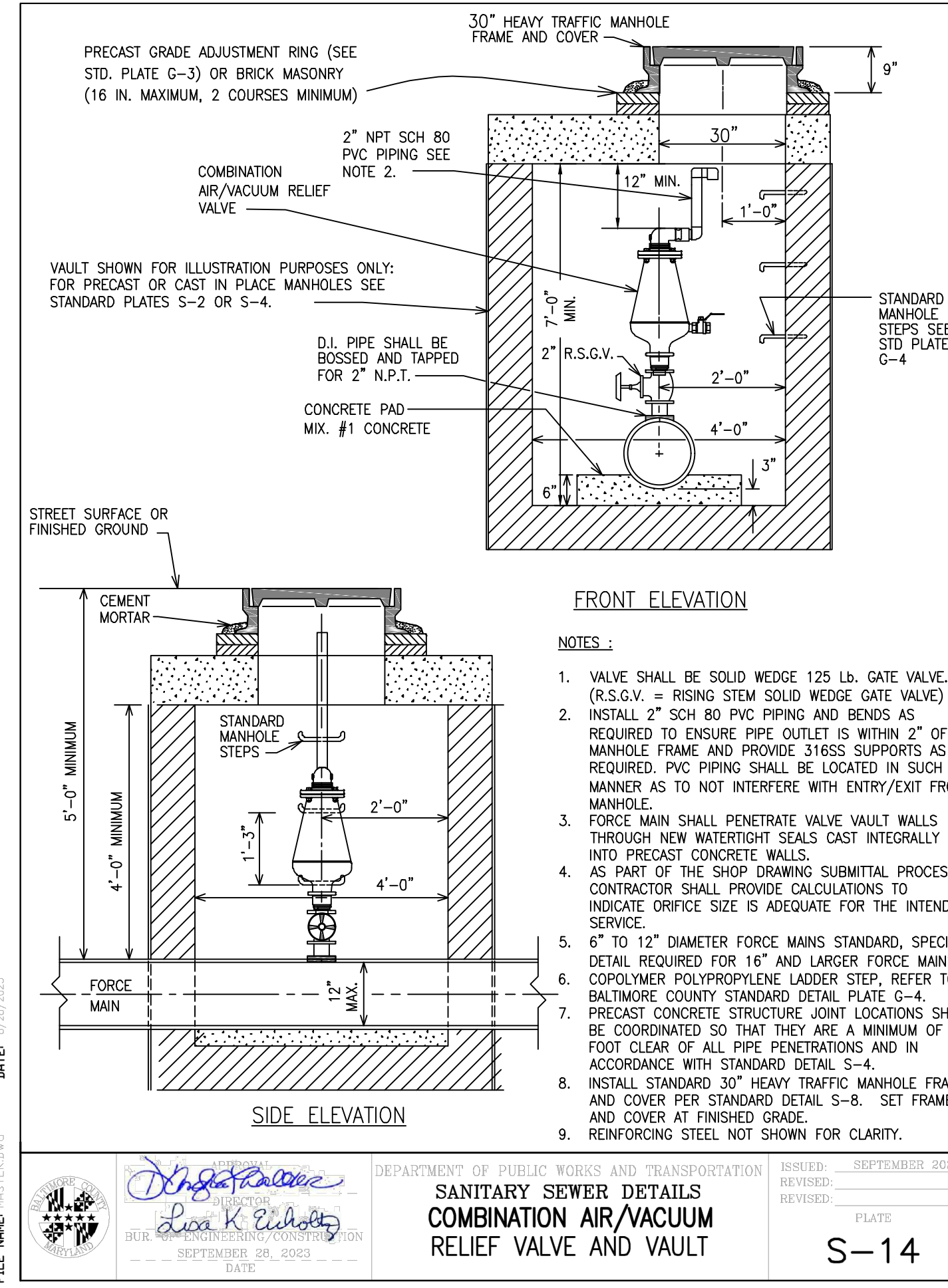
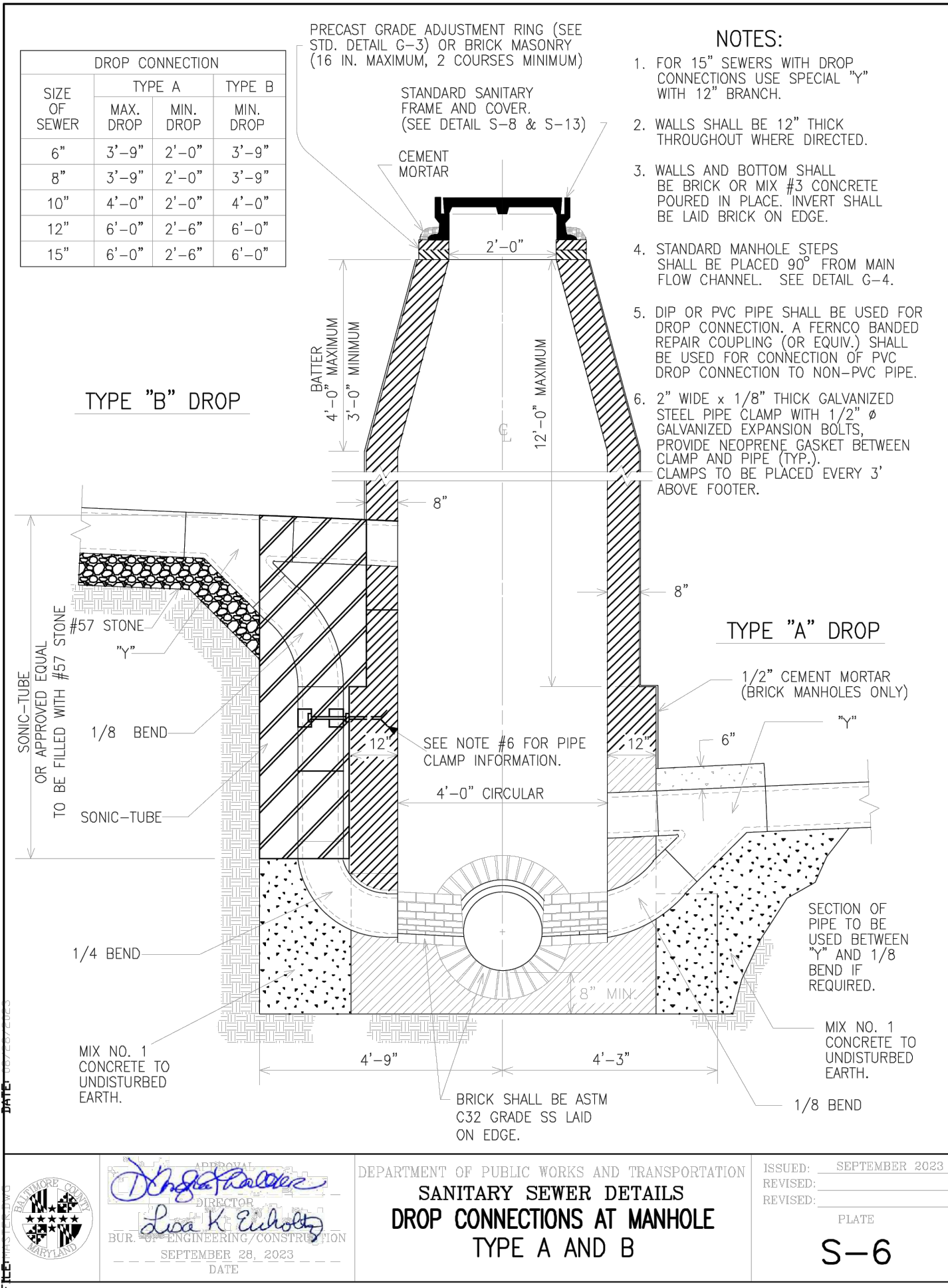
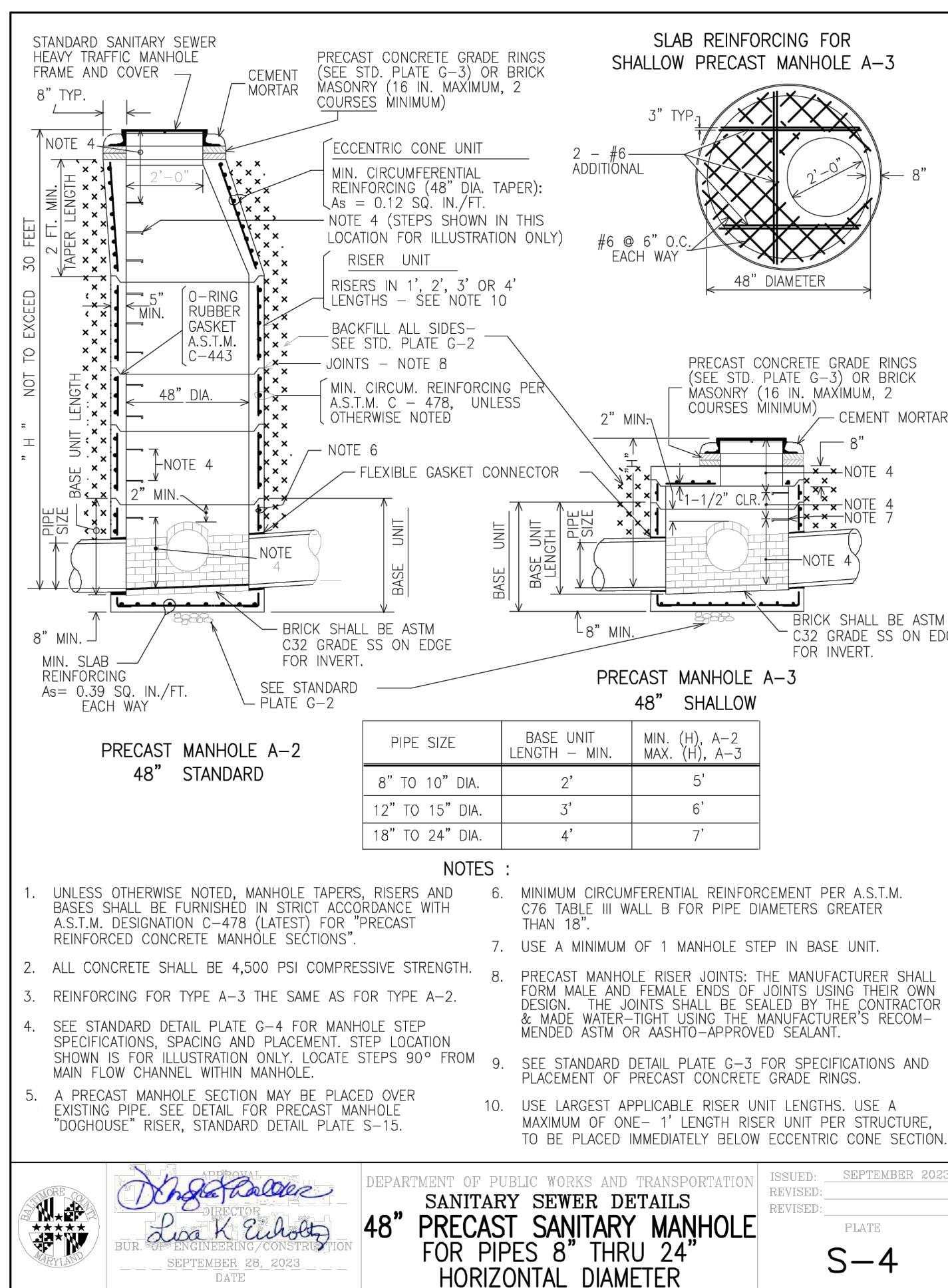


MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION
		CONTRACT COMPLETION BOX	REVISION							
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/26/2027									
		ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7423 SUITE 105, SMILE, HUNTS VALLEY, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT	DGN BY: MJE, MJP DWN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC	HIGHWAYS STRUCTURES STORM DRAINS SEWER	WATER FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION			
DATE: 7/21/2025										

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION		SHEET DESIGNATION	CONTRACT NUMBER
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 43+50 TO STA. 44+45		C-14	24084SX0
		PROJECT NUMBER PROJ-10000060	
SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5		SHEET 16 OF 39 DRAWING NUMBER 2024-1151	
		FILE NO.:	

DWG. FILENAME:

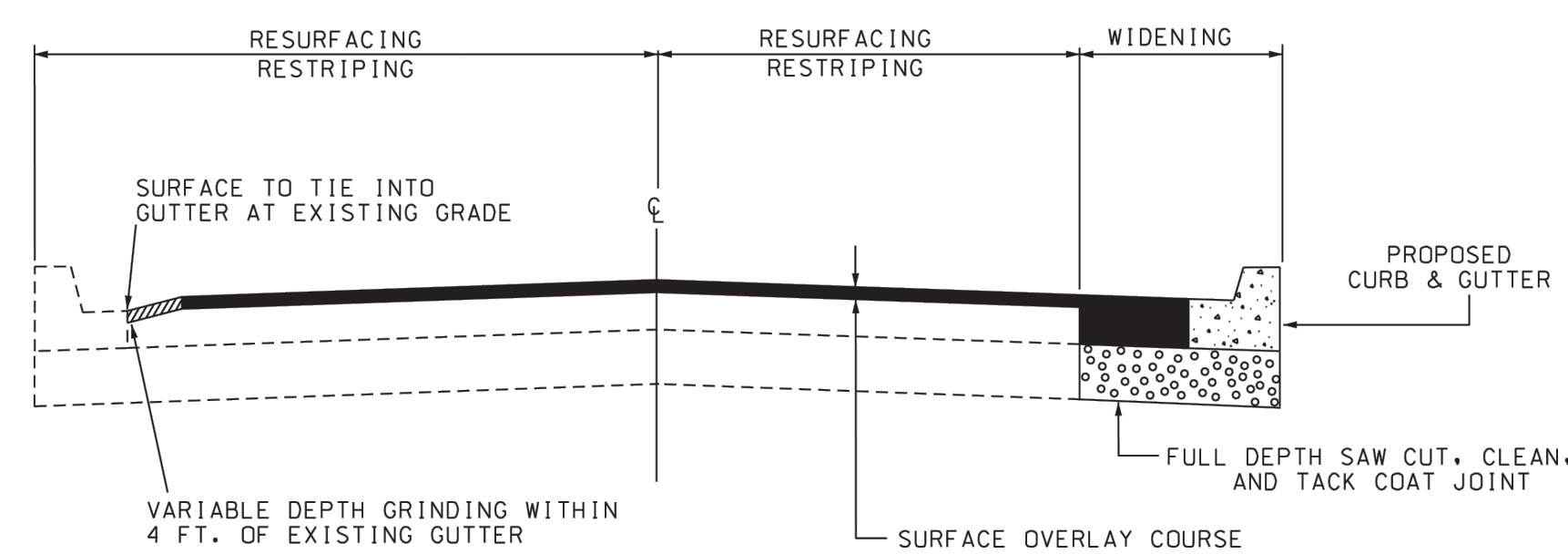
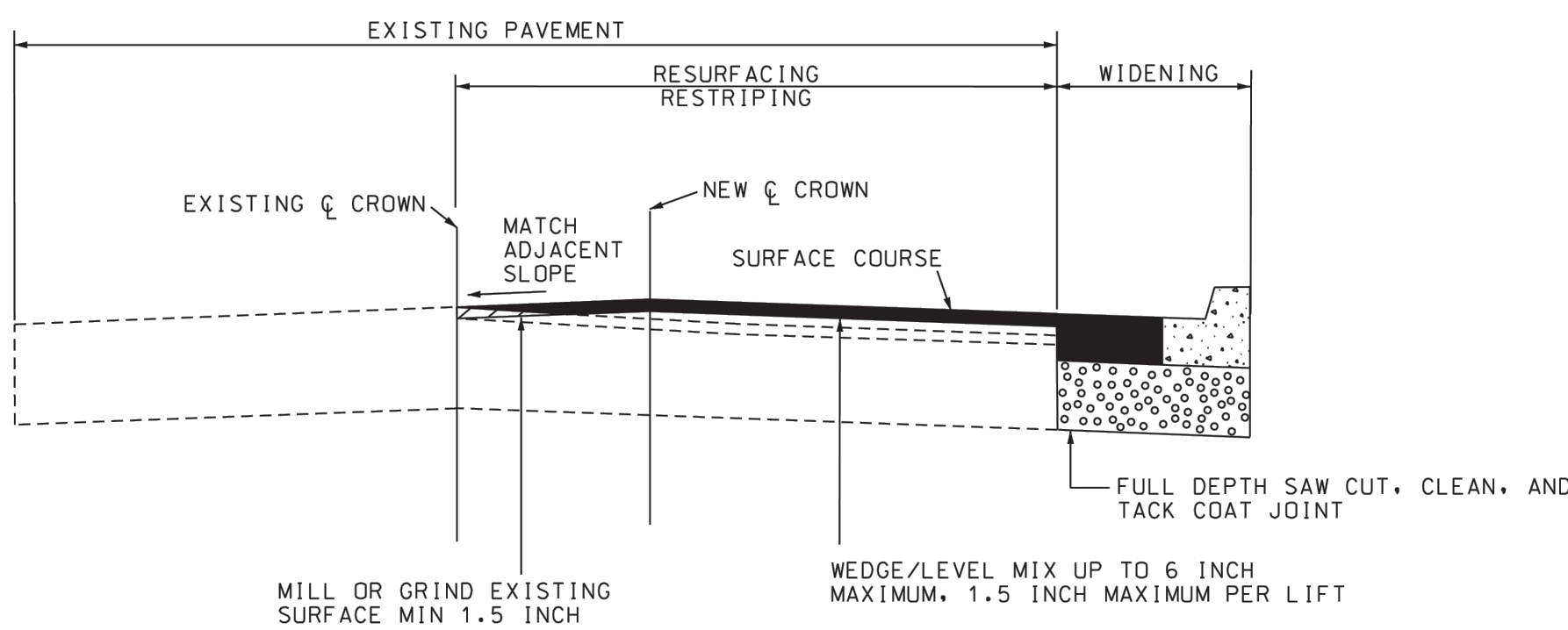


1 PRECAST MANHOLE DETAIL
C15 NOT TO SCALE

2 MANHOLE DROP CONNECTION DETAIL
C15 NOT TO SCALE

3 COMBINATION AIR VALVE DETAIL
C15 NOT TO SCALE

4 DEWATERING VALVE AND VAULT DETAIL
C15 NOT TO SCALE



5 ASPHALT MILL & OVERLAY DETAIL
C15 NOT TO SCALE

6 ASPHALT MILL & OVERLAY DETAIL
C15 NOT TO SCALE

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 6/26/2027							AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-795-7483 SUITE 100 HUNY VALLEY, MD 21031 INFO@CRENGINEERING.COM AS-BUILT PER RECORD PRINT	DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	
DATE: 7/21/2025	BY: DATE:	CHKD BY: CMS	REVIEWED BY:	DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES				

SHEET DESIGNATION		CONTRACT NUMBER
C-15		24084SX0
PROJECT NUMBER		PROJ-10000060
SHEET 17 OF 39		
DRAWING NUMBER		2024-1152
FILE NO.:		

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

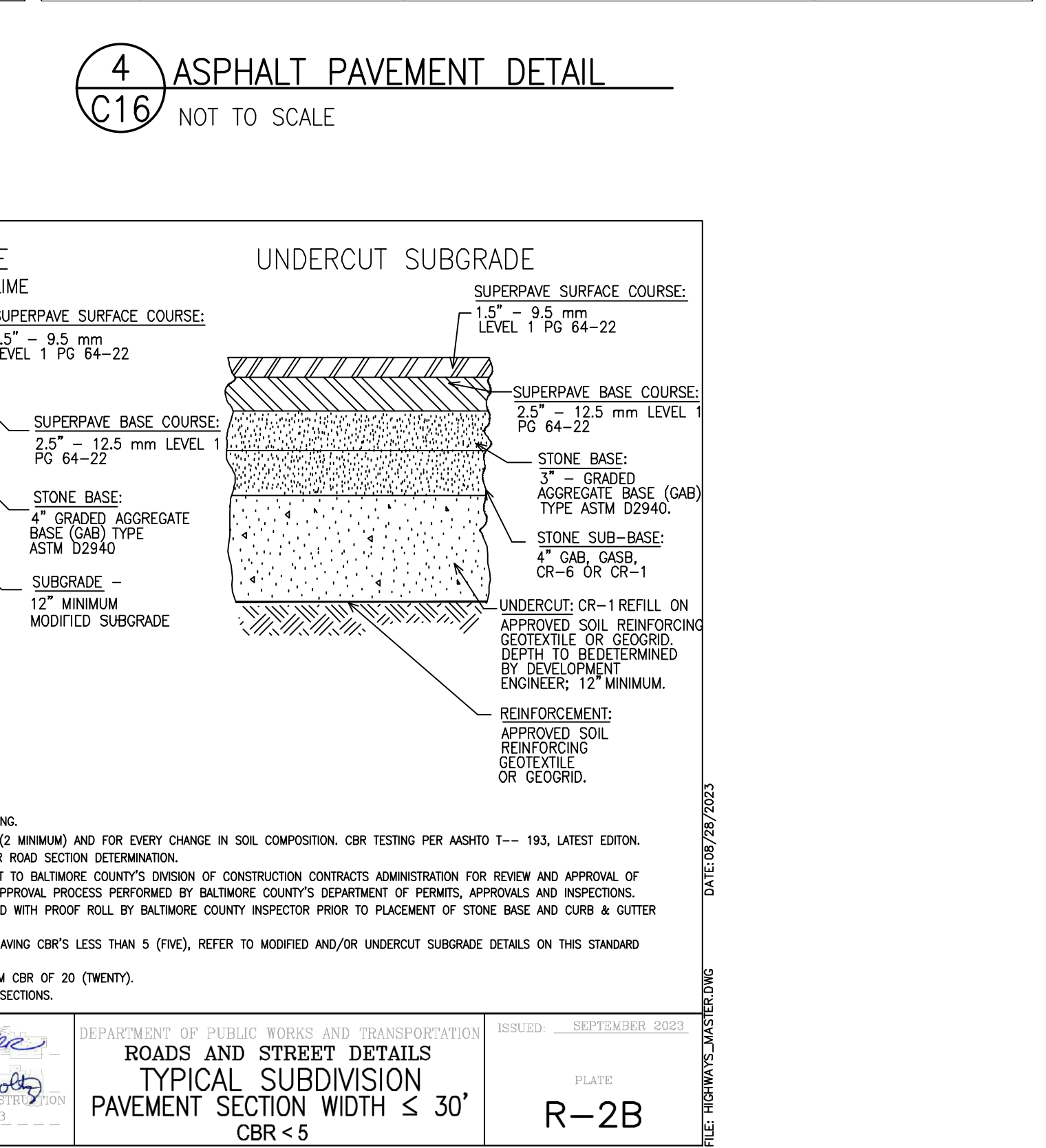
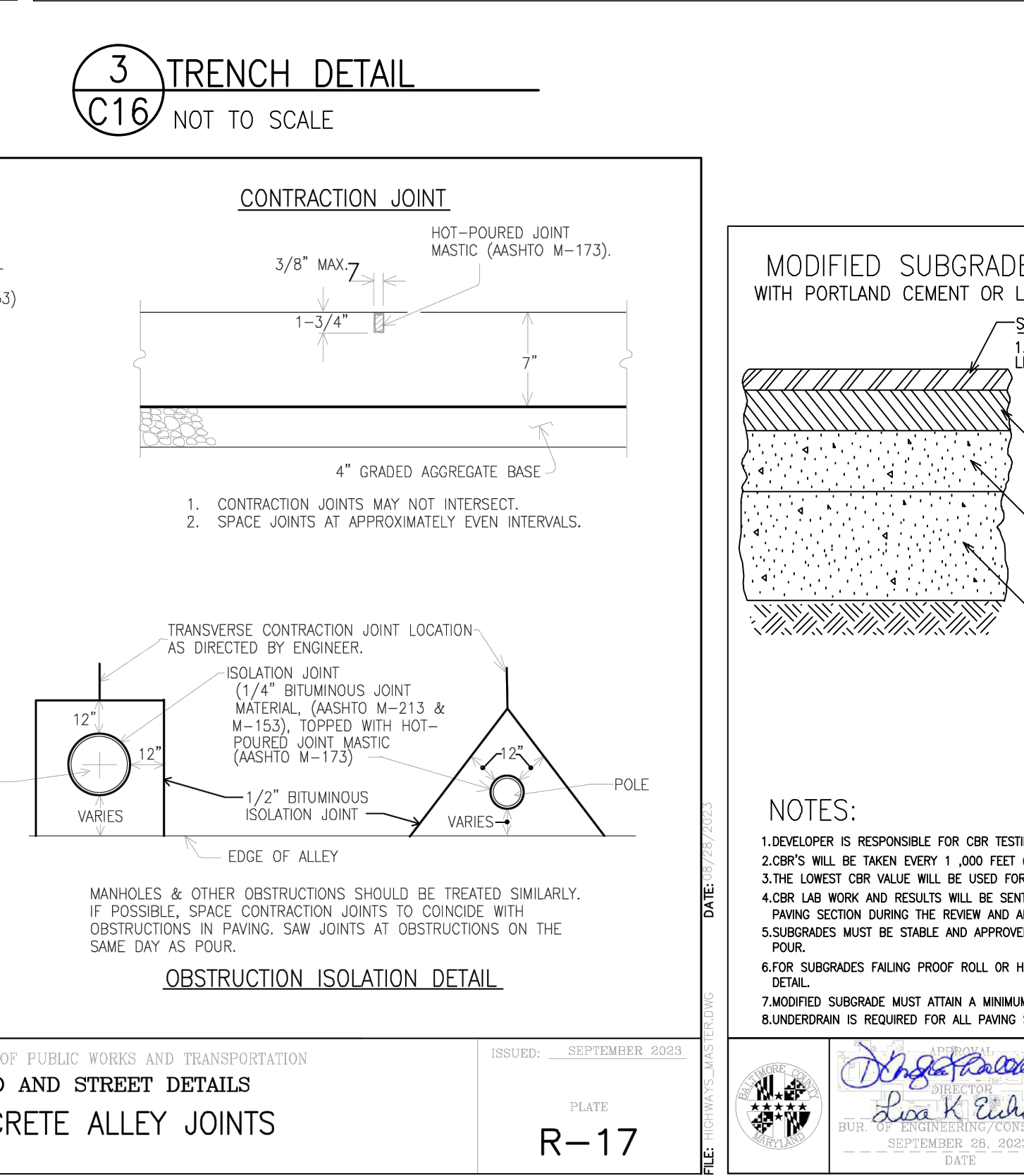
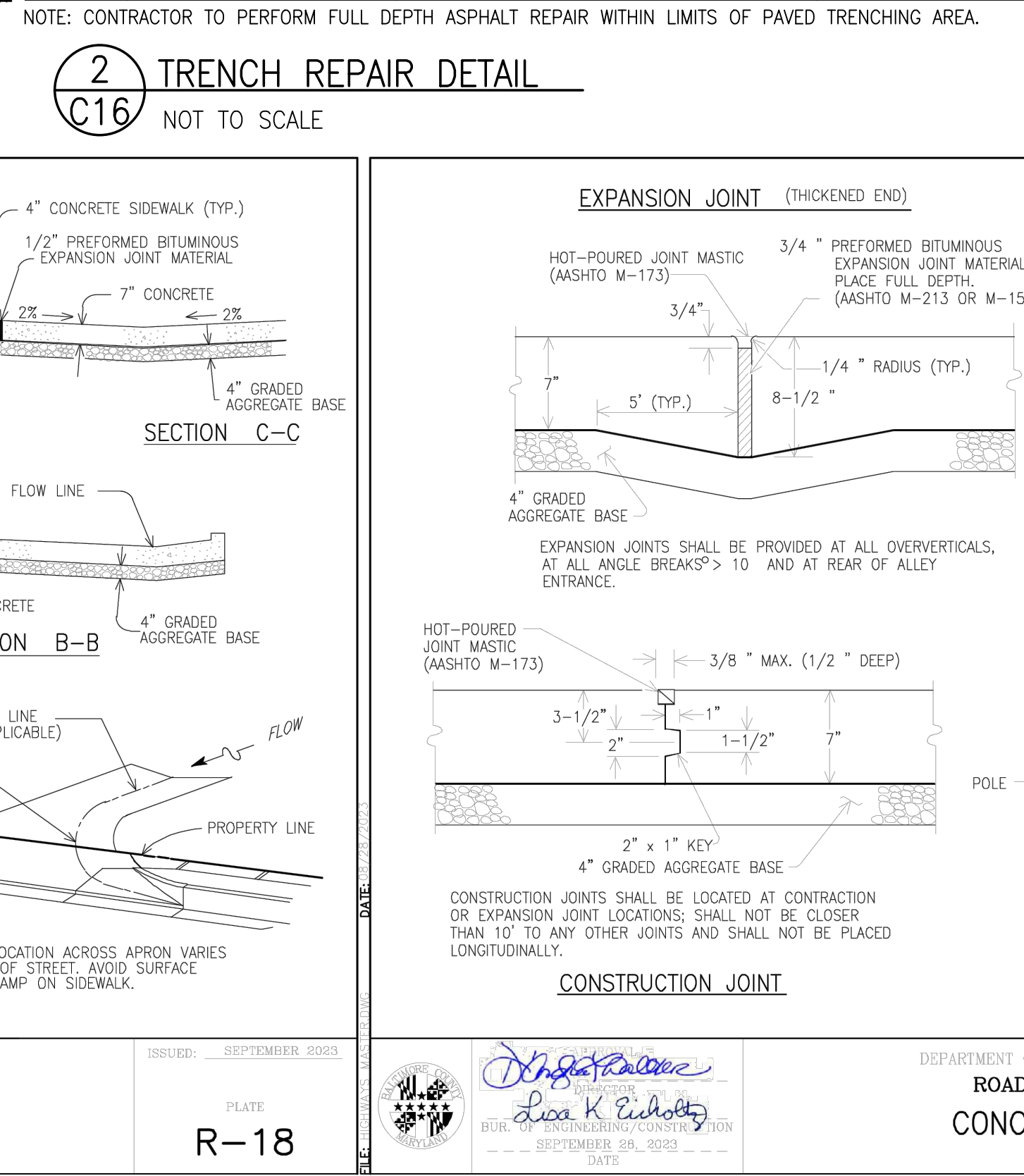
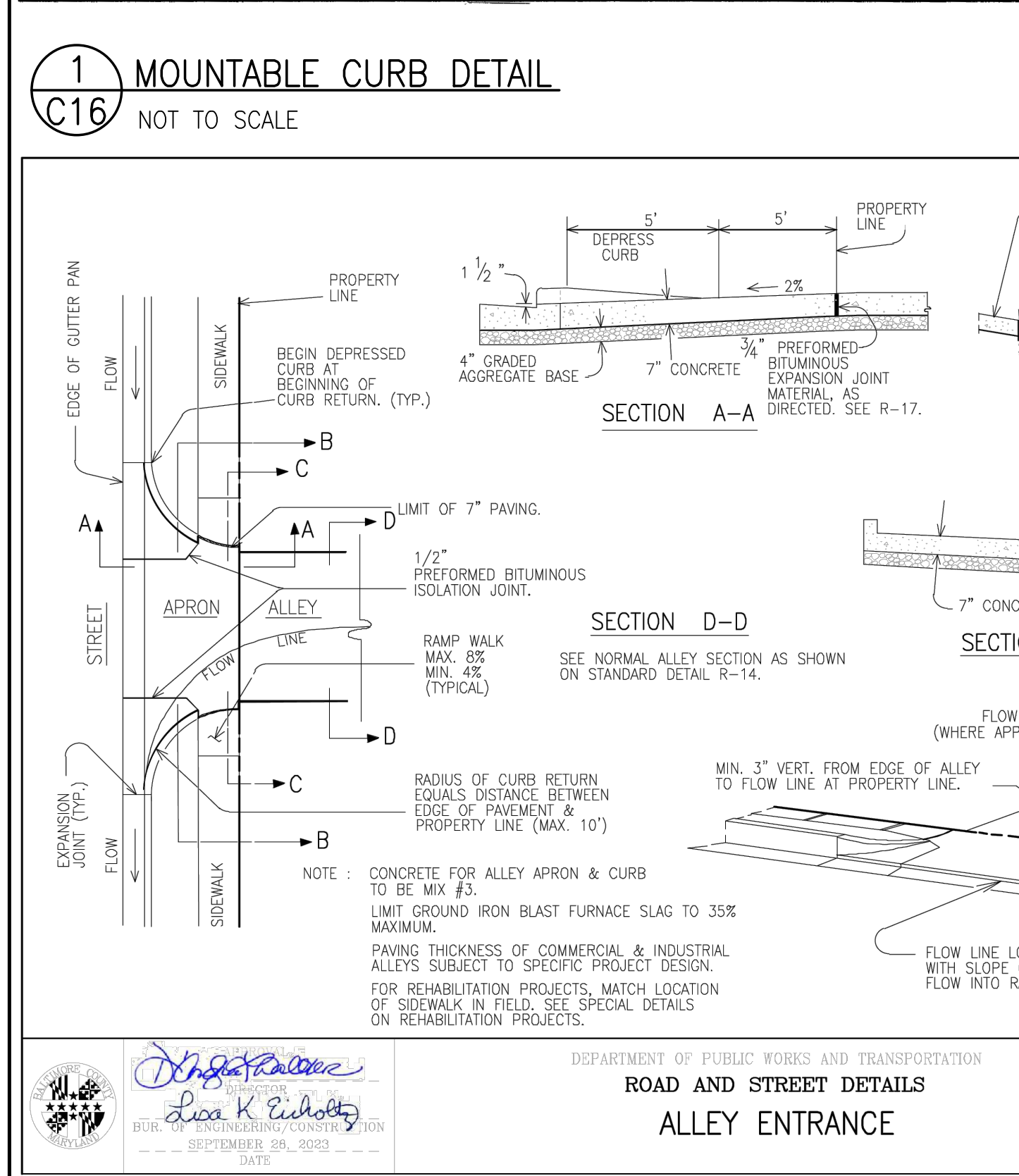
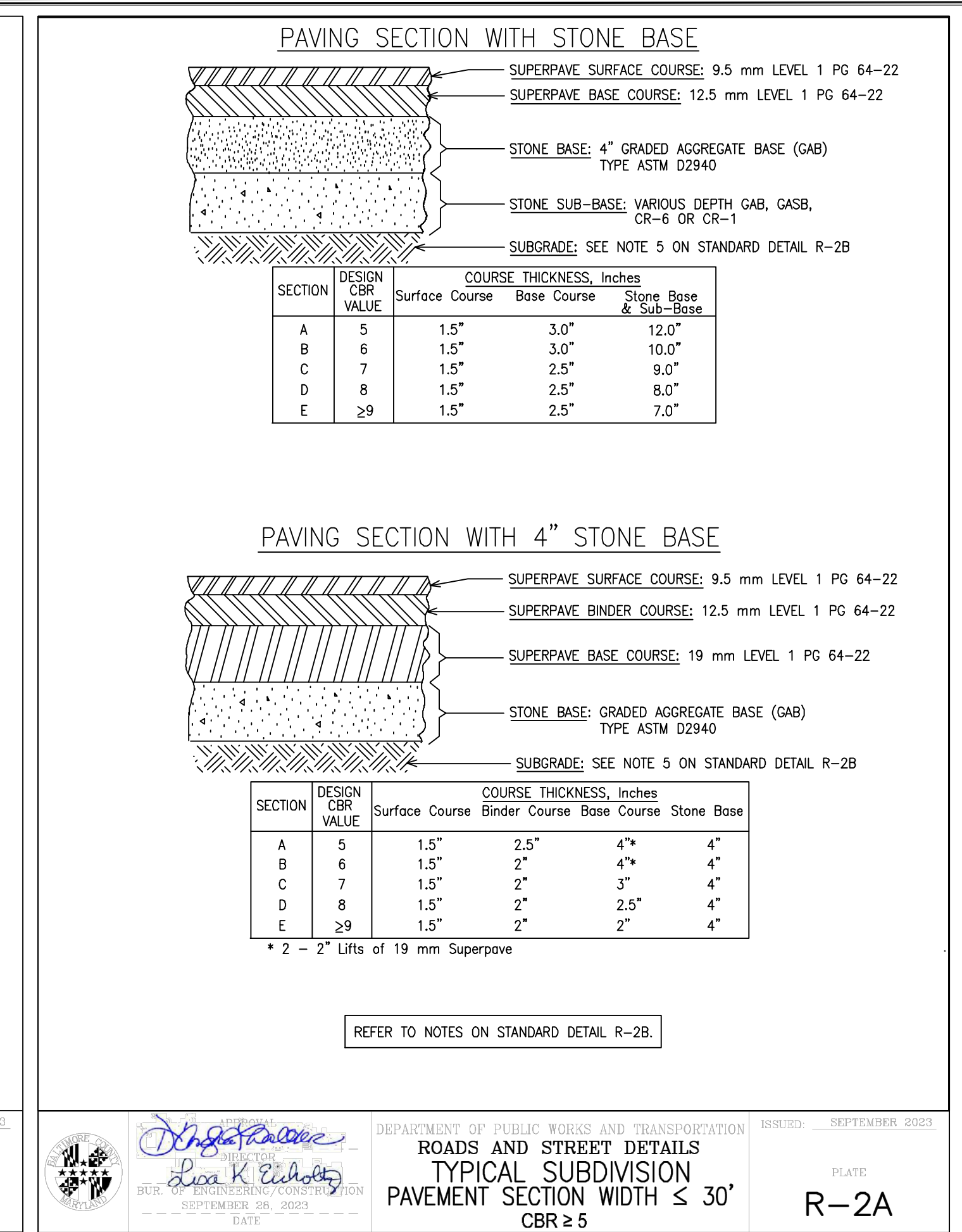
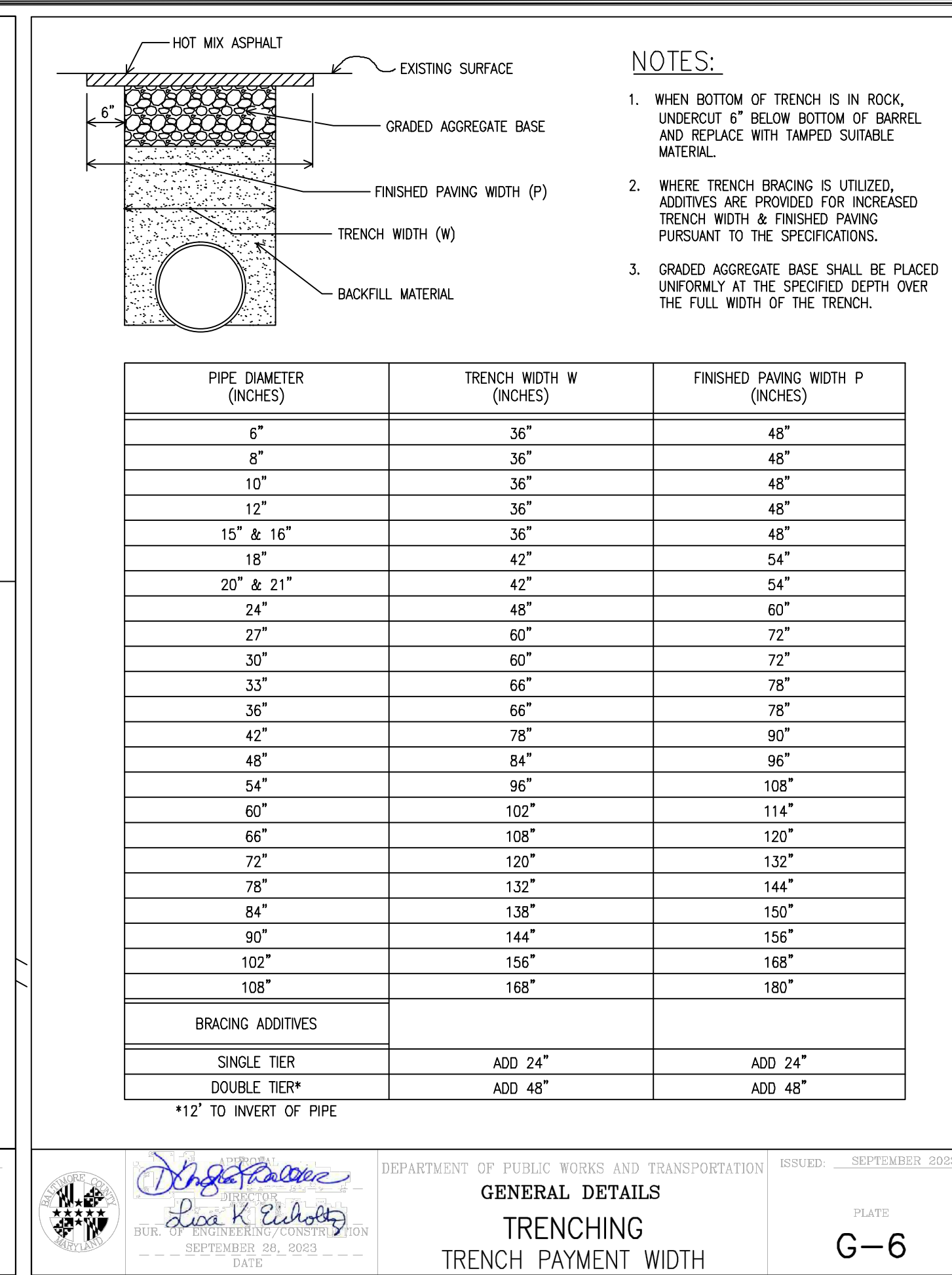
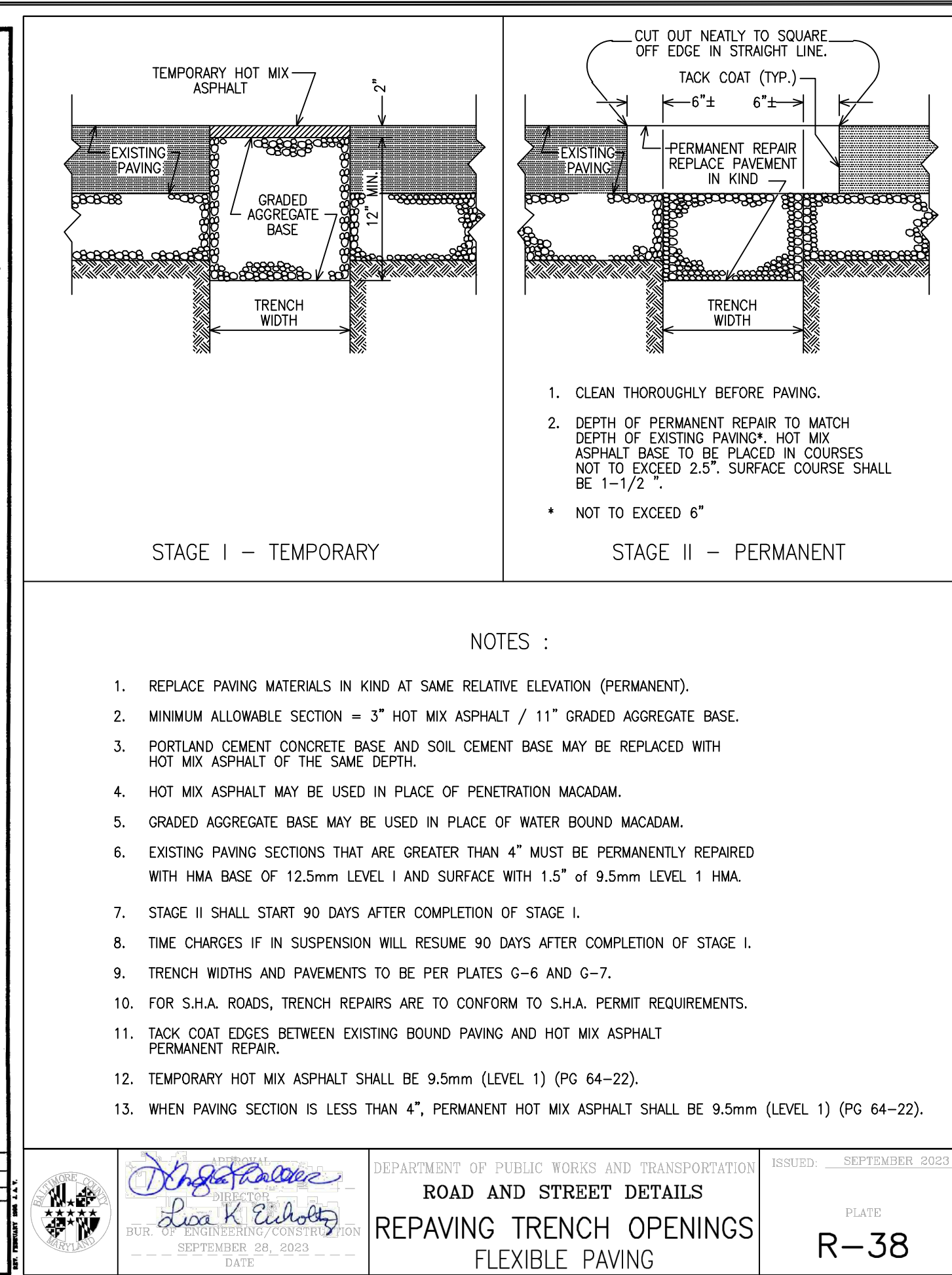
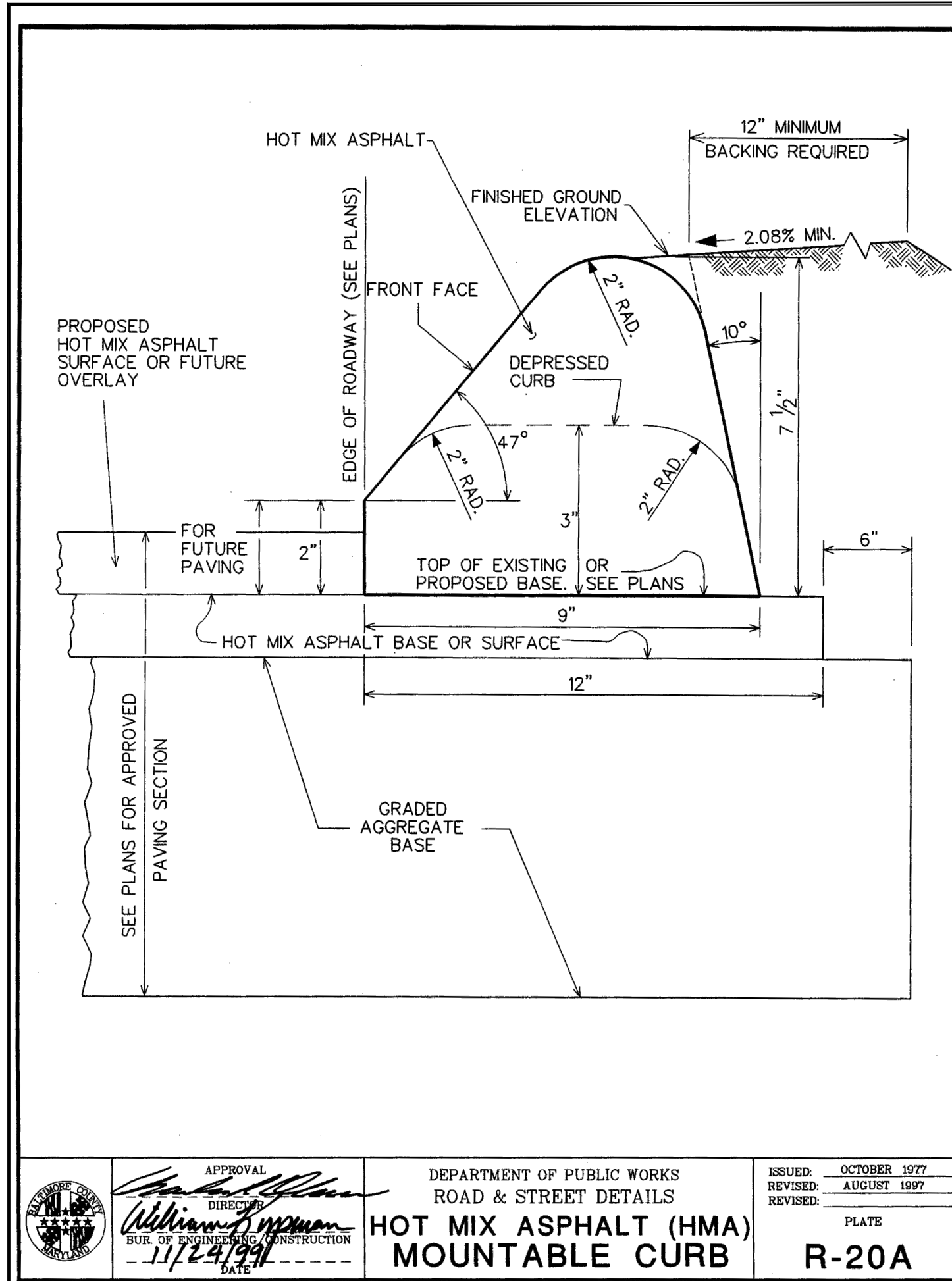
BALTIMORE COUNTY MARYLAND

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN

CIVIL DETAILS

SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5



5 CONCRETE ALLEY REPAIR DETAIL
C16 NOT TO SCALE

6 CONCRETE ALLEY EXPANSION JOINT DETAIL
C16 NOT TO SCALE

7 ASPHALT PAVEMENT DETAIL
C16 NOT TO SCALE

8 ASPHALT PAVEMENT DETAIL
C16 NOT TO SCALE

DATE: 7/21/2025

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446. EXPIRATION DATE 6/26/2027.

CONTRACT COMPLETION BOX

SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN

CIVIL DETAILS

SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

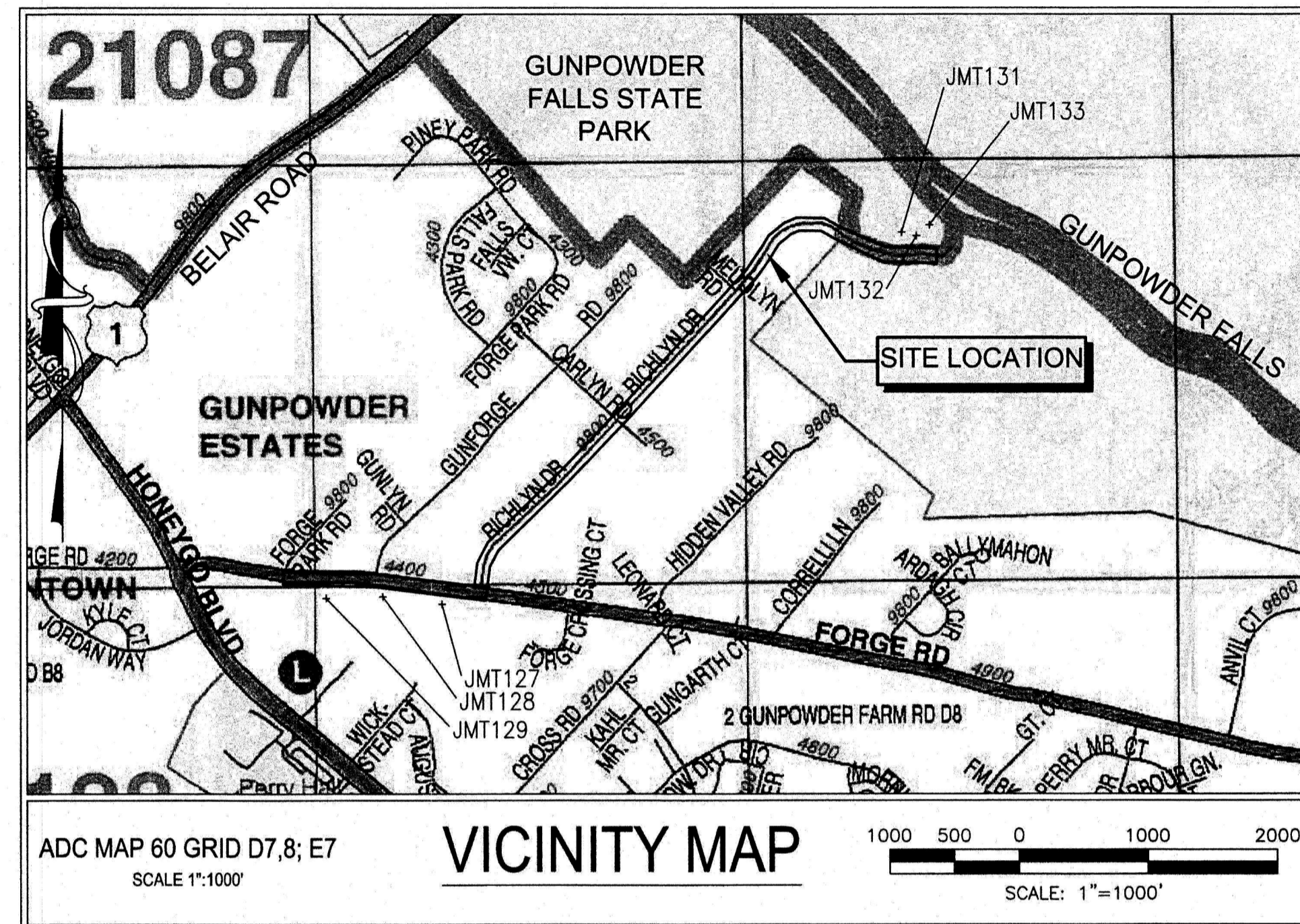
MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 88

SHEET DESIGNATION	CONTRACT NUMBER
C-16	24084SX0
PROJECT NUMBER	PROJ-10000060
SHEET 18 OF 39	
DRAWING NUMBER	2024-1153
FILE NO.:	

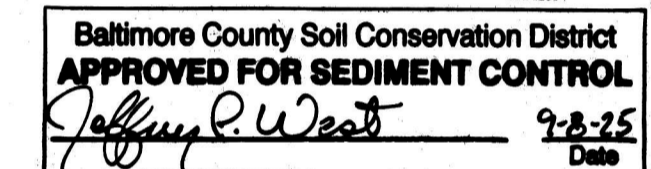
RICHLYN MANOR FORCE MAIN EROSION AND SEDIMENT CONTROL PLANS BALTIMORE COUNTY, MARYLAND

SHEET INDEX

SHEET NO.	DWG. NO.	BALTIMORE COUNTY DWG. NO.	TITLE
1	C-1	2024-1138	CIVIL LEGEND & NOTES
2	C-2	2024-1139	OVERALL SITE PLAN
3	C-3	2024-1140	PLAN & PROFILE STA. 0+00 TO STA. 0+50
4	C-4	2024-1141	PLAN & PROFILE STA. 0+50 TO STA. 4+50
5	C-5	2024-1142	PLAN & PROFILE STA. 4+50 TO STA. 7+75
6	C-6	2024-1143	PLAN & PROFILE STA. 7+75 TO STA. 13+50
7	C-7	2024-1144	PLAN & PROFILE STA. 13+50 TO STA. 17+50
8	C-8	2024-1145	PLAN & PROFILE STA. 17+50 TO STA. 21+50
9	C-9	2024-1146	PLAN & PROFILE STA. 21+50 TO STA. 25+50
10	C-10	2024-1147	PLAN & PROFILE STA. 25+50 TO STA. 29+50
11	C-11	2024-1148	PLAN & PROFILE STA. 29+50 TO STA. 33+50
12	C-12	2024-1149	PLAN & PROFILE STA. 33+50 TO STA. 38+50
13	C-13	2024-1150	PLAN & PROFILE STA. 38+50 TO STA. 43+50
14	C-14	2024-1151	PLAN & PROFILE STA. 43+50 TO STA. 44+44
15	C-15	2024-1152	CIVIL DETAILS
16	C-16	2024-1153	CIVIL DETAILS
17	ESC-1	2024-1154	EROSION & SEDIMENT CONTROL COVER SHEET
18	ESC-2	2024-1155	OVERALL ESC PLAN
19	ESC-3	2024-1156	ESC PLAN STA. 0+00 TO STA. 0+50
20	ESC-4	2024-1157	ESC PLAN STA. 0+50 TO STA. 4+50
21	ESC-5	2024-1158	ESC PLAN STA. 4+50 TO STA. 7+75
22	ESC-6	2024-1159	ESC PLAN STA. 7+75 TO STA. 13+50
23	ESC-7	2024-1160	ESC PLAN STA. 13+50 TO STA. 17+50
24	ESC-8	2024-1161	ESC PLAN STA. 17+50 TO STA. 21+50
25	ESC-9	2024-1162	ESC PLAN STA. 21+50 TO STA. 25+50
26	ESC-10	2024-1163	ESC PLAN STA. 25+50 TO STA. 29+50
27	ESC-11	2024-1164	ESC PLAN STA. 29+50 TO STA. 33+50
28	ESC-12	2024-1165	ESC PLAN STA. 33+50 TO STA. 38+50
29	ESC-13	2024-1166	ESC PLAN STA. 38+50 TO STA. 43+50
30	ESC-14	2024-1167	ESC PLAN STA. 43+50 TO STA. 44+44
31	ESC-15	2024-1168	ESC DETAILS
32	ESC-16	2024-1169	ESC DETAILS & NOTES
33	ESC-17	2024-1170	ESC NOTES
34	ESC-18	2024-1171	ESC NOTES



THESE PLANS ARE TO BE USED FOR EROSION & SEDIMENT CONTROL ONLY.



SEQUENCE OF CONSTRUCTION:

- NOTIFY BALTIMORE COUNTY DEPARTMENT OF PERMITS, APPROVALS AND INSPECTIONS, SEDIMENT CONTROL, (410) 887-3226 AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. SCHEDULE MEETING WITH ALL RESPONSIBLE PARTIES. CONTRACTOR TO CONTACT OWNER AND SCHEDULE PLANNED UTILITY OUTAGES 72 HOURS PRIOR TO ANY SCHEDULED WORK. ALL REQUIRED STATE, LOCAL, AND FEDERAL PERMITS MUST BE OBTAINED PRIOR TO THE PRE-CONSTRUCTION MEETING.
- PROVIDE LAYOUT OF THE LIMIT OF DISTURBANCE (LOD). THE LOD MUST BE FIELD MARKED PRIOR TO AND INSPECTED AT THE PRE-CONSTRUCTION MEETING. IF APPLICABLE, ORANGE HIGH VISIBILITY FENCE SHALL BE MANUALLY INSTALLED ALONG THE LIMIT OF DISTURBANCE, WHERE THE LIMIT IS WITHIN 50 FEET OF THE FOREST BUFFER/CONSERVATION EASEMENT. THIS SHALL BE COMPLETED BY AND INSPECTED AT THE PRE-CONSTRUCTION MEETING.
- CONDUCT ON-SITE PRE-CONSTRUCTION MEETING WITH ALL RESPONSIBLE PARTIES TO DISCUSS ISSUES INCLUDING, BUT NOT LIMITED TO, MEANS AND METHODS, LIMITS OF WORK RESPONSIBILITIES, AND TO INSPECT THE SITE FOR ANY UNFORESEEN CONDITIONS.
- CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES ONLY. INSTALL ALL SEDIMENT & EROSION CONTROL MEASURES AND DEVICES INCLUDING, BUT NOT LIMITED TO, SILT FENCE & SUPER SILT FENCE. AT THE DISCRETION OF THE ESC INSPECTOR, STANDARD INLET PROTECTION, CURB INLET PROTECTION, AND AT GRADE INLET PROTECTION MAY BE REQUIRED AT LOCATIONS NOTED. INSTALL CONSTRUCTION FENCE SURROUNDING AREA OF WORK AND IMMEDIATELY STABILIZE ALL DISTURBANCE.
- NOTIFY BALTIMORE COUNTY DEPARTMENT OF PERMITS, APPROVALS AND INSPECTIONS, SEDIMENT CONTROL, UPON COMPLETION OF SAID INSTALLATION.
- WITH THE APPROVAL OF BALTIMORE COUNTY DEPARTMENT OF PERMITS, APPROVALS AND INSPECTIONS, SEDIMENT CONTROL, AND THE SEDIMENT CONTROL INSPECTOR CLEAR AND GRUB REMAINDER OF SITE.
- BEGIN TRENCH EXCAVATION, FORCE MAIN INSTALLATION, AND TRENCH REPAIR. PERFORM ANY CURB AND CONCRETE REMOVAL AND REPAIR ASSOCIATED WITH THE FORCE MAIN INSTALLATION. CONTRACTOR SHALL EXCAVATE AND INSTALL FORCE MAIN IN A DOWNSTREAM TO UPSTREAM FASHION. CONTRACTOR SHALL ONLY EXCAVATE AND INSTALL FORCE MAIN IN SECTIONS THAT CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY (SEE DAILY STABILIZATION AND UTILITY NOTES ON SHEET ESC-2).

SEQUENCE OF CONSTRUCTION (CONTINUED)

- UPON SUBSTANTIAL COMPLETION OF THE WORK, PERMANENTLY STABILIZE ALL AREAS DISTURBED DURING CONSTRUCTION. FINE GRADE PEROUS AREAS AND STABILIZE WITH PERMANENT SEED AND MULCH OR SOIL STABILIZATION MATTING AS REQUIRED.
- UPON COMPLETION AND STABILIZATION OF SITE WITH ESTABLISHED VEGETATION AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS.

ESC NOTES:

- CONTRACTOR SHALL PROTECT ALL AREAS ADJACENT TO THE DESIGNATED LIMITS OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
- NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICE.
- INFORMATION SHOWN ON THIS DRAWING IS PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY LAYOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.
- UNDERGROUND UTILITIES ARE SHOWN ON THIS DRAWING FOR THE CONVENIENCE OF THE USER OF THE DRAWING AND THERE IS NO WARRANTY OR GUARANTEE AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN.
- SEDIMENT CONTROL DETAILS AND NOTES ARE SHOWN ON ESC-2 & ESC-15, 16, 17, & 18.
- SEE THIS SHEET FOR SEQUENCE OF CONSTRUCTION.
- TRENCH WORK SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS.

NOTE TO CONTRACTOR:

"EROSION AND SEDIMENT CONTROL SHALL BE STRICTLY ENFORCED. FAILURE TO MAINTAIN SEDIMENT CONTROLS IN AN OPERABLE CONDITION WILL NOT BE ACCEPTABLE"

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATIONS BY THE BALTIMORE COUNTY SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.

Shack Eubank 8-14-2025
SIGNATURE OWNER/DEVELOPER DATE

Lisa K. Eicholtz Deputy Director
PRINT NAME TITLE

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BALTIMORE COUNTY SOIL CONSERVATION DISTRICT AND THE CURRENT STATE OF MARYLAND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

Judith A. Carroll 7/21/2025
SIGNATURE DATE

Judith Carroll 14446
PRINT NAME MD. LICENSE NO.

SURVEY NOTES:

- THIS SURVEY WAS BASED ON A FIELD-RUN TOPOGRAPHIC SURVEY PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON (JMT) IN DECEMBER 2022 AND REFLECTS SITE CONDITIONS AS OF THAT DATE. INFORMATION OUTSIDE OF THE LIMITS OF SURVEY IS SUPPLEMENTED WITH GIS INFORMATION AS WELL AS FIELD OBSERVATIONS.
- COORDINATES ARE REFERENCED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83(2011) AS DETERMINED BY GNSS RTN (SMARTNET) OBSERVATIONS IN DECEMBER 2022.
- ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 1988
- ALL COORDINATES, DISTANCES, MEASUREMENTS, AND UNITS SHOWN HEREON ARE IN U.S. SURVEY FEET.

GENERAL SURVEY NOTES:

THE LOCATION OF IMPROVEMENTS SHOWN HEREON ARE DERIVED FROM MARYLAND COORDINATE SYSTEM (NAV83/NA2011) & NAVD88 FOR VERTICAL:

SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT131	639675.3842	1471249.6397	96.831	TRAV,R&C
JMT132	639664.7138	1471336.8618	89.886	TRAV,MAG. NAIL
JMT133	639726.4046	1471408.0028	84.507	TRAV,R&C
JMT127	637608.6324	1468194.4954	280.231	TRAV,R&C
JMT128	637654.4383	1467841.4423	297.710	TRAV,R&C
JMT129	637657.0642	1467656.8660	287.316	TRAV,R&C

PROJECT LIMIT OF DISTURBANCE = 50,000 S.F. (1.15 ac.)
PROJECT EARTHWORK CALCULATIONS:
CUT: 14,000 C.Y.
FILL: 14,000 C.Y.
FOR PERMITTING USE ONLY. NOT FOR CONTRACTOR.

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14444 EXPIRATION DATE 6/25/2027		AS-BUILT / REVISION BY DATE P.W.A. NO. KEY SHEET POSITION SHT DRAWING SCALE DPW AND TRANSPORTATION
	ENGINEER: CHARLES ENGINEERING 816 SCHEDLING CIRCLE, P.O. BOX 410-796-7483 SUITE 100, VALLEY, MD 21081 WWW.CHARLESENGINEERING.COM		CONTRACT COMPLETION BOX TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION
DGN BY: <u>MJR, MIF</u> DWN BY: <u>MJR, MIF</u> BY: _____ DATE: _____		REVIEWED BY: _____ DATE REVIEWED: _____ SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
EROSION & SEDIMENT CONTROL COVER SHEET

SUBDIVISION: RICHLYN MANOR

PERRY HALL, MD

ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
ESC-1	24084SXO
PROJECT NUMBER	PROJ-10000060
SHEET 19 OF 39	DRAWING NUMBER
	2024-1154
FILE NO.:	

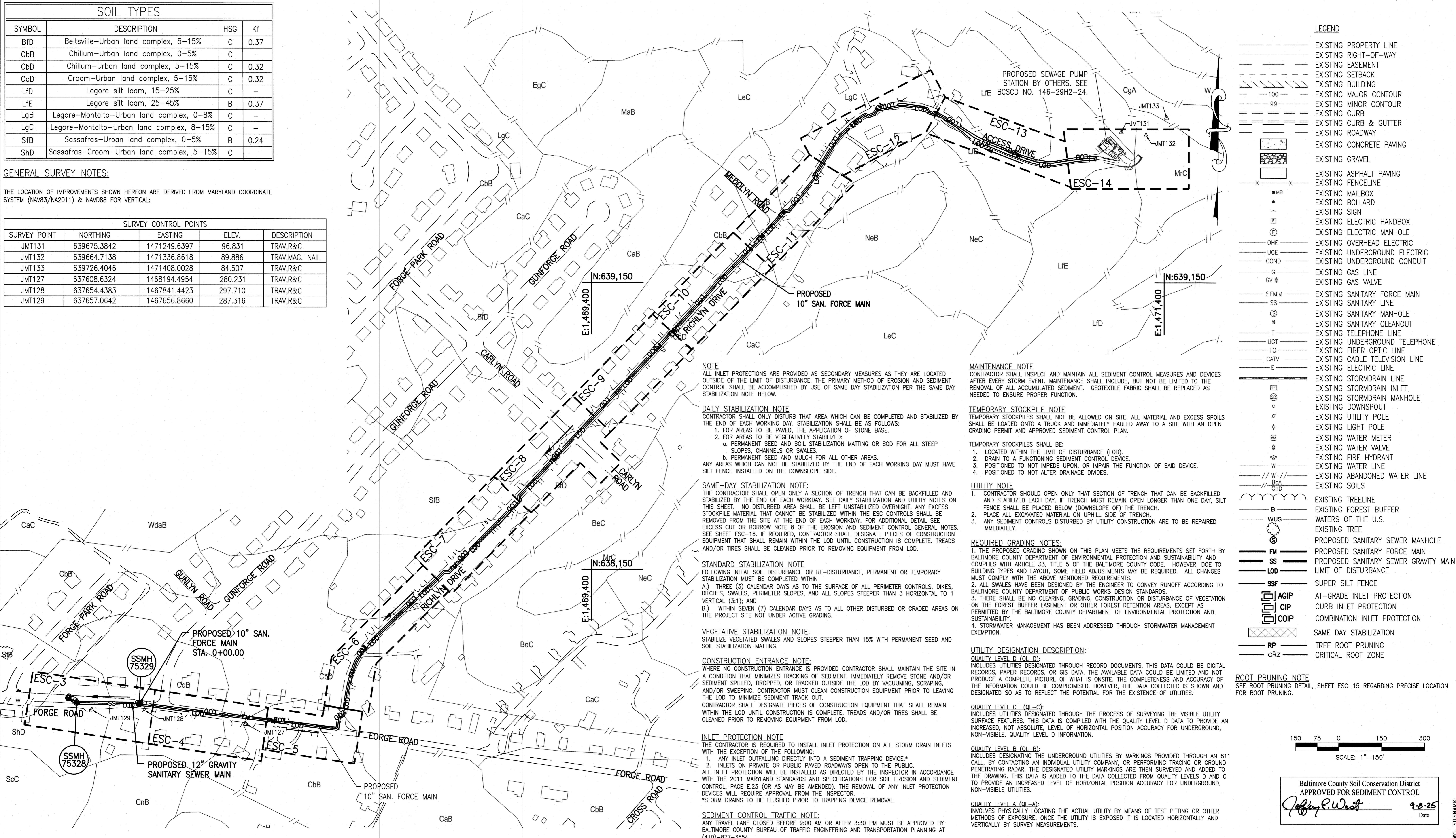
DWG. FILENAME:

SOIL TYPES				
SYMBOL	DESCRIPTION	HSG	Kf	
BfD	Beltsville-Urban land complex, 5-15%	C	0.37	
CbB	Chillum-Urban land complex, 0-5%	C	-	
CbD	Chillum-Urban land complex, 5-15%	C	0.32	
CoD	Croom-Urban land complex, 5-15%	C	0.32	
LfD	Legore silt loam, 15-25%	C	-	
LfE	Legore silt loam, 25-45%	B	0.37	
LgB	Legore-Montalto-Urban land complex, 0-8%	C	-	
LgC	Legore-Montalto-Urban land complex, 8-15%	C	-	
SfB	Sassafras-Urban land complex, 0-5%	B	0.24	
ShD	Sassafras-Croom-Urban land complex, 5-15%	C	-	

GENERAL SURVEY NOTES:

THE LOCATION OF IMPROVEMENTS SHOWN HEREON ARE DERIVED FROM MARYLAND COORDINATE SYSTEM (NAV83/NA2011) & NAV88 FOR VERTICAL:

SURVEY CONTROL POINTS				
SURVEY POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT131	639675.3842	1471249.6397	96.831	TRAV,R&C
JMT132	639664.7138	1471336.8618	89.886	TRAV,MAG. NAIL
JMT133	639726.4046	1471408.0028	84.507	TRAV,R&C
JMT127	637608.6324	1468194.4954	280.231	TRAV,R&C
JMT128	637654.4383	1467841.4423	297.710	TRAV,R&C
JMT129	637657.0642	1467656.8660	287.316	TRAV,R&C



LEGEND	
	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	EXISTING EASEMENT
	EXISTING SETBACK
	EXISTING BUILDING
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING CURB
	EXISTING CURB & GUTTER
	EXISTING ROADWAY
	EXISTING CONCRETE PAVING
	EXISTING GRAVEL
	EXISTING ASPHALT PAVING
	EXISTING FENCELINE
	EXISTING MAILBOX
	EXISTING BOLLARD
	EXISTING SIGN
	EXISTING ELECTRIC HANDBOX
	EXISTING ELECTRIC MANHOLE
	EXISTING OVERHEAD ELECTRIC
	EXISTING UNDERGROUND ELECTRIC
	EXISTING UNDERGROUND CONDUIT
	EXISTING GAS LINE
	EXISTING GAS VALVE
	EXISTING SANITARY FORCE MAIN
	EXISTING SANITARY LINE
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY CLEANOUT
	EXISTING TELEPHONE LINE
	EXISTING UNDERGROUND TELEPHONE
	EXISTING FIBER OPTIC LINE
	EXISTING CABLE TELEVISION LINE
	EXISTING ELECTRIC LINE
	EXISTING STORMDRAIN LINE
	EXISTING STORMDRAIN INLET
	EXISTING STORMDRAIN MANHOLE
	EXISTING DOWNSPOUT
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING ABANDONED WATER LINE
	EXISTING SOILS
	EXISTING TREELINE
	EXISTING FOREST BUFFER
	WATERS OF THE U.S.
	EXISTING TREE
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED SANITARY FORCE MAIN
	PROPOSED SANITARY SEWER GRAVITY MAIN
	LIMIT OF DISTURBANCE
	SUPER SILT FENCE
	AT-GRADE INLET PROTECTION
	CURB INLET PROTECTION
	COMBINATION INLET PROTECTION
	SAME DAY STABILIZATION
	TREE ROOT PRUNING
	CRITICAL ROOT ZONE

NOTE

ALL INLET PROTECTIONS ARE PROVIDED AS SECONDARY MEASURES AS THEY ARE LOCATED OUTSIDE OF THE LIMIT OF DISTURBANCE. THE PRIMARY METHOD OF EROSION AND SEDIMENT CONTROL SHALL BE ACCOMPLISHED BY USE OF SAME DAY STABILIZATION PER THE SAME DAY STABILIZATION NOTE BELOW.

DAILY STABILIZATION NOTE

CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS:
 1. FOR AREAS TO BE PAVED, THE APPLICATION OF STONE BASE.
 2. FOR AREAS TO BE VEGETATIVELY STABILIZED:
 a. PERMANENT SEED AND SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES.
 b. PERMANENT SEED AND MULCH FOR ALL OTHER AREAS.
 ANY AREAS WHICH CAN NOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE.

SAME-DAY STABILIZATION NOTE:

THE CONTRACTOR SHALL OPEN ONLY A SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED BY THE END OF EACH WORKDAY. SEE DAILY STABILIZATION AND UTILITY NOTES ON THIS SHEET. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT. ANY EXCESS STOCKPILE MATERIAL THAT CANNOT BE STABILIZED WITHIN THE ESC CONTROLS SHALL BE REMOVED FROM THE SITE AT THE END OF EACH WORKDAY. FOR ADDITIONAL DETAIL SEE EXCESS CUT OR BORROW NOTE 8 OF THE EROSION AND SEDIMENT CONTROL GENERAL NOTES, SEE SHEET ESC-18. IF REQUIRED, CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT THAT SHALL REMAIN WITHIN THE LOD UNTIL CONSTRUCTION IS COMPLETE. TREADS AND/OR TIRES SHALL BE CLEANED PRIOR TO REMOVING EQUIPMENT FROM LOD.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
 A.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, DITCHES, SWALES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
 B.) WITHIN SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

VEGETATIVE STABILIZATION NOTE:

STABILIZE VEGETATED SWALES AND SLOPES STEEPER THAN 15% WITH PERMANENT SEED AND SOIL STABILIZATION MATTING.

CONSTRUCTION ENTRANCE NOTE:

WHERE NO CONSTRUCTION ENTRANCE IS PROVIDED CONTRACTOR SHALL MAINTAIN THE SITE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED OUTSIDE THE LOD BY VACUUMING, SCRAPING, AND/OR SWEEPING. CONTRACTOR MUST CLEAN CONSTRUCTION EQUIPMENT PRIOR TO LEAVING THE LOD TO MINIMIZE SEDIMENT TRACK OUT. CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT THAT SHALL REMAIN WITHIN THE LOD UNTIL CONSTRUCTION IS COMPLETE. TREADS AND/OR TIRES SHALL BE CLEANED PRIOR TO REMOVING EQUIPMENT FROM LOD.

INLET PROTECTION NOTE

THE CONTRACTOR IS REQUIRED TO INSTALL INLET PROTECTION ON ALL STORM DRAIN INLETS WITH THE EXCEPTION OF THE FOLLOWING:
 1. ANY INLET OUTFALLING DIRECTLY INTO A SEDIMENT TRAPPING DEVICE.*
 2. INLETS ON PRIVATE OR PUBLIC PAVED ROADWAYS OPEN TO THE PUBLIC.
 ALL INLET PROTECTION WILL BE INSTALLED AS DIRECTED BY THE INSPECTOR IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, PAGE E.23 (OR AS MAY BE AMENDED). THE REMOVAL OF ANY INLET PROTECTION DEVICES WILL REQUIRE APPROVAL FROM THE INSPECTOR.
 *STORM DRAINS TO BE FLUSHED PRIOR TO TRAPPING DEVICE REMOVAL.

SEDIMENT CONTROL TRAFFIC NOTE:

ANY TRAVEL LANE CLOSED BEFORE 9:00 AM OR AFTER 3:30 PM MUST BE APPROVED BY BALTIMORE COUNTY BUREAU OF TRAFFIC ENGINEERING AND TRANSPORTATION PLANNING AT (410)-877-3554.

MAINTENANCE NOTE

CONTRACTOR SHALL INSPECT AND MAINTAIN ALL SEDIMENT CONTROL MEASURES AND DEVICES AFTER EVERY STORM EVENT. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE REMOVAL OF ALL ACCUMULATED SEDIMENT. GEOTEXTILE FABRIC SHALL BE REPLACED AS NEEDED TO ENSURE PROPER FUNCTION.

TEMPORARY STOCKPILE NOTE

TEMPORARY STOCKPILES SHALL NOT BE ALLOWED ON SITE. ALL MATERIAL AND EXCESS SPOILS SHALL BE LOADED ONTO A TRUCK AND IMMEDIATELY HAULED AWAY TO A SITE WITH AN OPEN GRADING PERMIT AND APPROVED SEDIMENT CONTROL PLAN.

TEMPORARY STOCKPILES SHALL BE:

1. LOCATED WITHIN THE LIMIT OF DISTURBANCE (LOD).
2. DRAIN TO A FUNCTIONING SEDIMENT CONTROL DEVICE.
3. POSITIONED TO NOT IMPEDE UPON, OR IMPAIR THE FUNCTION OF SAID DEVICE.
4. POSITIONED TO NOT ALTER DRAINAGE DIVIDES.

UTILITY NOTE

1. CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE OF) THE TRENCH.
2. PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

REQUIRED GRADING NOTES:

1. THE PROPOSED GRADING SHOWN ON THIS PLAN MEETS THE REQUIREMENTS SET FORTH BY BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND COMPLIES WITH ARTICLE 33, TITLE 5 OF THE BALTIMORE COUNTY CODE. HOWEVER, DUE TO BUILDING TYPES AND LAYOUT, SOME FIELD ADJUSTMENTS MAY BE REQUIRED. ALL CHANGES MUST COMPLY WITH THE ABOVE MENTIONED REQUIREMENTS.
2. ALL SWALES HAVE BEEN DESIGNED BY THE ENGINEER TO CONVEY RUNOFF ACCORDING TO BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS DESIGN STANDARDS.
3. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION ON THE FOREST BUFFER EASEMENT OR OTHER FOREST RETENTION AREAS, EXCEPT AS PERMITTED BY THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY.
4. STORMWATER MANAGEMENT HAS BEEN ADDRESSED THROUGH STORMWATER MANAGEMENT EXEMPTION.

UTILITY DESIGNATION DESCRIPTION:

QUALITY LEVEL D (QL-D):
 INCLUDES UTILITIES DESIGNATED THROUGH RECORD DOCUMENTS. THIS DATA COULD BE DIGITAL RECORDS, PAPER RECORDS, OR GIS DATA. THE AVAILABLE DATA COULD BE LIMITED AND NOT PRODUCE A COMPLETE PICTURE OF WHAT IS ON-SITE. THE COMPLETENESS AND ACCURACY OF THE INFORMATION COULD BE COMPROMISED. HOWEVER, THE DATA COLLECTED IS SHOWN AND DESIGNATED SO AS TO REFLECT THE POTENTIAL FOR THE EXISTENCE OF UTILITIES.

QUALITY LEVEL C (QL-C):

INCLUDES UTILITIES DESIGNATED THROUGH THE PROCESS OF SURVEYING THE VISIBLE UTILITY SURFACE FEATURES. THIS DATA IS COMPILED WITH THE QUALITY LEVEL D DATA TO PROVIDE AN INCREASED, NOT ABSOLUTE, LEVEL OF HORIZONTAL POSITION ACCURACY FOR UNDERGROUND, NON-VISIBLE, QUALITY LEVEL D INFORMATION.

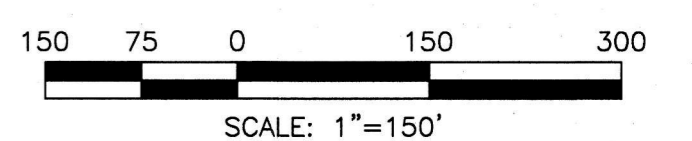
QUALITY LEVEL B (QL-B):

INCLUDES DESIGNATING THE UNDERGROUND UTILITIES BY MARKINGS PROVIDED THROUGH AN 811 CALL, BY CONTACTING AN INDIVIDUAL UTILITY COMPANY, OR PERFORMING TRACING OR GROUND PENETRATING RADAR. THE DESIGNATED UTILITY MARKINGS ARE THEN SURVEYED AND ADDED TO THE DRAWING. THIS DATA IS ADDED TO THE DATA COLLECTED FROM QUALITY LEVELS D AND C TO PROVIDE AN INCREASED LEVEL OF HORIZONTAL POSITION ACCURACY FOR UNDERGROUND, NON-VISIBLE UTILITIES.

QUALITY LEVEL A (QL-A):

INVOLVES PHYSICALLY LOCATING THE ACTUAL UTILITY BY MEANS OF TEST PITTING OR OTHER METHODS OF EXPOSURE. ONCE THE UTILITY IS EXPOSED IT IS LOCATED HORIZONTALLY AND VERTICALLY BY SURVEY MEASUREMENTS.

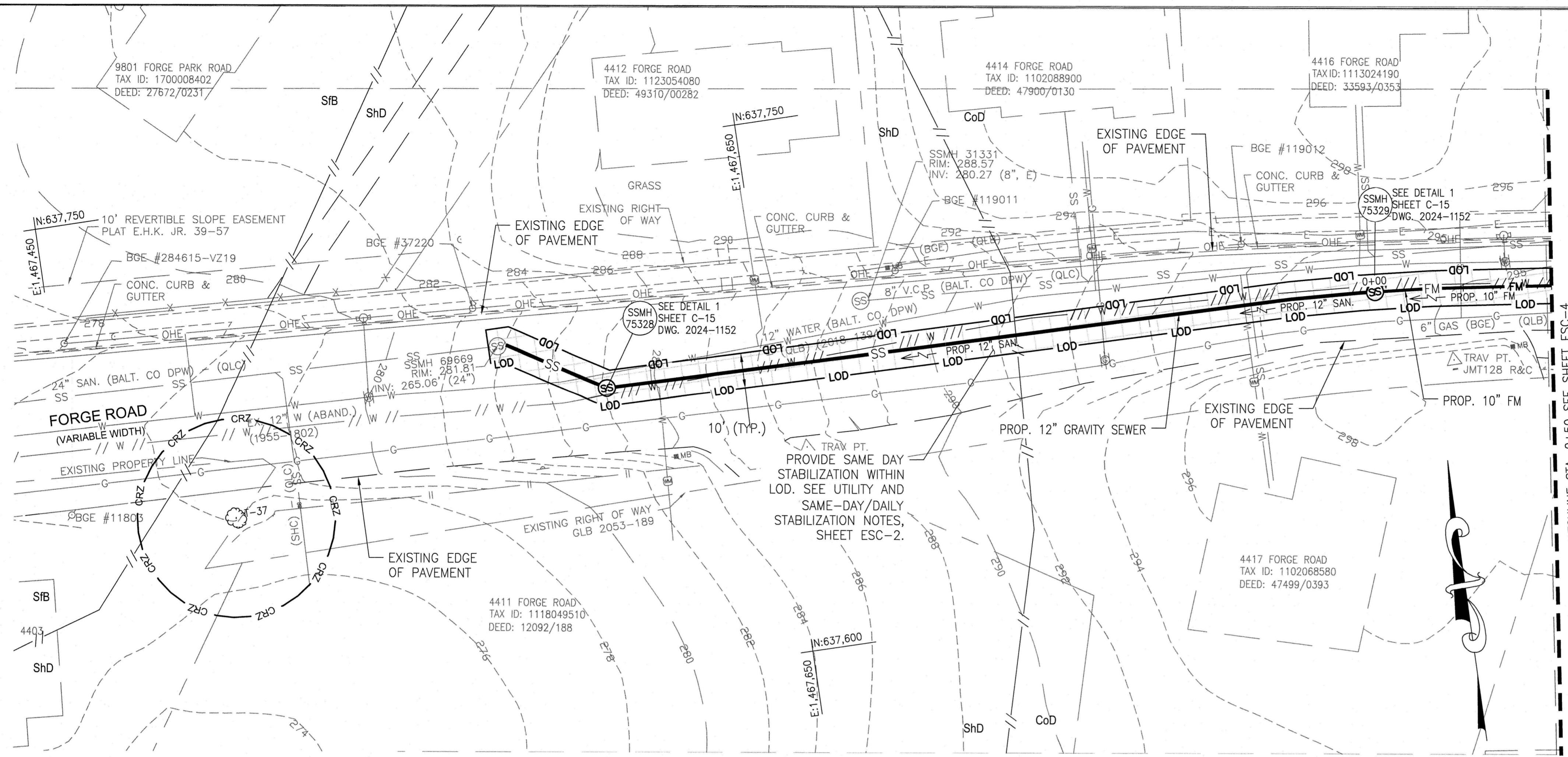
ROOT PRUNING NOTE
 SEE ROOT PRUNING DETAIL, SHEET ESC-15 REGARDING PRECISE LOCATION FOR ROOT PRUNING.



Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
 9-8-25
 Date

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHI	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14448 EXPIRATION DATE 5/28/2027 ENGINEER: CARROLL ENGINEERING 215 SCHLING CIRCLE, PH. 410-786-7483 SUITE 101, HAVEN, MD 21051 EMAIL: INFO@CARROLL-ENGINEERING.COM	CONTRACT COMPLETION BOX						PLAN SCALE: AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
		DON BY: MJE, MJP DWN BY: MJE, MJP BY: DATE:	BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER	REVIEWED BY: DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES				

SHEET DESIGNATION		CONTRACT NUMBER	
ESC-2		24084SX0	
BALTIMORE COUNTY		PROJECT NUMBER	
MARYLAND		PROJ-10000060	
SHEET 20 OF 39		DRAWING NUMBER	
2024-1155		FILE NO.:	



EROSION & SEDIMENT CONTROL PLAN STA. 0+00 TO STA. 0+50

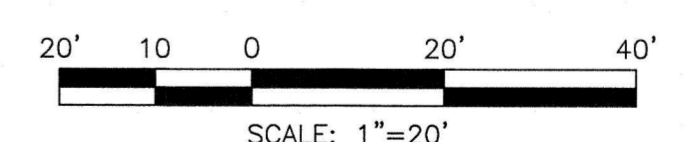
SCALE: 1"=20'-0" SEE SHEET C-3 (2024-1140)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.

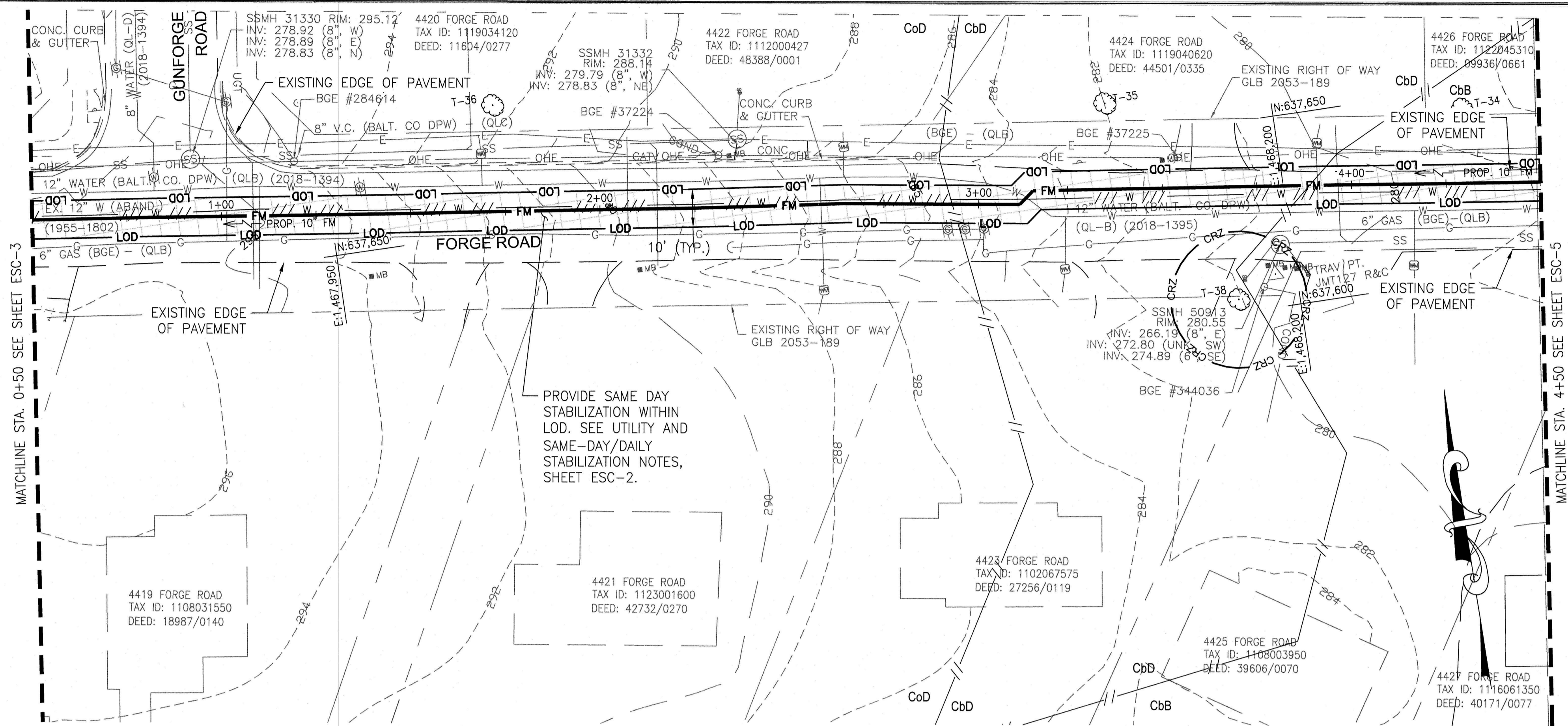


Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
Date: 9-8-25

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION
	ENGINEER: CARROLL ENGINEERING, INC. 215 SCOTTLING CIRCLE, PH. 410-705-7423 SUITE 102, HENTZ VALLEY, MD 21031 INFO@CARROLLENGINEERING.COM AS-BUILT PER RECORD PRINT BY:		CONTRACT COMPLETION BOX	DGN BY: MIE, MIF DWN BY: MIE, MIF CHKD BY: CWS	R.O.W. NO.	QSE	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 0+00 TO STA. 0+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD
 ELECTION DIST. NO.: 11C5

SHEET DESIGNATION ESC-3	CONTRACT NUMBER 24084SX0
PROJECT NUMBER PROJ-10000060	SHEET 21 OF 39 DRAWING NUMBER 2024-1156
	FILE NO.:



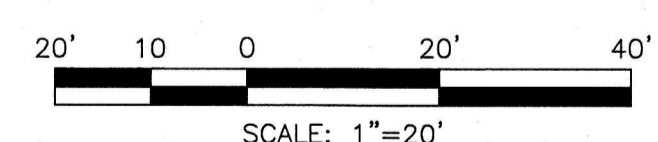
EROSION & SEDIMENT CONTROL PLAN STA. 0+50 TO STA. 4+50
 SCALE: 1"=20'-0" SEE SHEET C-4 (2024-1141)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.

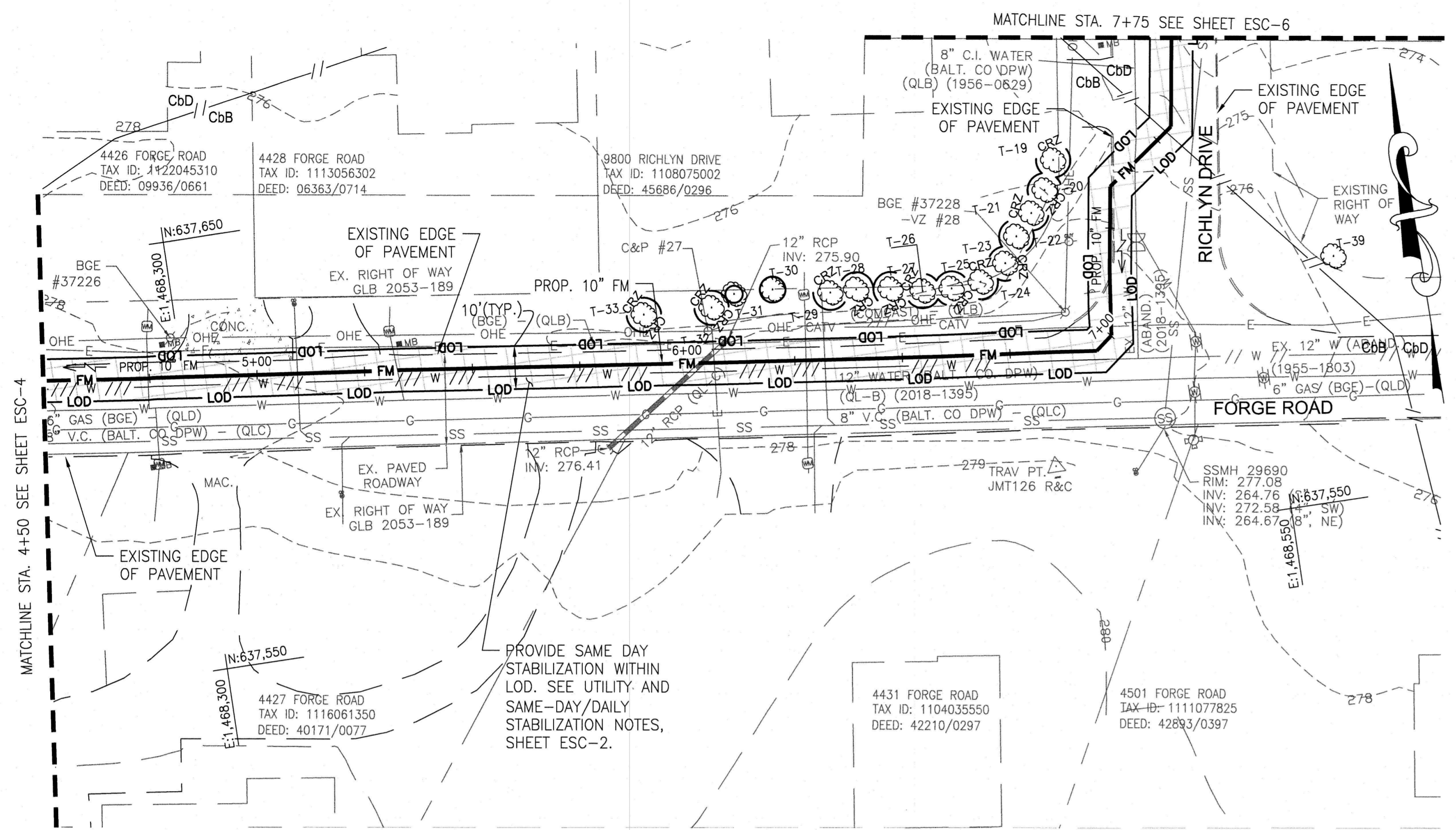


Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
 9-8-25
 Date

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14448 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION	
	CONTRACT COMPLETION BOX		BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION
	ENGINEER: CARROLL ENGINEERING 216 SHILLING CIRCLE, PH. 410-705-7423 SUITE 102, HUNT VALLEY, MD 21081 INFO@CARROLLENGINEERING.COM AS-BUILT PER RECORD PRINT		DGN BY: <u>ME, MFP</u> DWN BY: <u>ME, MFP</u> BY: _____ DATE: _____	REVIEWED BY: _____ DATE REVIEWED: _____	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES						
	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES										

MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 88		SHEET DESIGNATION ESC-4	CONTRACT NUMBER 24084SX0
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN EROSION & SEDIMENT CONTROL PLAN STA. 0+50 TO STA. 4+50 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD			
		PROJECT NUMBER PROJ-1000060	SHEET 22 OF 39 DRAWING NUMBER 2024-1157
ELECTION DIST. NO.: 11C5		FILE NO.:	

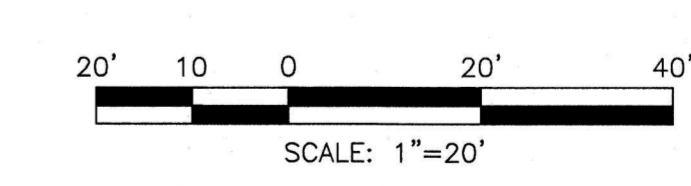
DWG. FILENAME:



EROSION & SEDIMENT CONTROL PLAN STA. 4+50 TO STA. 7+75
 SCALE: 1"=20'-0"
 SEE SHEET C-5 (2024-1142)

- SHEET NOTES**
- SEE SHEET ESC-1 FOR VICINITY MAP.
 - SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
 - SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
 - SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

- ROOT PRUNING NOTE**
- WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
 Date: 9-8-25

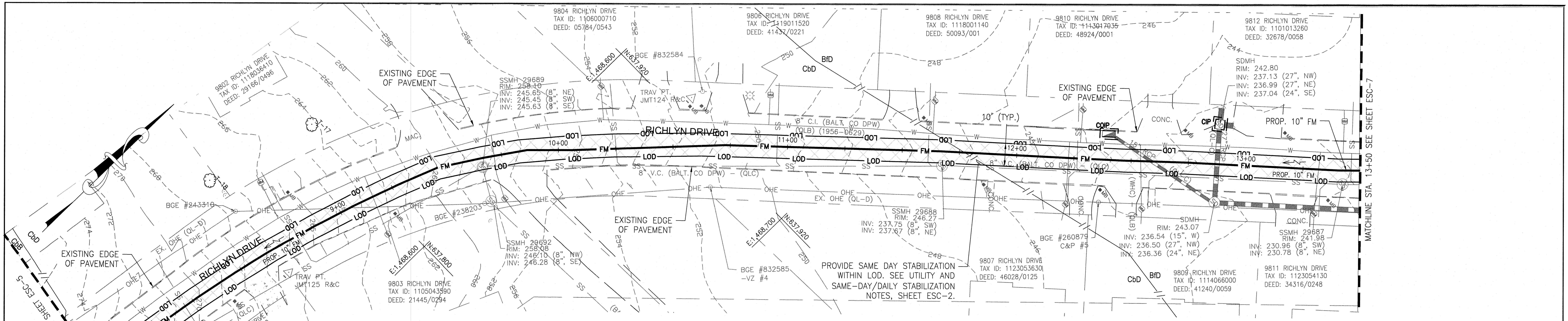
	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14448 EXPIRATION DATE 2/28/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION		
	ENGINEER: CARROLL ENGINEERING 215 SCHLING CIRCLE, PH. 410-786-7423 SUITE 102, HENRY VALLEY, MD 21031 INFO@CARROLLENGINEERING.COM		CONTRACT COMPLETION BOX	DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
AS-BUILT PER RECORD PRINT		DWN BY: MJE, MJP	REVIEWED BY:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES								
BY:	CHKD BY: CMS	DATE REVIEWED:										

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 4+50 TO STA. 7+75
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION ESC-5	CONTRACT NUMBER 24084SXO
PROJECT NUMBER PROJ-10000060	
SHEET 23 OF 39	
DRAWING NUMBER 2024-1158	
FILE NO.:	



DWG. FILENAME:



EROSION & SEDIMENT CONTROL PLAN STA. 7+75 TO STA. 13+50

SCALE: 1"=20'-0"

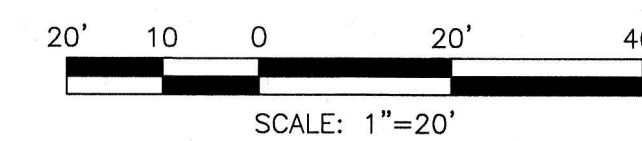
SEE SHEET C-6 (2024-1143)

SHEET NOTES

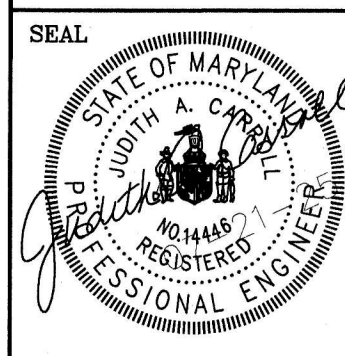
- SEE SHEET ESC-1 FOR VICINITY MAP.
- SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
- SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
- INLET PROTECTION SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
- INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
- SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

- WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
Date: 9-8-25

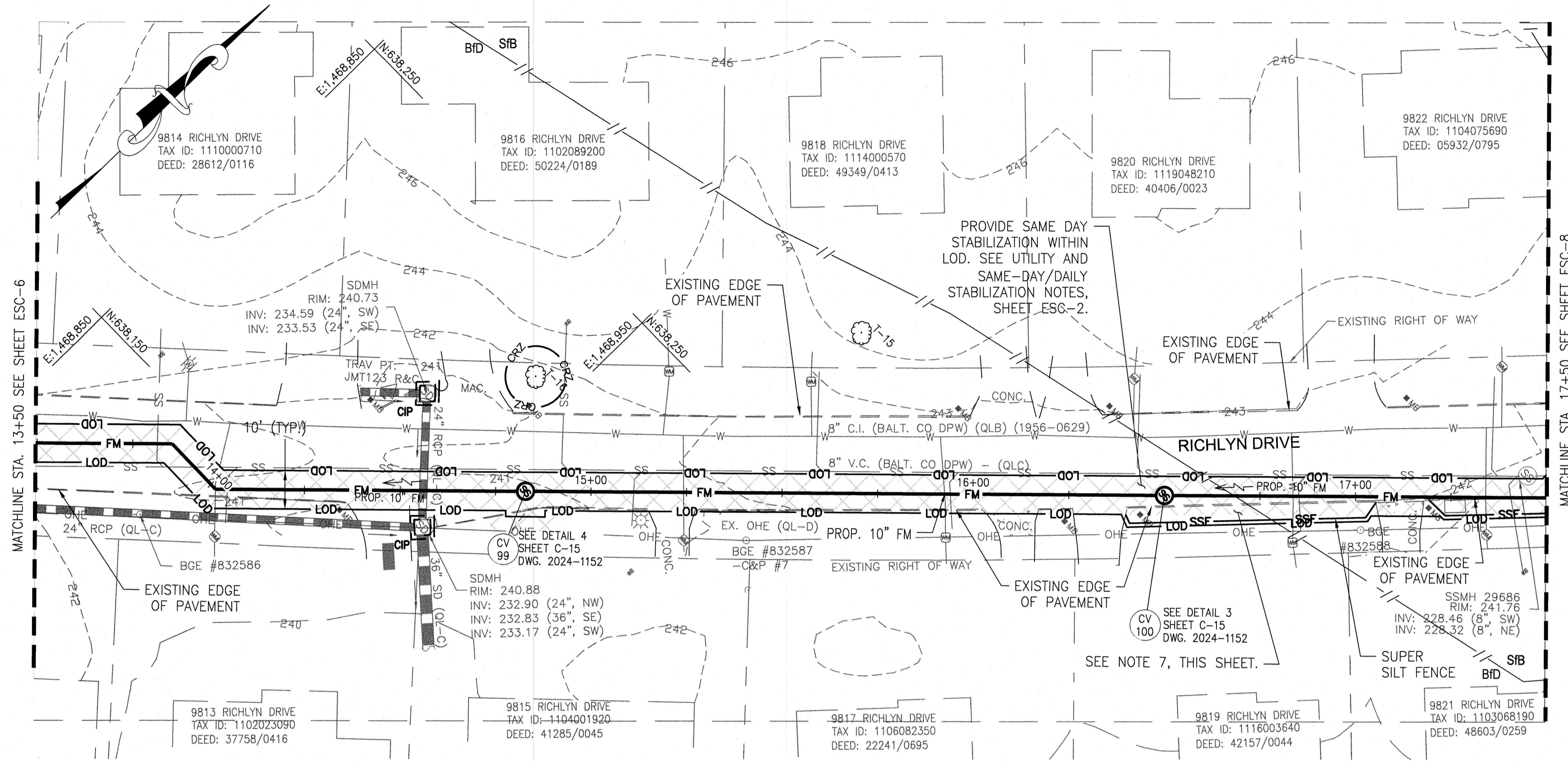


PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION CONTRACT COMPLETION BOX		BY DGN BY: M.E. M.F. DWN BY: M.E. M.F. BY: _____ DATE: _____	DATE REVIEWED BY: _____ DATE REVIEWED: _____	P.W.A. NO. R.O.W. NO.	KEY SHEET QSE	POSITION SHI 44NE32 44NE33 45NE33 46NE33 46NE34	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ. 1"=20' VERT. 1"=10'	DPW AND TRANSPORTATION SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES										

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 7+75 TO STA. 13+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 88	SHEET DESIGNATION ESC-6	CONTRACT NUMBER 24084SX0
		PROJECT NUMBER PROJ-1000060
SHEET 24 OF 39 DRAWING NUMBER 2024-1159		FILE NO.:

DWG. FILENAME:



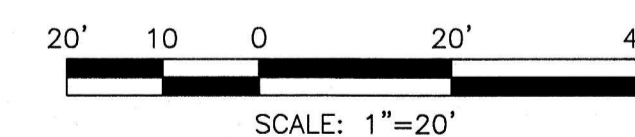
EROSION & SEDIMENT CONTROL PLAN STA. 13+50 TO STA. 17+50
 SCALE: 1"=20'-0"
 SEE SHEET C-7 (2024-1144)

SHEET NOTES

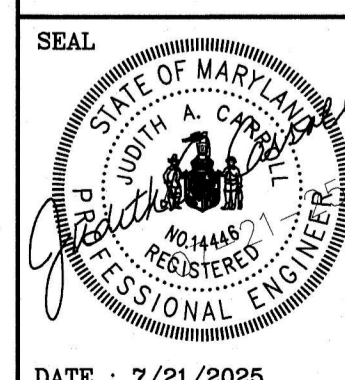
- SEE SHEET ESC-1 FOR VICINITY MAP.
- SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
- SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
- INLET PROTECTION SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
- INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
- SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.
- FOR PERVIOUS HIGHLY ERODIBLE SOILS WITHIN THE LIMITS OF FORCE MAIN INSTALLATION, APPLY TSMS WITH 1.5 PSF.

ROOT PRUNING NOTE

- WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



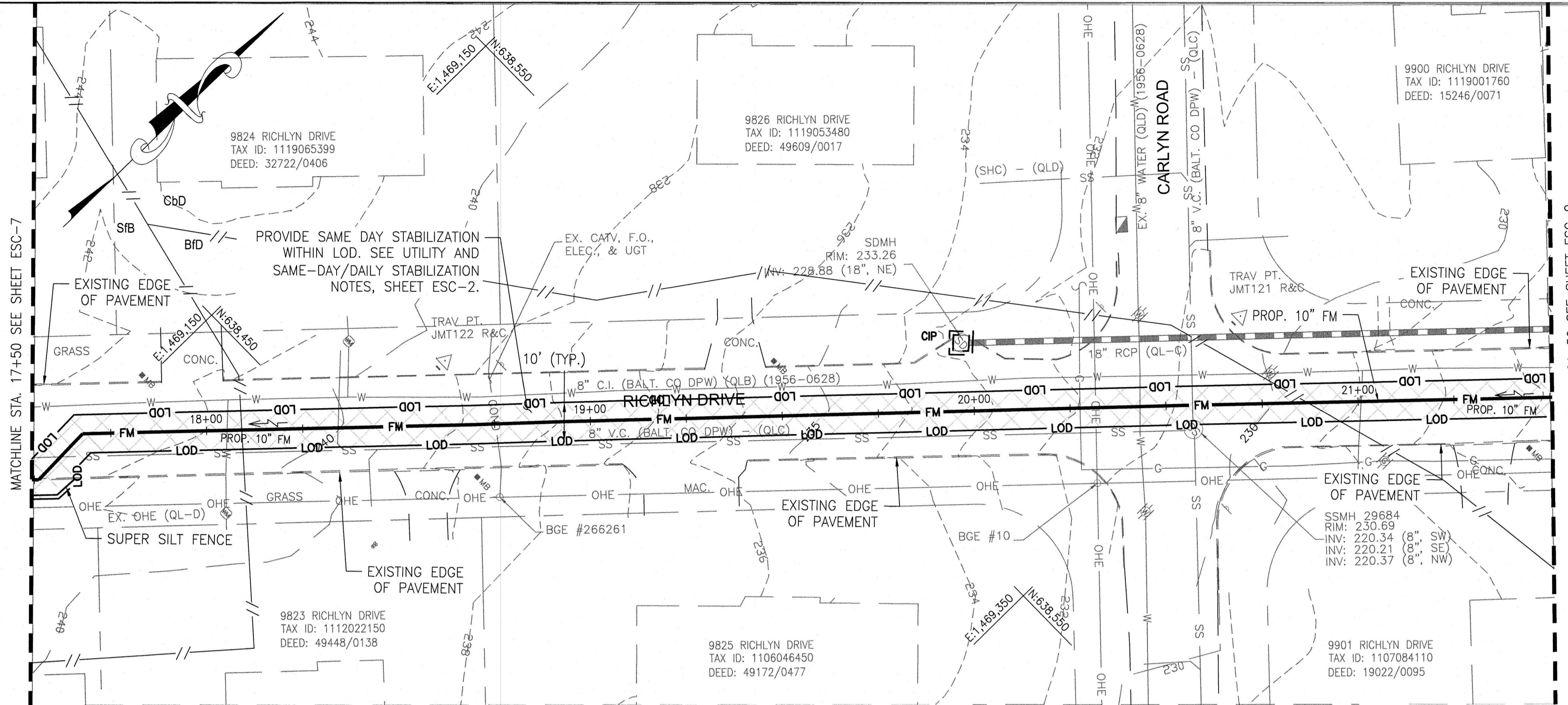
Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
 Date: 9-8-25



PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14448 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION CONTRACT COMPLETION BOX	BY DGN BY: MJE, MJP DWN BY: MJE, MJP CHKD BY: CMS	DATE BUREAU OF ENGINEERING AND CONSTRUCTION REVIEWED BY: DATE REVIEWED:	P.W.A. NO. R.O.W. NO.	KEY SHEET QSE	POSITION SHI 44NE32 44NE33 46NE33 46NE34	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'	DPW AND TRANSPORTATION SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES BUR. OF ENGINEERING & CONSTRUCTION
SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES									

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 13+50 TO STA. 17+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 88	SHEET DESIGNATION ESC-7	CONTRACT NUMBER 24084SXO
	PROJECT NUMBER PROJ-10000060	SHEET 25 OF 39
	DRAWING NUMBER 2024-1160	FILE NO.:

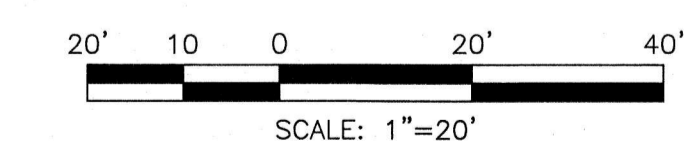


EROSION & SEDIMENT CONTROL PLAN STA. 17+50 TO STA. 21+50
 SCALE: 1"=20'-0"
 SHEET NOTES

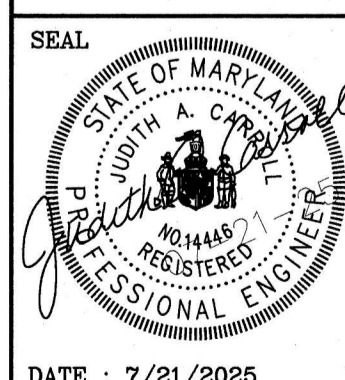
1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. INLET PROTECTION SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
5. INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
6. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

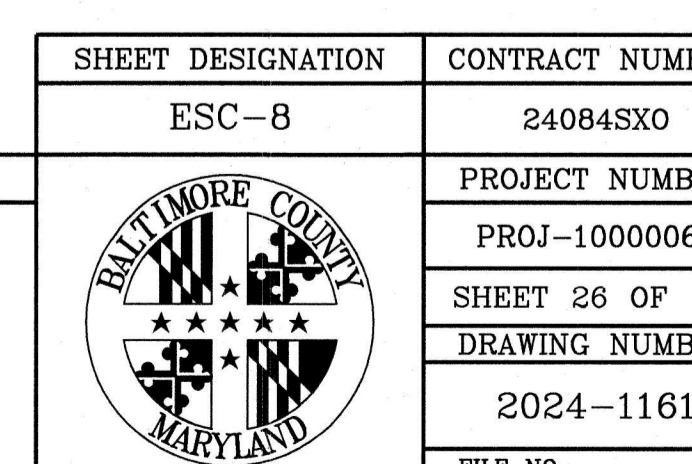
1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



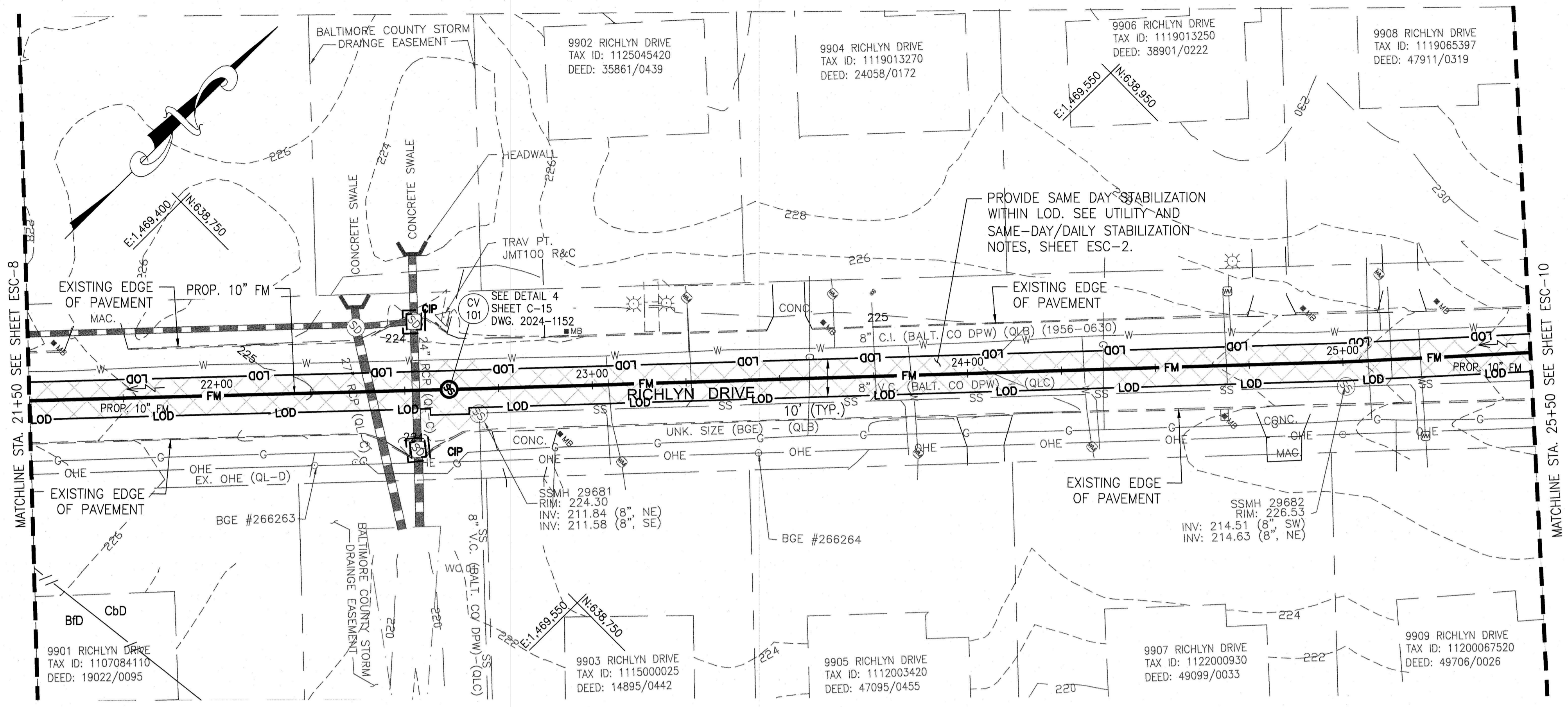
Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West 9-8-25
 Date



PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14448, EXPIRATION DATE 5/25/2027.		AS-BUILT / REVISION		BY		DATE		P.W.A. NO.		KEY SHEET		POSITION SHT		DRAWING SCALE		DPW AND TRANSPORTATION							
ENGINEER: CARROLL ENGINEERING 216 SHILLING CIRCLE, PH: 410-785-7423 HUNT VALLEY, MD 21081 EMAIL: INFO@CARROLLENGINEERING.COM AS-BUILT PER RECORD PRINT		CONTRACT COMPLETION BOX		DGN BY: M.E. M.F. DWN BY: M.E. M.F. CHKD BY: C.M.S.		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS		STRUCTURES		STORM DRAINS		SEWER		WATER		FIELD ENGINEER		BUR. OF ENGINEERING & CONSTRUCTION	
DATE: 7/21/2025		REVIEWED BY:		DATE REVIEWED:		SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES		R.O.W. NO.		QSE		PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ: 1"=20' VERT: 1"=10'		SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES		BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION		RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN		EROSION & SEDIMENT CONTROL PLAN		STA. 17+50 TO STA. 21+50	
SUBDIVISION: RICHLYN MANOR		PERRY HALL, MD		ELECTION DIST. NO.: 11C5		ESC-8		24084SXO		PROJECT NUMBER		PROJ-10000060		SHEET 26 OF 39		DRAWING NUMBER		2024-1161		FILE NO.:			



DWG. FILENAME:



EROSION & SEDIMENT CONTROL PLAN STA. 21+50 TO STA. 25+50

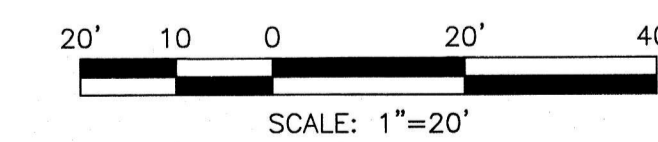
SCALE: 1"=20'-0" SEE SHEET C-9 (2024-1146)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. INLET PROTECTIONS SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
5. INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
6. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



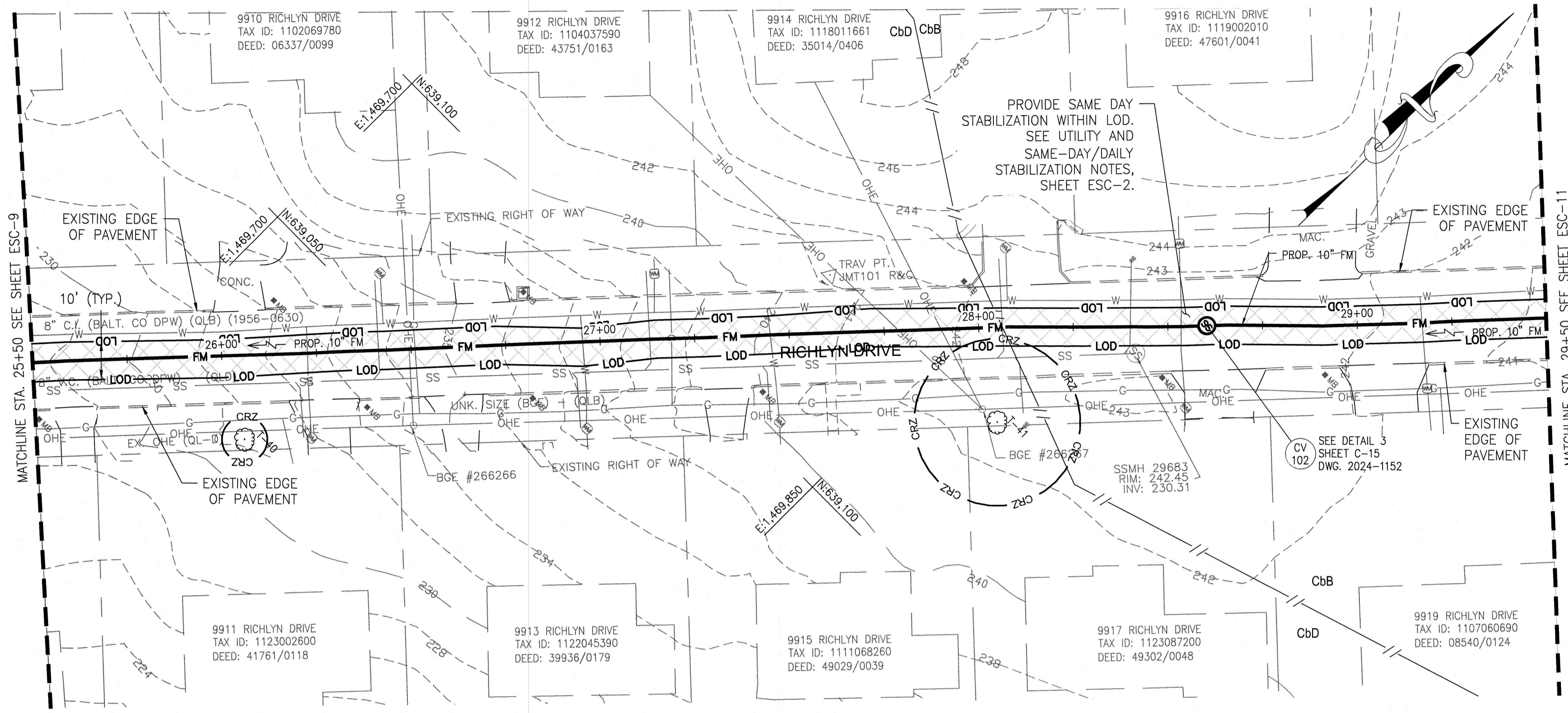
Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West 9-8-25
Date

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

SHEET DESIGNATION	CONTRACT NUMBER
ESC-9	24084SX0
PROJECT NUMBER	PROJ-10000060
SHEET 27 OF 39	DRAWING NUMBER
	2024-1162
FILE NO.:	

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 6/25/2027 ENGINEER: CARROLL ENGINEERING & CONSTRUCTION, 215 SCHILLING CIRCLE, PH. 410-785-7483, SUITE 100, HUNT VALLEY, MD 21031, INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT BY: [Signature] DATE: [Blank]		CONTRACT COMPLETION BOX				R.O.W. NO.	QSE	44NE32 44NE33 46NE33 46NE34	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ. 1"=20' VERT. 1"=10'
	DGN BY: MJE, MJP	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION	
	DWN BY: MJE, MJP	REVIEWED BY:								
	CHKD BY: CMS	DATE REVIEWED:								

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 21+50 TO STA. 25+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5



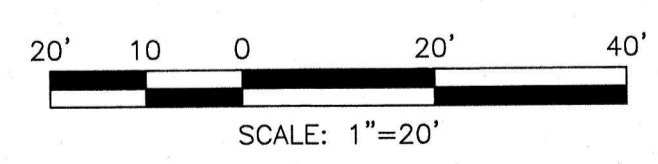
EROSION & SEDIMENT CONTROL PLAN STA. 25+50 TO STA. 29+50
 SCALE: 1"=20'-0" SEE SHEET C-10 (2024-1147)

SHEET NOTES

- SEE SHEET ESC-1 FOR VICINITY MAP.
- SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
- SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
- SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

- WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



MARYLAND COORDINATE SYSTEM
 HORIZONTAL - NAD 83/2011
 VERTICAL - NAVD 88

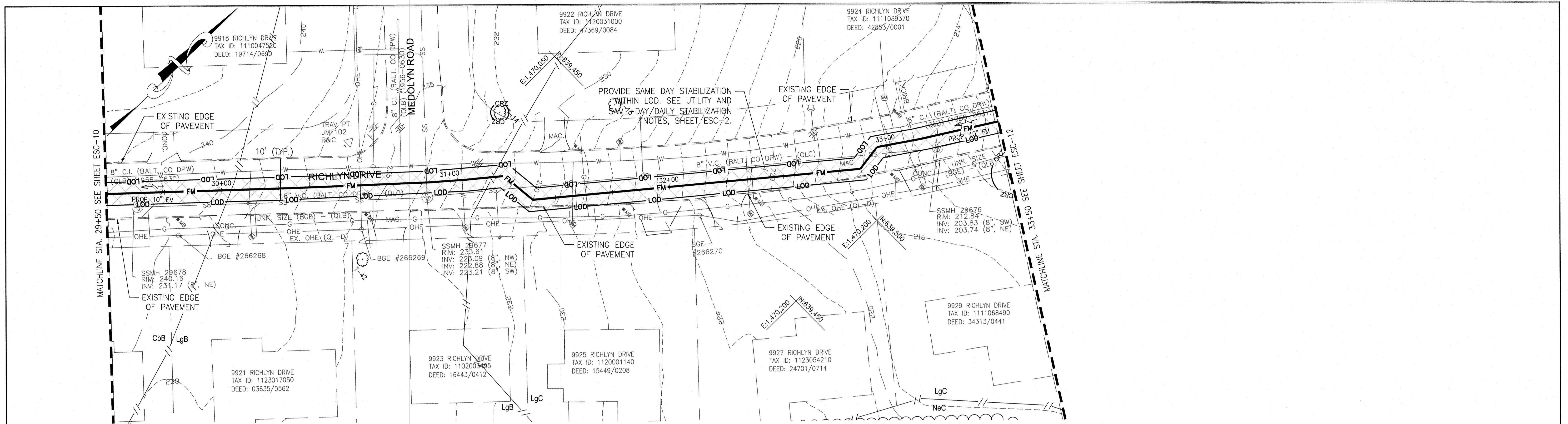
Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West 4-8-25
 Date

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION	
	CONTRACT COMPLETION BOX					R.O.W. NO.	QSE	44NE32 44NE33 46NE33 46NE34	AS SHOWN HORIZ. 1"=20' VERT. 1"=10'	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7483 SUITE 102 HUNT VALLEY, MD 21031 INFO@CEENGINEERING.COM AS-BUILT PER RECORD PRINT		DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	BY: _____ DATE: _____		CHKD BY: CMS	REVIEWED BY:							BUR. OF ENGINEERING & CONSTRUCTION

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 25+50 TO STA. 29+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
ESC-10	24084SX0
PROJECT NUMBER	PROJ-1000060
SHEET 28 OF 39	DRAWING NUMBER
2024-1163	FILE NO.:

DWG. FILENAME:



EROSION & SEDIMENT CONTROL PLAN STA. 29+50 TO STA. 33+50

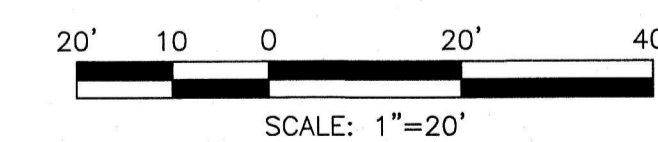
SCALE: 1"=20'-0" SEE SHEET C-11 (2024-1148)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West 9-8-25
 Date

MARYLAND COORDINATE SYSTEM
 HORIZONTAL - NAD 83/2011
 VERTICAL - NAVD 88

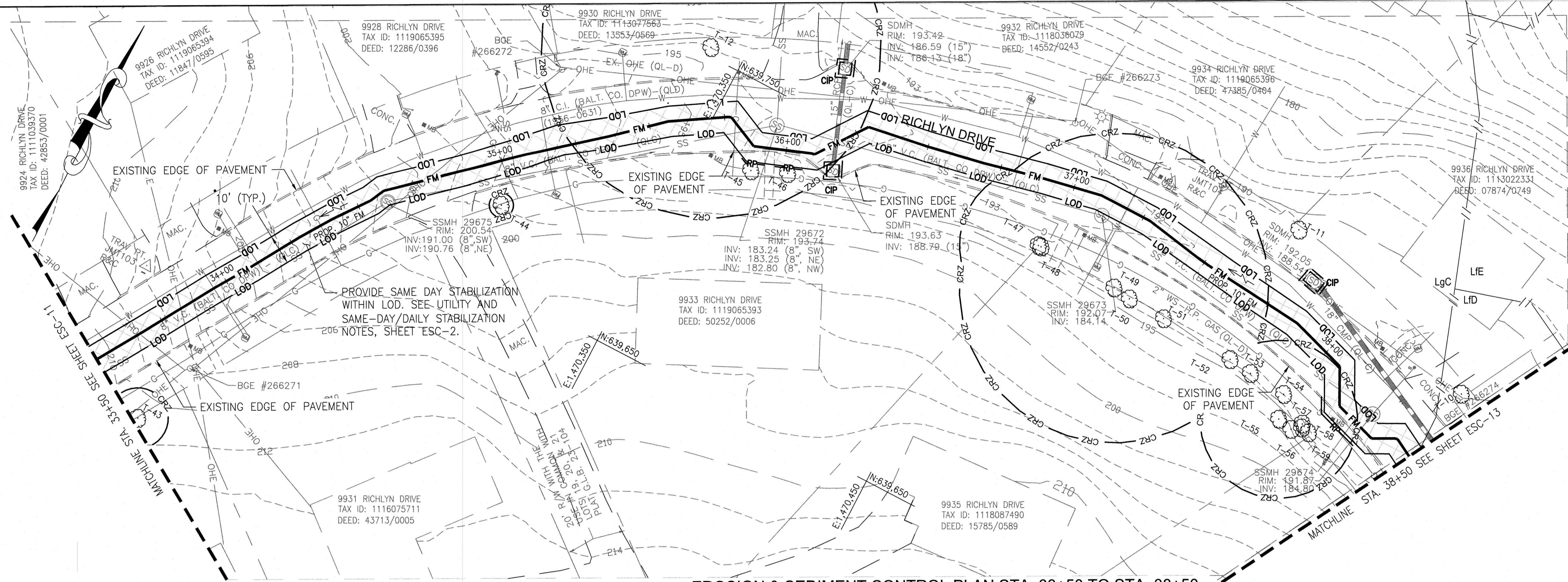
	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 6/26/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION	
	CONTRACT COMPLETION BOX					R.O.W. NO.	QSE	44NE2 44NE3 46NE3 46NE4	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ. 1"=20' VERT. 1"=10'	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7423 SUITE 102 HUNT VALLEY, MD 21091 INFO@CEENGINEERING.COM	DGN BY: MJE, MJF DWN BY: MJE, MJF AS-BUILT PER RECORD PRINT BY: DATE:	BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION	REVIEWED BY: DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES						
	DATE: 7/21/2025										

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 29+50 TO STA. 33+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
ESC-11	24084SXO
PROJECT NUMBER	PROJ-10000060
SHEET 29 OF 39	DRAWING NUMBER
	2024-1164
FILE NO.:	



DWG. FILENAME:



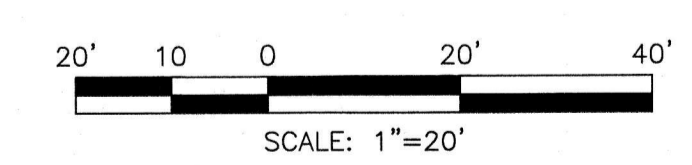
EROSION & SEDIMENT CONTROL PLAN STA. 33+50 TO STA. 38+50
 SCALE: 1"=20'-0" SEE SHEET C-12 (2024-1149)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. INLET PROTECTION SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
5. INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
6. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.
2. TOTAL POTENTIAL ROOT PRUNING THIS SHEET: 38 LINEAR FEET.
3. CONTRACTOR TO COORDINATE WITH GAS COMPANY PRIOR TO ANY ROOT PRUNING IN THE VICINITY OF EXISTING GAS UTILITIES.



Baltimore County Soil Conservation District
 APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West 9-8-25
 Date

MARYLAND COORDINATE SYSTEM
 HORIZONTAL - NAD 83/2011
 VERTICAL - NAVD 88

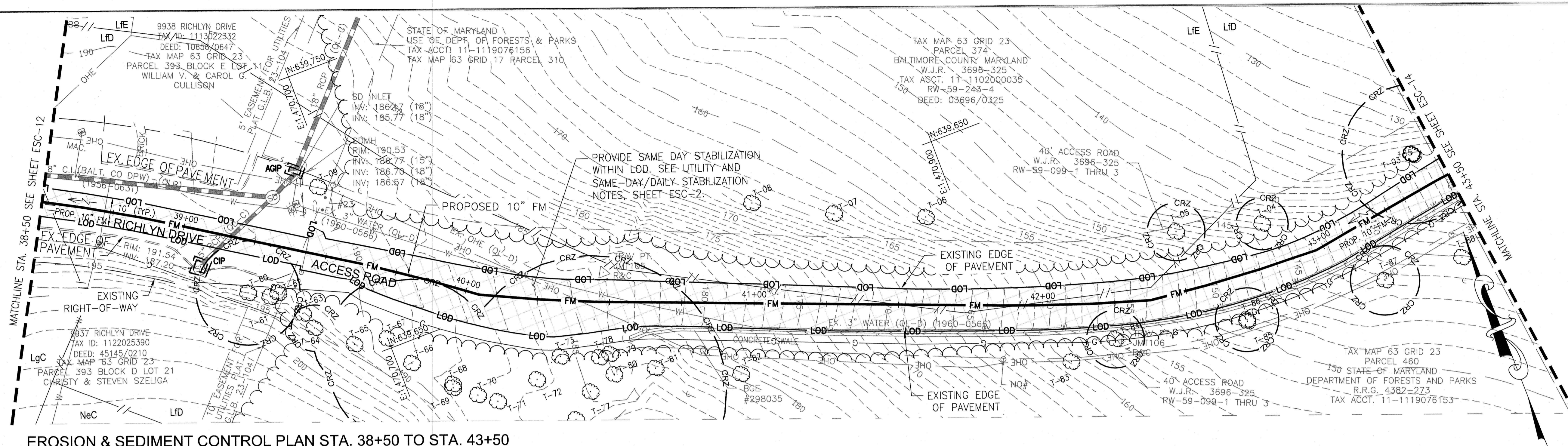
	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.					R.O.W. NO.	QSE	44N32 44N33 44N34	AS SHOWN HORIZ. 1"=20' VERT. 1"=10'	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		CONTRACT COMPLETION BOX							
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-785-7423 SUITE 102 HUNT VALLEY, MD 21031 INFO@CEENGINEERING.COM	DGN BY: MJE, MJF	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
AS-BUILT PER RECORD PRINT	DWN BY: MJE, MJF	REVIEWED BY:								
BY: DATE:	CHKD BY: CMS	DATE REVIEWED:								

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 33+50 TO STA. 38+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
ESC-12	24084SXO
PROJECT NUMBER	
PROJ-10000060	
SHEET 30 OF 39	
DRAWING NUMBER	
2024-1165	
FILE NO.:	

DATE : 7/21/2025

DWG. FILENAME:



EROSION & SEDIMENT CONTROL PLAN STA. 38+50 TO STA. 43+50

SCALE: 1"=20'-0"

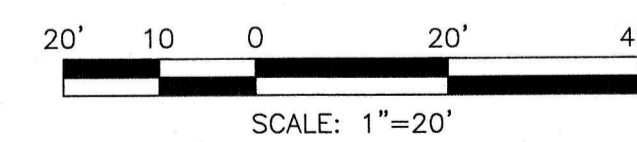
SEE SHEET C-13 (2024-1150)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. INLET PROTECTION SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
5. INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
6. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West 9-25-25
Date

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/25/2027		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHI	DRAWING SCALE	DPW AND TRANSPORTATION
	CONTRACT COMPLETION BOX					R.O.W. NO.	QSE	44NE32 44NE33 44NE34	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ. 1"=20' VERT. 1"=10'	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	ENGINEER: CARROLL ENGINEERING 515 SCHILLING CIRCLE, PE 410-785-7483 SUITE 102 HUNT VALLEY, MD 21031 INFO@CEENGINEERING.COM	DON BY: MJE, MIF DWN BY: MJE, MIF	BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER							BUR. OF ENGINEERING & CONSTRUCTION
	AS-BUILT PER RECORD PRINT BY: _____ DATE: _____	CHD BY: CMS DATE REVIEWED: _____								

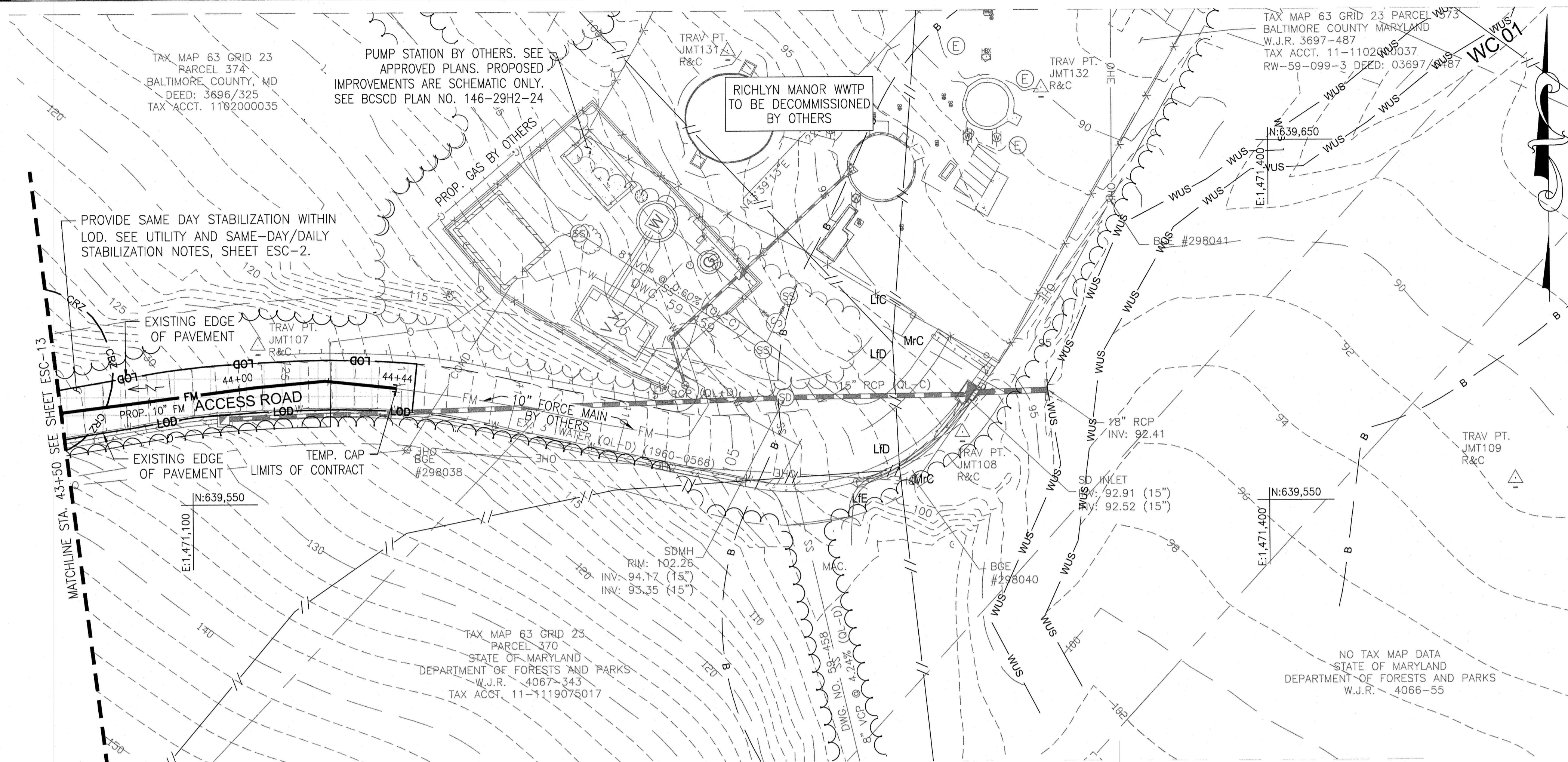
SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 38+50 TO STA. 43+50
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
ESC-13	24084SX0
PROJECT NUMBER	PROJ-1000060
SHEET 31 OF 39	DRAWING NUMBER
	2024-1166
FILE NO.:	



DWG. FILENAME:



EROSION & SEDIMENT CONTROL PLAN STA. 43+50 TO STA. 44+44

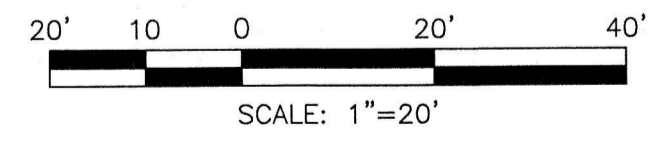
SCALE: 1"=20'-0" SEE SHEET C-14 (2024-1151)

SHEET NOTES

1. SEE SHEET ESC-1 FOR VICINITY MAP.
2. SEE SHEET ESC-2 FOR OVERALL EROSION & SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
3. SEE SHEETS ESC-15 THROUGH 18 FOR SEDIMENT CONTROL NOTES & DETAILS.
4. INLET PROTECTION SHOWN HEREON PER THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
5. INLET PROTECTIONS MAY BE REMOVED WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AS THE WORK ZONE MOVES PAST (DOWNSTREAM OF) THE INLET PROTECTION.
6. SEE SAME DAY STABILIZATION, UTILITY, AND DAILY STABILIZATION NOTES ON SHEET ESC-2 FOR TRENCH WORK AND STABILIZATION METHODS.

ROOT PRUNING NOTE

1. WHERE THE PROJECT LOD IS ENTIRELY WITHIN THE ROADBED, IT IS UNLIKELY THAT ANY TREE ROOTS WILL BE ENCOUNTERED DURING CONSTRUCTION. SHOULD ROOTS BE ENCOUNTERED, ROOT PRUNING MAY BE NECESSARY PER THE DIRECTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT/CERTIFIED ARBORIST.



MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
Date: 9-8-25

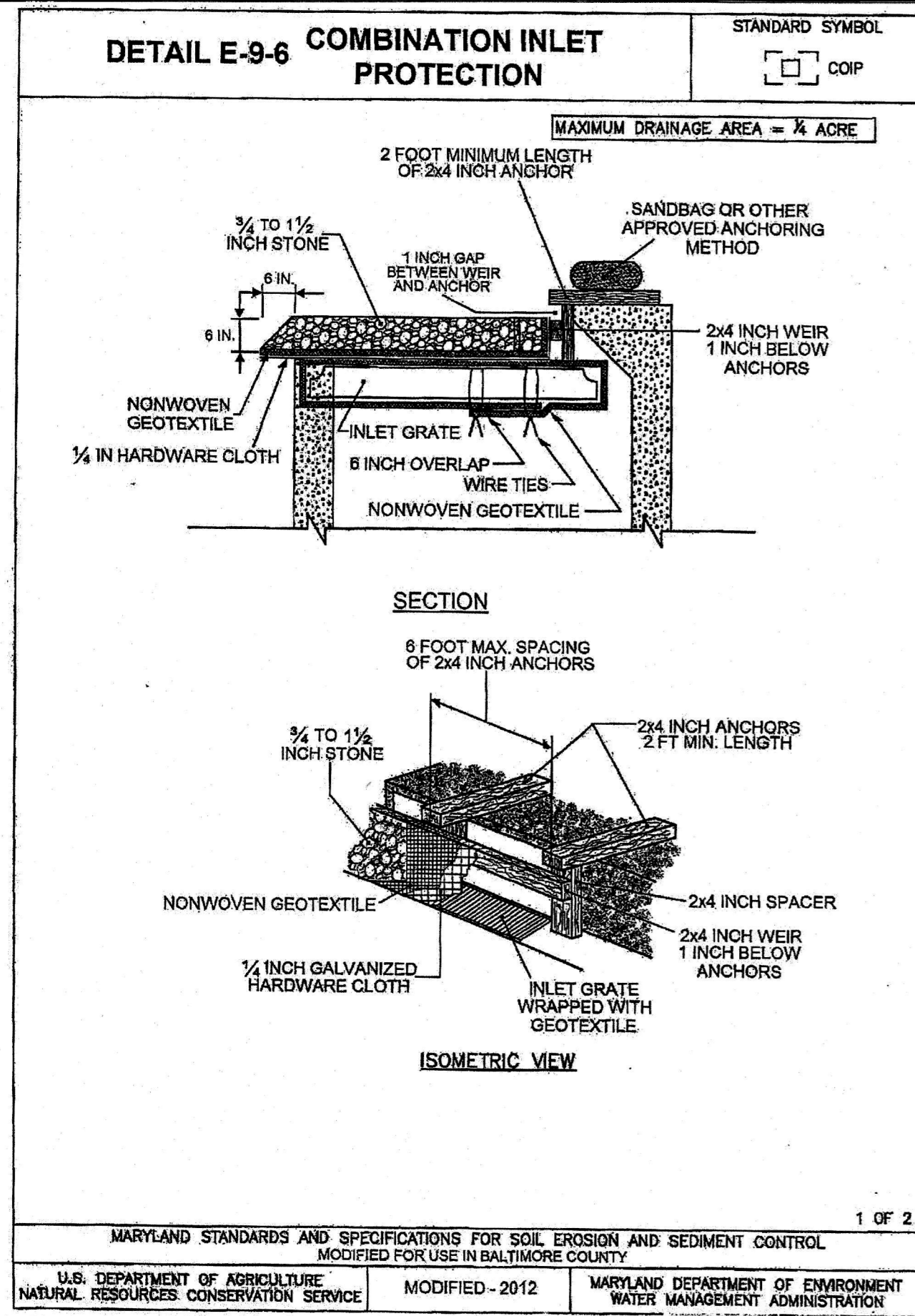
SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/25/2027					R.O.W. NO.	QSE	44NE22 44NE33 44NE34	PLAN SCALE: AS SHOWN PROFILE SCALE: HORIZ. 1"=20' VERT. 1"=10'
	ENGINEER: CARROLL ENGINEERING 215 SCHILLING CIRCLE, PH. 410-786-7483 SUITE 102 HUNT VALLEY, MD 21031 INFO@CEENGINEERING.COM	CONTRACT COMPLETION BOX							
	DGN BY: MJE, MIF DWN BY: MJE, MIF AS-BUILT PER RECORD PRINT	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION
BY: _____ DATE: _____	CHKD BY: CMS	REVIEWED BY:							
		DATE REVIEWED:							

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 EROSION & SEDIMENT CONTROL PLAN
 STA. 43+50 TO STA. 44+45
 SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

SHEET DESIGNATION	CONTRACT NUMBER
ESC-14	24084SXO
PROJECT NUMBER	PROJ-1000060
SHEET 32 OF 39	DRAWING NUMBER
	2024-1167
FILE NO.:	

DATE: 7/21/2025

DWG. FILENAME:



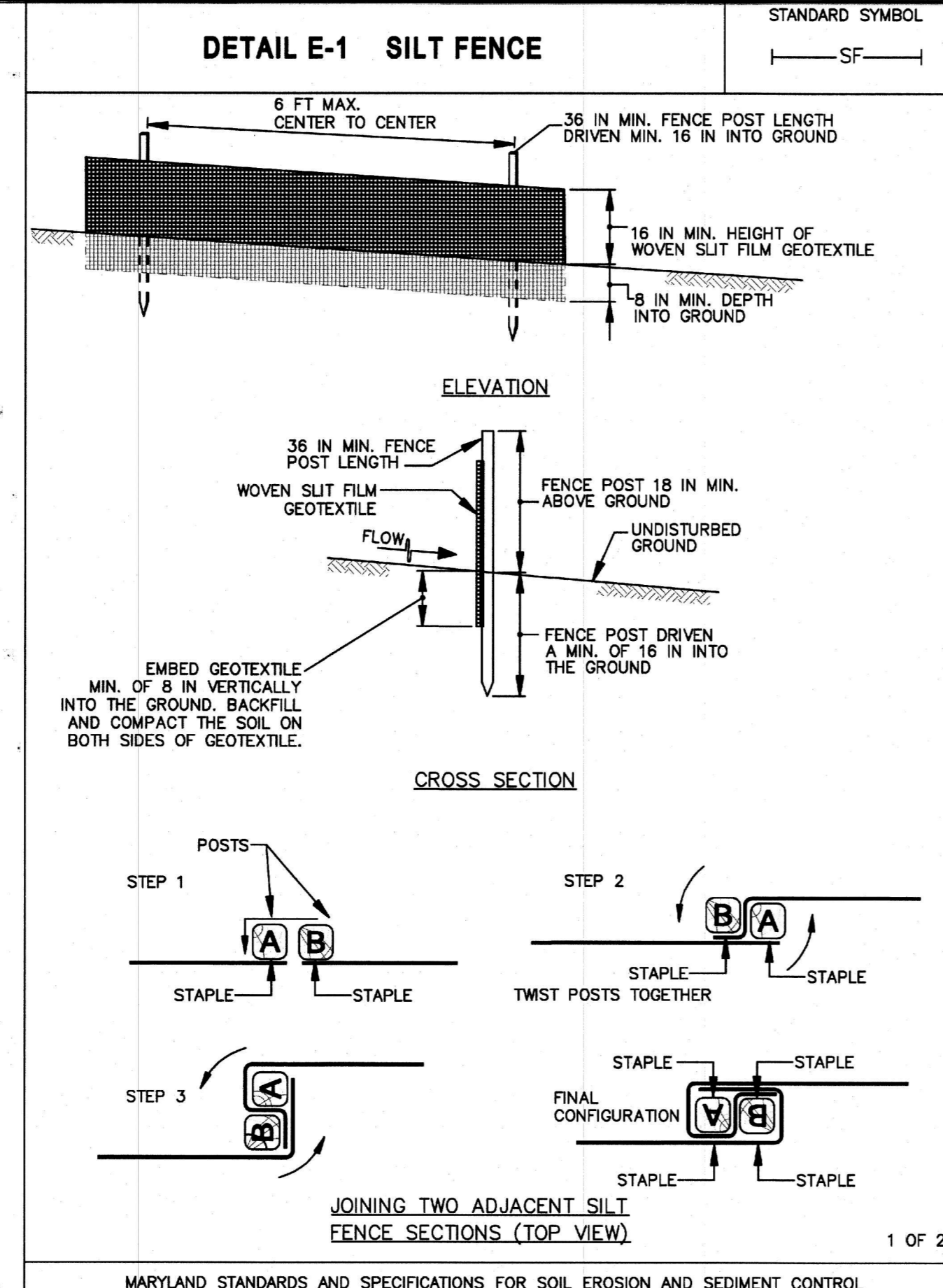
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MODIFIED FOR USE IN BALTIMORE COUNTY

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MODIFIED - 2012 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

- ### DETAIL E-9-6 COMBINATION INLET PROTECTION
- STANDARD SYMBOL: COIP
- #### CONSTRUCTION SPECIFICATIONS
- USE NOMINAL 2 INCH x 4 INCH LUMBER.
 - USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
 - LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
 - ATTACH A CONTINUOUS PIECE OF 3/4 INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2 INCH BY 4 INCH WEIR, EXTENDING 2 FEET BEYOND THE THROAT ON EACH SIDE.
 - PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR.
 - NAIL THE 2 x 4 INCH WEIR (1 INCH BELOW THE ANCHORS) TO THE 8 INCH LONG VERTICAL SPACERS, LOCATED BETWEEN THE WEIR AND INLET FACE, (MAXIMUM 4 FEET APART).
 - PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO THE 2 x 4 INCH ANCHORS (MINIMUM 2 FOOT LENGTHS) AT THE SPACER LOCATIONS. EXTEND THE 2 x 4 INCH ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
 - INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
 - FORM THE 3/4 INCH GALVANIZED CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
 - AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
 - STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN OR REPLACE THE GEOTEXTILE AND STONE.
- 2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MODIFIED FOR USE IN BALTIMORE COUNTY

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MODIFIED - 2012 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



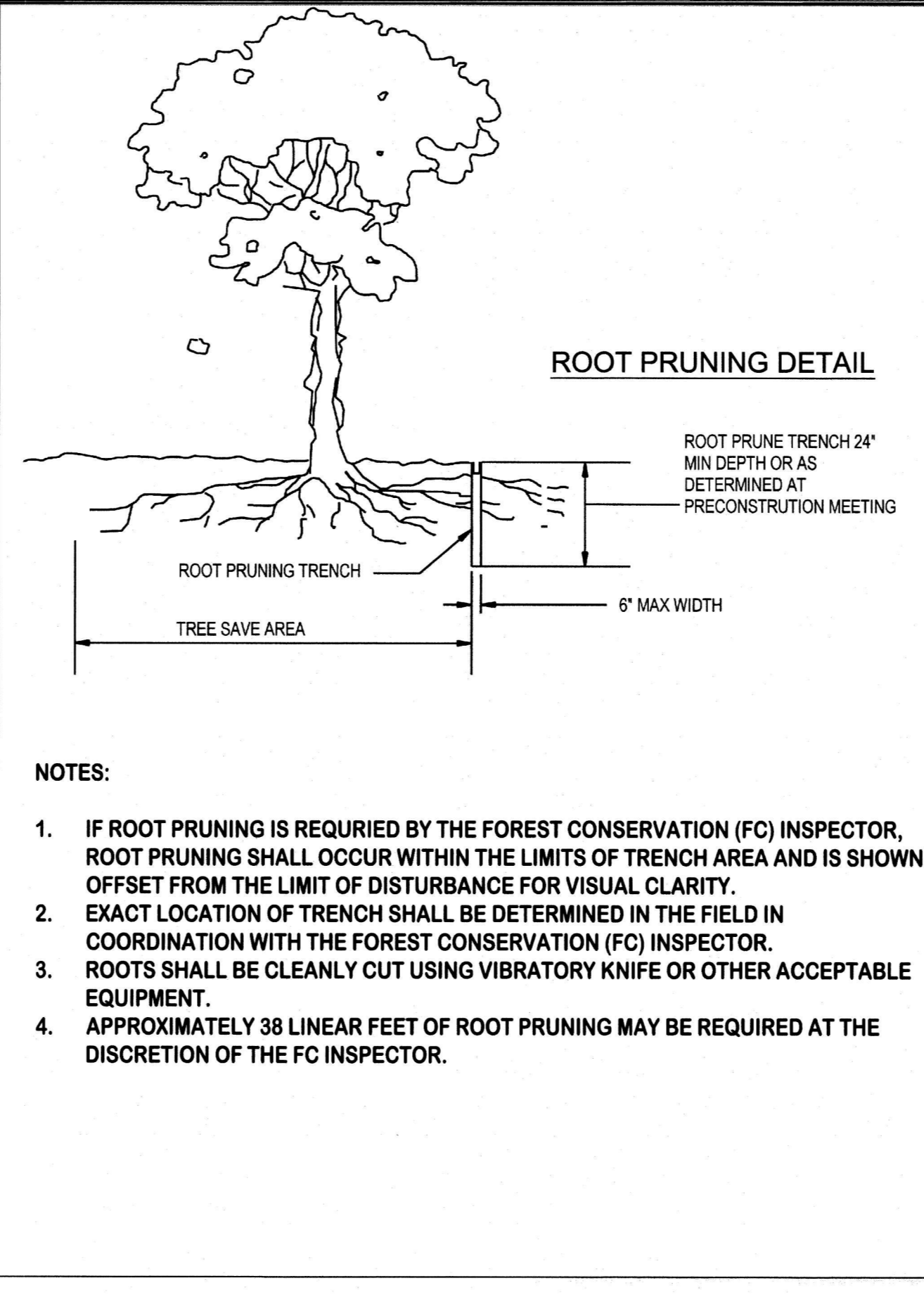
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

- ### DETAIL E-1 SILT FENCE
- STANDARD SYMBOL: SF
- #### CONSTRUCTION SPECIFICATIONS
- USE WOOD POSTS 1 3/4 x 1 3/4 x 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 - USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
 - USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.
- 2 OF 2

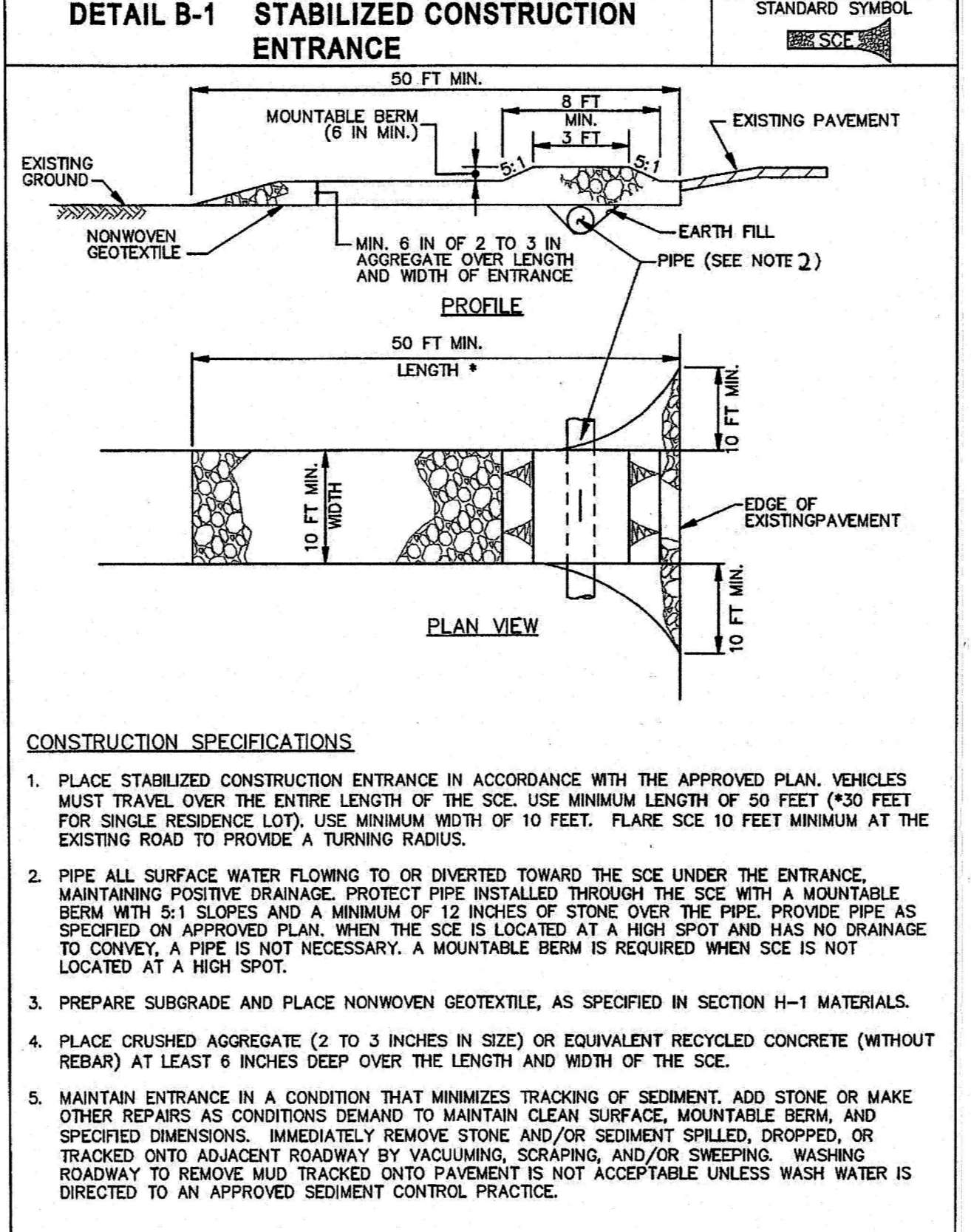
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



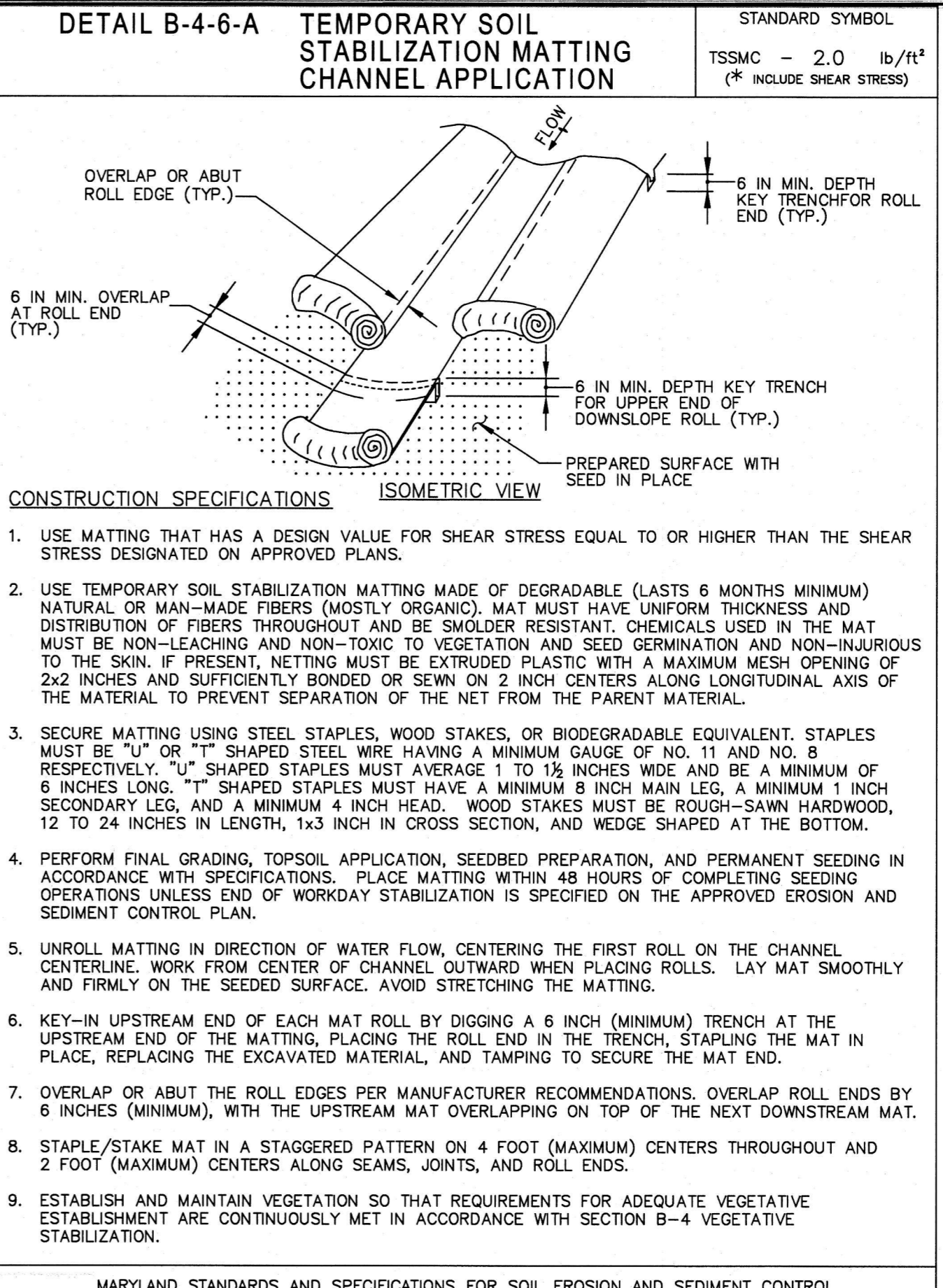
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



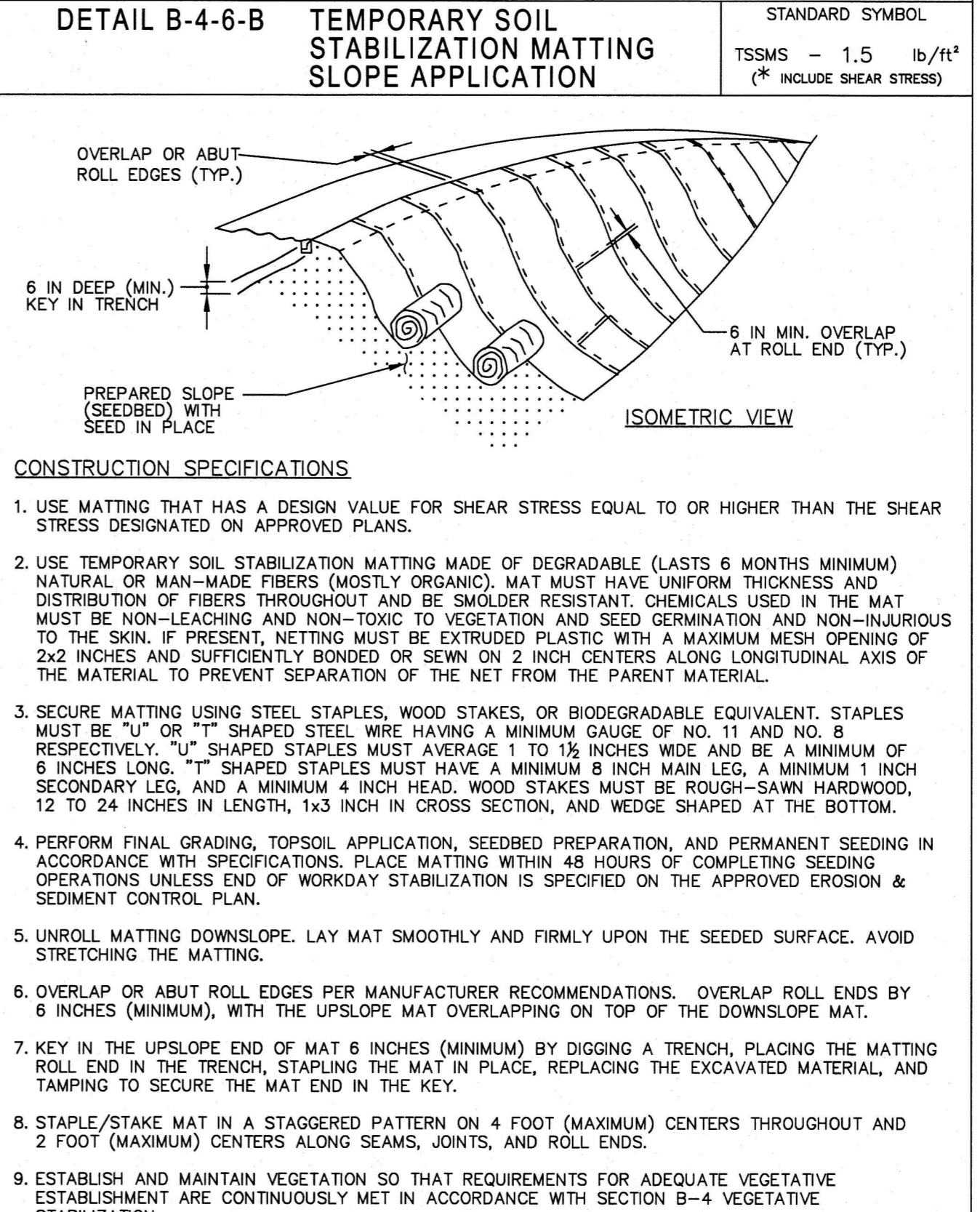
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL

Jeffrey P. West 9-8-25
Date

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

SHEET DESIGNATION	CONTRACT NUMBER
ESC-15	24084SX0
PROJECT NUMBER	
PROJ-10000060	
SHEET 33 OF 39	
DRAWING NUMBER	
2024-1168	
FILE NO.:	

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	SHT	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446 EXPIRATION DATE 5/28/2027	CONTRACT COMPLETION BOX				R.O.W. NO.	QSE			SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
ENGINEER: CARROLL ENGINEERING 216 SCHLING CIRCLE, PH. 410-766-7483 SUITE 101, BALTIMORE, MD 21201 EMAIL: CARROLL@CARROLLENGINEERING.COM	DON BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION
AS-BUILT PER RECORD PRINT	DWN BY: MJE, MJP	REVIEWED BY:								
DATE: 7/21/2025	CHKD BY: CMS	DATE REVIEWED:								SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION	
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN	
EROSION & SEDIMENT CONTROL DETAILS	
SUBDIVISION: RICHLYN MANOR	PERRY HALL, MD
ELECTION DIST. NO.: 11C5	

DETAIL F-2 SUMP PIT

STANDARD SYMBOL: SP

THIS MEASURE SHALL BE LOCATED WHERE IT WILL BE EASILY ACCESSIBLE TO ALLOW FOR PRACTICAL USAGE. CHANGES TO THE DISCHARGE LOCATION SHOWN ON THE APPROVED PLANS SHALL BE COORDINATED WITH THE SEDIMENT CONTROL INSPECTOR.

CONSTRUCTION SPECIFICATIONS

- USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
- WRAP PIPE WITH 1/4 INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
- EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE 3/4 TO 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
- SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
- BACKFILL PIT AROUND THE PIPE WITH 3/4 TO 1/2 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
- DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
- A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MODIFIED FOR USE IN BALTIMORE COUNTY.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MODIFIED - 2012 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL: PST

CONSTRUCTION SPECIFICATIONS

- PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE OBTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
- USE 80 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, 1/4 INCH HARDWARE CLOTH.
- OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
- ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
- USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE.
- INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
- PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
- A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE

CONSTRUCTION SPECIFICATIONS

- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
- PLACE CLEAN 3/4 TO 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Impacted Tree Critical Root Zones (CRZ)										
Tree ID	DBH (in.)	Multitem DBH (in.)	Species	Condition	Comments	CRZ Radius (ft)	CRZ Impact (%)	Action Required	Sheet No.	
T-03	24.0		<i>Liriodendron tulipifera</i>	Good		24.0	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-12	36.8		<i>Fagus grandifolia</i>	Good		55.2	<30%	None; roots unlikely to cross under roadbed	ESC-12	
T-41	22.2	18.0, 9.5	<i>Juniperus virginiana</i>	Poor	Multiple dead limbs	22.2	<30%	None; work within roadbed	ESC-10	
T-45	5.0		<i>Picea rubens</i>	Good		5.0	<30%	Root pruning	ESC-12	
T-46	5.0		<i>Thuja occidentalis</i>	Good		5.0	<30%	Root pruning	ESC-12	
T-47	25.8		<i>Quercus alba</i>	Good		25.8	<30%	None; roots unlikely to cross under roadbed	ESC-12	
T-49	33.8		<i>Liriodendron tulipifera</i>	Good		50.7	<30%	None; roots unlikely to cross under roadbed	ESC-12	
T-51	24.8		<i>Fagus grandifolia</i>	Good		24.8	<30%	None; roots unlikely to cross under roadbed	ESC-12	
T-55	26.0		<i>Quercus alba</i>	Good		26.0	<30%	Root pruning	ESC-12	
T-60	18.0		<i>Robinia pseudoacacia</i>	Good		18.0	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-66	28.8		<i>Liriodendron tulipifera</i>	Good		28.8	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-67	20.1		<i>Liriodendron tulipifera</i>	Good		20.1	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-77	31.1		<i>Liriodendron tulipifera</i>	Good		46.7	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-78	20.1		<i>Liriodendron tulipifera</i>	Good		20.1	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-79	21.6		<i>Liriodendron tulipifera</i>	Good		21.6	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-84	9.8		<i>Quercus rubra</i>	Good		9.8	<30%	None; roots unlikely to cross under roadbed	ESC-13	
T-86	10.9		<i>Sassafras albidum</i>	Good		10.9	<30%	None; roots unlikely to cross under roadbed	ESC-13	

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = 1/4 ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE

CONSTRUCTION SPECIFICATIONS

- USE WOVEN GEOTEXTILE (AS INDICATED ON THE STANDARD INLET PROTECTION DETAIL) AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2x4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2x4 INCH FRAME AS SHOWN. STRETCH 1/4 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 3/4 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.15 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 8 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MODIFIED FOR USE IN BALTIMORE COUNTY.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MODIFIED - 2012 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

- TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
- PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
- CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
- REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY. WHICHEVER OCCURS FIRST, SPREAD THE DETERIORATED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
- USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT ²	ASTM D-4491
PERMITTIVITY (SEC ⁻¹)	1.2 SEC ⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
- REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MODIFIED - 2012 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-4 FILTER BAG

STANDARD SYMBOL: FB

CONSTRUCTION SPECIFICATIONS

- TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
- PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
- CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
- REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY. WHICHEVER OCCURS FIRST, SPREAD THE DETERIORATED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
- USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT ²	ASTM D-4491
PERMITTIVITY (SEC ⁻¹)	1.2 SEC ⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
- REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

- USE NOMINAL 2x4 INCH LUMBER.
- ATTACH A CONTINUOUS PIECE OF 1/4 INCH GALVANIZED HARDWARE CLOTH, MINIMUM WIDTH OF 30 INCHES, AND MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 INCH WEIR, EXTENDING 2 FEET BEYOND THE THROAT ON EACH SIDE.
- PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 INCH WEIR.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- NAIL THE 2x4 INCH WEIR (1 INCH BELOW THE ANCHORS) TO THE 9 INCH LONG VERTICAL SPACERS (MAX. 6 FEET APART).
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 INCH ANCHORS (MIN. 2 FEET IN LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
- INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
- FORM THE HARDWARE CLOTH AND GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 3/4 TO 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
- AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN OR REPLACE THE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MODIFIED FOR USE IN BALTIMORE COUNTY.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MODIFIED - 2012 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION AND SEDIMENT CONTROL GENERAL NOTES

- Refer to "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" for standard details and detailed specifications of each practice specified herein.
- With the approval of the sediment control inspector, minor field adjustments can and will be made to insure the control of any sediment. Changes in sediment control practices require prior approval of the sediment control inspector and the Baltimore County Soil Conservation District.
- At the end of each working day, all sediment control practices will be inspected and left in operational condition.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization must be completed within:
 - Three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than three horizontal to one vertical (3:1), and
 - Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
- Any change to the grading proposed on this plan requires re-submission to Baltimore County Soil Conservation District for approval.
- Dust control will be provided for all disturbed areas. Refer to "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", pg. H.22, for acceptable methods and specifications for dust control.
- Any variations from the sequence of operations stated on this plan requires the approval of the sediment control inspector and the Baltimore County Soil Conservation District prior to the initiation of the change.
- Excess cut or borrow material shall go to, or come from, respectively, a site with an open grading permit and approved sediment control plan.
- The following item may be used as applicable: Refer to "Maryland's Guidelines to Waterway Construction" by the Water Management Administration of the Maryland Department of the Environment, revised November 2000, for standard details and detailed specifications of each practice specified herein for waterway construction.
- PUMPING SEDIMENT-LADEN WATER INTO WATERS OF THE STATE IS STRICTLY PROHIBITED. Any portable dewatering device must be located within the limits of disturbance.
- Upon installation of the base pavement and at the direction of the sediment control inspector, relocate the stabilized construction entrance(s) and install additional control measures (stabilized construction entrances, silt fences, super silt fences) as needed to control sediment runoff from disturbed areas. The additional controls must not alter drainage patterns.

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
9-8-25
Date

SEAL:

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

ENGINEER: CARROLL ENGINEERING
215 SCULLING CIRCLE, P.O. BOX 140-785-7483
SUITE 101, WILMINGTON, MD 21801
DWN BY: MJE, MJP
REVIEWED BY: MJE, MJP
DATE: 7/21/2025

AS-BUILT / REVISION BY DATE P.W.A. NO. KEY SHEET POSITION SHT. DRAWING SCALE DPW AND TRANSPORTATION

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION

TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION

SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

DATE REVIEWED: SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN

EROSION & SEDIMENT CONTROL DETAILS & NOTES

SUBDIVISION: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5

MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 88

SHEET DESIGNATION: ESC-16 CONTRACT NUMBER: 24084SX0

PROJECT NUMBER: PROJ-10000060

SHEET 34 OF 39

DRAWING NUMBER: 2024-1169

FILE NO.:

B-3 STANDARDS AND SPECIFICATIONS FOR LAND GRADING

Definition

Reshaping the existing land surface to provide suitable topography for building facilities and other site improvements.

Purpose

To provide erosion control and vegetative establishment for extreme changes in grade.

Conditions Where Practice Applies

Earth disturbances or extreme grade modifications on steep or long slopes.

Design Criteria

The grading plan should be based on the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, adjacent properties, drainage patterns, measures for water removal, and vegetative treatment, etc.

Many jurisdictions have regulations and design procedures already established for land grading that must be followed. The plan must show existing and proposed contours for the area(s) to be graded including practices for erosion control, slope stabilization, and safe conveyance of runoff (e.g., waterways, lined channels, reverse benches, grade stabilization structures). The grading/construction plans are to include the phasing of these practices and consideration of the following:

- Provisions to safely convey surface runoff to storm drains, protected outlets or stable water courses to ensure that surface runoff will not damage slopes or other graded areas.
- Cut and fill slopes, stabilized with grasses, no steeper than 2:1. (Where the slope is to be mowed, the slope should be no steeper than 3:1, but 4:1 is preferred because of safety factors related to mowing steep slopes.) Slopes steeper than 2:1 require special design and stabilization considerations to be shown on the plans.
- Benching per Detail B-3-1 whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slopes, when it exceeds 30 feet; and for 4:1 slopes, when it exceeds 40 feet. Locate benches to divide the slope face as equally as possible and to convey the water to a stable outlet. Soils, seeps, rock outcrops, etc. are to be taken into consideration when designing benches.
 - Provide benches with a minimum width of six feet for ease of maintenance.
 - Design benches with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Grade the longitudinal slope of the bench between 2 percent and 3 percent, unless accompanied by appropriate design and computations.
 - The maximum allowable flow length within a bench is 800 feet unless accompanied by appropriate design and computations.
- Diversion of surface water from the face of all cut and fill slopes using earth dikes or swales. Convey surface water down slope using a designed structure, and:
 - Protect the face of all graded slopes from surface runoff until they are stabilized.
 - Do not subject the slope's face to any concentrated flow of surface water such as from natural drainage ways, graded swales, downspouts, etc.
 - Protect the face of the slope by special erosion control materials to include, but not be limited to, approved vegetative stabilization practices, riprap or other approved stabilization methods.
- Serrated slopes as shown in Detail B-3-2. The steepest allowable slope for ripable rock is 1.5:1. For non rock surfaces, the slopes are to be 2:1 or flatter. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization.
- Subsurface drainage provisions. Provide subsurface drainage where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.
- Proximity to adjacent property. Slopes must not be created close to property lines without adequate protection against sedimentation, erosion, slippage, settlement, subsidence, or other related damages.
- Quality of fill material. Fill material must be free of brush, rubbish, logs, stumps, building debris, and other objectionable material. Do not place frozen materials in the fill nor place the fill material on a frozen foundation.
- Stabilization. Stabilize all disturbed areas structurally or vegetatively in compliance with Section B4 Standards and Specifications for Stabilization Practices.

Maintenance

The line, grade, and cross section of benching and serrated slopes must be maintained. Benches and serrated slopes must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization.

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seeded preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

- Adequate vegetative stabilization requires 95 percent groundcover.
- If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seeded preparation, and seeding.
- If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
- Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

- A. Incremental Stabilization – Cut Slopes
- Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
 - Construction sequence example (Refer to Figure B.1):
 - Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
 - Perform Phase 1 excavation, prepare seedbed, and stabilize.
 - Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
 - Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

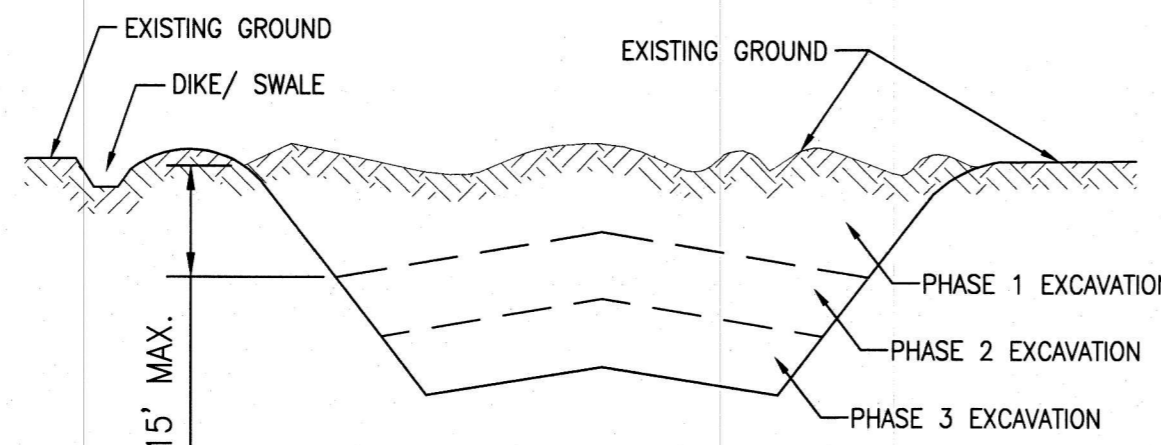


Figure B.1: Incremental Stabilization – Cut

B. Incremental Stabilization – Fill Slopes

- Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
- Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
- At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
- Construction sequence example (Refer to Figure B.2):
 - Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
 - At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
 - Place Phase 1 fill, prepare seedbed, and stabilize.
 - Place Phase 2 fill, prepare seedbed, and stabilize.
 - Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

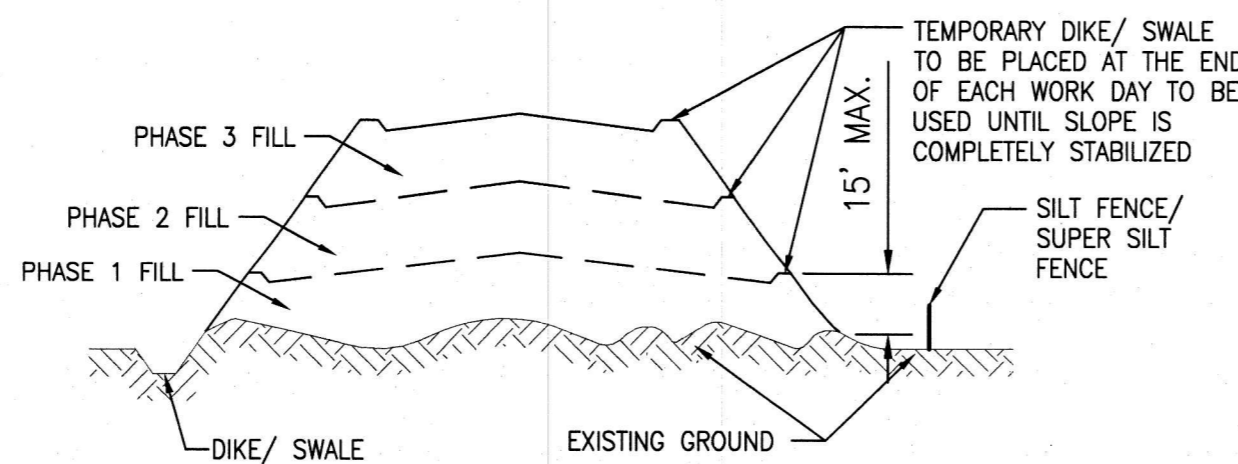


Figure B.2: Incremental Stabilization – Fill

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- A. Soil Preparation
- Temporary Stabilization
 - Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soluble salts less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if loess will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seeded preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.
 - Topsoiling
 - Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
 - Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
 - Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - Areas having slopes steeper than 2:1 require special consideration and design.
 - Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Topsoil Application
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil must not be placed if 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 seeded preparation.
 - Soil Amendments (Fertilizer and Lime Specifications)
 - Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
 - Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 - Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

- A. Seeding
- Specifications
 - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.

- Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
- Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
 - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Mix seed and fertilizer on site and seed immediately and without interruption.
 - When hydroseeding do not incorporate seed into the soil.

B. Mulching

- Mulch Materials (in order of preference)
 - Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - Wood Cellulose Fiber Mulch (WCFFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFFM, including dye, must contain no germination or growth inhibiting factors.
 - WCFFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
 - WCFFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
- Application
 - Apply mulch to all seeded areas immediately after seeding.
 - When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
 - Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- Anchoring
 - Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
 - Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Synthetic binders such as Acrylic DLR (Ago-Tack), DCA-70, Petrosel, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3A.1.b and maintain until the next seeding season.

NOTE: SEE SHEET ESC-18 FOR CONTINUATION OF TEMPORARY STABILIZATION SPECIFICATIONS.

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jeffrey P. West
9-2-25
Date

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

SHEET DESIGNATION	CONTRACT NUMBER
ESC-17	24084SX0
PROJECT NUMBER	
PROJ-10000060	
SHEET 35 OF 39	
DRAWING NUMBER	
2024-1170	
FILE NO.:	

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHI	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14448. EXPIRATION DATE 6/28/2027.									
	ENGINEER: CARROLL M. JONES 215 SCHULZING CIRCLE, PH. 410-786-7483 SUITE 101, BELLEVILLE, MD 21038 WWW.CARROLLM.JONES.COM	DGN BY: MJE, MJP	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	AS-BUILT PER RECORD PRINT	DWN BY: MJE, MJP	REVIEWED BY:							BUR. OF ENGINEERING & CONSTRUCTION
DATE: 7/21/2025	BY: DATE:	CHKD BY: CMS	DATE REVIEWED:						SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
EROSION & SEDIMENT CONTROL NOTES

SUBDIVISION: RICHLYN MANOR

PERRY HALL, MD

ELECTION DIST. NO.: 11C5

DWG. FILENAME

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 7b Seed Mixture (from Table B.1):					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	Annual Ryegrass	40	Feb 15 to Apr 30; Aug 15 to Nov 30	0.5 inch	436 lb/ac (10 lb/1000sf)	2 tons/ac (90 lb/1000sf)
	Barley	96	Feb 15 to Apr 30; Aug 15 to Nov 30	1.0 inch		
	Foxtail Millet	30	May 1 to Aug 14	0.5 inch		

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use

- a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
- b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
- c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
- d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures

- a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
- b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - i. Kentucky Bluegrass/ Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - ii. Kentucky Bluegrass/Perennial Ryegrass: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 - iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures

- Western MD: March 1 to June 1, August 1 to October 1 (Hardiness Zone: 5b, 6a)
 - Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
 - Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 7a, 7b)
- d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty. e. If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 7b Seed Mixture (from Table B.3): #9					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ O	
9	Tall Fescue	60		1/4-1/2 inch	45 lb/ac (1.0 lb/1000sf)	90 lb/ac (2.0 lb/1000sf)	90 lb/ac (2.0 lb/1000sf)	2 tons/ac (90 lb/1000sf)
	Kentucky Bluegrass	40	Feb 15 to April 30; Aug 15 to Oct 31	1/4-1/2 inch				
	Perennial Ryegrass	20		1/4-1/2 inch				

* For seeding dates May 1 to Aug 14, add 6.0lbs per acre of foxtail millet to seed mixture No. 9.

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications

- a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pods and torn or uneven ends will not be acceptable.
 - c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
- 2. Sod Installation**
- a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - b. Lay the first row of sod on a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
- 3. Sod Maintenance**
- a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
 - c. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-6 STANDARDS AND SPECIFICATIONS FOR SOIL STABILIZATION MATTING

Definition

Material used to temporarily or permanently stabilize channels or steep slopes until groundcover is established.

Purpose

To protect the soils until vegetation is established.

Conditions Where Practice Applies

On newly seeded surfaces to prevent the applied seed from washing out; in channels and on steep slopes where the flow has erosive velocities or conveys clear water; on temporary swales, earth dikes, and perimeter dike swales as required by the respective design standard; and, on stream banks where moving water is likely to wash out new vegetative plantings.

Design Criteria

1. The soil stabilization matting that is used must withstand the flow velocities and shear stresses determined for the area, based on the 2-year, 24-hour frequency storm for temporary applications and the 10-year, 24-hour frequency storm for permanent applications. Designate on the plan the type of soil stabilization matting using the standard symbol and include the calculated shear stress for the respective treatment area.
2. Matting is required on permanent channels where the runoff velocity exceeds two and half feet per second (2.5 fps) or the shear stress exceeds two pounds per square foot (2 lbs/ft²). On temporary channels discharging to a sediment trapping practice, provide matting where the runoff velocity exceeds four feet per second (4 fps).
3. Temporary soil stabilization matting is made with degradable (lasts 6 months minimum), natural, or manmade fibers of uniform thickness and distribution of fibers throughout and is smolder resistant. The maximum permissible velocity for temporary matting is 6 feet per second.
4. Permanent soil stabilization matting is an open weave, synthetic material consisting of nondegradable fibers or elements of uniform thickness and distribution of weave throughout. The maximum permissible velocity for permanent matting is 8.5 feet per second.
5. Calculate channel velocity and shear stress using the following procedure:

Shear Stress (τ) is a measure of the force of moving water against the substrate and is calculated as:

$$\tau = \gamma R S_w \text{ where:}$$

- τ = shear stress (lb/ft²)
- γ = weight density of water (62.4 lb/ft³)
- R = average water depth (hydraulic radius) (ft)
- S_w = water surface slope (ft/ft)

Velocity (v) measures the rate of flow through a defined area and is calculated as:

$$v = \frac{1.48 R^{2/3} S}{n} \text{ where:}$$

- v = velocity (ft/sec)
- n = Manning's roughness coefficient
- R = hydraulic radius (ft)
- S = channel slope (ft/ft)

6. Use Table B.7 to assist in selecting the appropriate soil stabilization matting for slope applications based on the slope, the slope length, and the soil-erodibility K factor.

Table B.7: Soil Stabilization on Slopes

Slope	20:1 Flatter (≤5%)		<20:1 to 4:1 (5-25%)		<4:1 to 3:1 (25-33%)		<3:1 to 2.5:1 (33-40%)		<2.5:1 to 2:1** (40-50%)		
	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60
Straw Mulch/Wood Cellulose Fiber	for K ≤ 0.35***										
Temporary Matting with Design Shear Stress ≥ 1.5 lb/sf	█										
Temporary Matting with Design Shear Stress ≥ 1.75 lb/sf	█										
Temporary Matting with Design Shear Stress ≥ 2.0 lb/sf	█										
Temporary Matting with Design Shear Stress ≥ 2.25 lb/sf	█										

█ Effective range for all K values unless otherwise specified

* Slope length includes contributing flow length.

** Slopes steeper than 2:1 must be engineered.

*** Soil having a K value less than or equal to 0.35 can be stabilized effectively with straw mulch or wood cellulose fiber when located on slopes steeper than 5%. Soil stabilization matting is required on all slopes steeper than 5% that have soil with a K factor greater than 0.35. K factor ratings are published in the NRCS Soil Survey. During construction or reclamation, the soil erodibility K value should represent the upper 6 inches of the final fill material re-spread as the last lift. Only the effects of rock fragments within the soil profile are considered in the estimation of the K value. Do not adjust K values to account for rocks on the soil surface or increases in the soil organic matter related to management activities.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

H-1 STANDARDS AND SPECIFICATIONS FOR MATERIALS

Table H.1: Geotextile Fabrics

PROPERTY	TEST METHOD	MINIMUM AVERAGE ROLL VALUE					
		WOVEN SLIT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MD	CD	MD	CD	MD	CD
GRAB TENSILE STRENGTH	ASTM D-4632	200lb	200lb	370lb	250lb	200lb	200lb
GRAB TENSILE ELONGATION	ASTM D-4632	15%	10%	15%	15%	50%	50%
TRAPEZOIDAL TEAR STRENGTH	ASTM D-4533	75 lb	75 lb	100 lb	60 lb	80 lb	80 lb
PUNCTURE STRENGTH	ASTM D-6241	450 lb		900 lb		450 lb	
APPARENT OPENING SIZE ²	ASTM D-4751	U.S. Sieve 30 (0.59 mm)		U.S. Sieve 70 (0.21 mm)		U.S. Sieve 70 (0.21 mm)	
PERMITTIVITY	ASTM D-4491	0.05 sec		0.28 sec		1.1 sec	
ULTRAVIOLET RESISTANCE RETAINED AT 500 HOURS	ASTM D-4355	70% strength		70% strength		70% strength	

1 All numeric values except apparent opening size (AOS) represent minimum average roll values (MARV). MARV is calculated as the typical minus two standard deviations. MD is machine direction; CD is cross direction.

2 Values for AOS represent the average maximum opening.

Geotextiles must be evaluated by the National Transportation Product Evaluation Program (NITPEP) and conform to the values in Table H.1.

The geotextile must be inert to commonly encountered chemicals and hydrocarbons and must be rot and mildew resistant. The geotextile must be composed of a minimum of 95 percent by weight of polyolefins or polyesters, and formed into a stable network so the filaments or yarns retain their dimensional stability relative to each other, including selvages.

When more than one section of geotextile is necessary, overlap the sections by at least one foot. The geotextile must be pulled taut over the applied surface. Equipment must not run over exposed fabric. When placing riprap on geotextile, do not exceed a one foot drop height.

Table H.2: Stone Size

TYPE	SIZE RANGE	d ₅₀	d ₁₀₀	AASHTO	MIDSIZE WEIGHT ³
NUMBER 57 ¹	3/8 TO 1 1/2 INCH	1/2 IN	1 1/2 IN	M-43	N/A
NUMBER 1	2 TO 3 INCH	2 1/2 IN	3 IN	M-43	N/A
RIPRAP 2 (CLASS 0)	4 TO 7 INCH	5 1/2 IN	7 IN	N/A	N/A
CLASS I	N/A	9 1/2 IN	15 IN	N/A	40 lb
CLASS II	N/A	16 IN	24 IN	N/A	200 lb
CLASS III	N/A	23 IN	34 IN	N/A	600 lb

- 1 This classification is to be used on the upstream face of stone outlets and check dams.
- 2 This classification is to be used for gabions.
- 3 Optimum gradation is 50 percent of the stone being above and 50 percent below the midsize.

Stone must be composed of a well graded mixture of stone sized so that fifty (50) percent of the pieces by weight are larger than the size determined by using the charts. A well graded mixture, as used herein, is defined as a mixture composed primarily of larger stone sizes but with a sufficient mixture of other sizes to fill the smaller voids between the stones. The diameter of the largest stone in such a mixture must not exceed the respective d₁₀₀ selected from Table H.2. The d₅₀ refers to the median diameter of the stone. This is the size for which 50 percent, by weight, will be smaller and 50 percent will be larger.

Note: Recycled concrete equivalent may be substituted for all stone classifications for temporary control measures only. Concrete broken into the sizes meeting the appropriate classification, containing no steel reinforcement, and having a minimum density of 150 pounds per cubic foot may be used as an equivalent.

SITE INFORMATION

- A. AREA DISTURBED: 50,000 SQUARE FEET / 1.15 ACRES.
- B. OFF-SITE WASTE / BORROW AREA LOCATION NONE
- C. CUT: 14,000 C.Y.
- D. FILL: 14,000 C.Y.

***NOTES:**

1. CUT/FILL TOTALS ARE FOR ESC REVIEW ONLY. CONTRACTOR IS RESPONSIBLE FOR CALCULATING CUT/FILL QUANTITIES FOR ESTIMATION PURPOSES. ENGINEER OFFERS NO GUARANTEE TO QUANTITIES ACTUALLY ENCOUNTERED DURING CONSTRUCTION.

DETAIL E-3 SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.15 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 6 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HIG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND. LAY THE GEOTEXTILE IN THE BOTTOM OF THE 24 INCH WIDE TRENCH.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BYPASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE UP HILL A MINIMUM OF 3 VERTICAL FEET TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURERS CERTIFICATION TO THE INSPECTION/FORMER AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF THE FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MODIFIED - 2012. REVISION 5/2023. U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE. MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION.

Baltimore County Soil Conservation District
APPROVED FOR SEDIMENT CONTROL
Jerry P. West
9-8-25
Date

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

SHEET DESIGNATION	CONTRACT NUMBER
ESC-18	24084SX0
	PROJECT NUMBER
	PROJ-1000060
	SHEET 36 OF 39
	DRAWING NUMBER
	2024-1171
	FILE NO.

SEAL: STATE OF MARYLAND PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446, EXPIRATION DATE 8/25/2027

ENGINEER: CARROLL ENGINEERING, 215 SCHLING CIRCLE, P.O. BOX 410-795-7483, SUITE 101, PERRY HALL, MD 21128, INFO@CARROLLENGINEERING.COM

AS-BUILT PER RECORD PRINT

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	DPW AND TRANSPORTATION

CONTRACT COMPLETION BOX

SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN

EROSION & SEDIMENT CONTROL NOTES

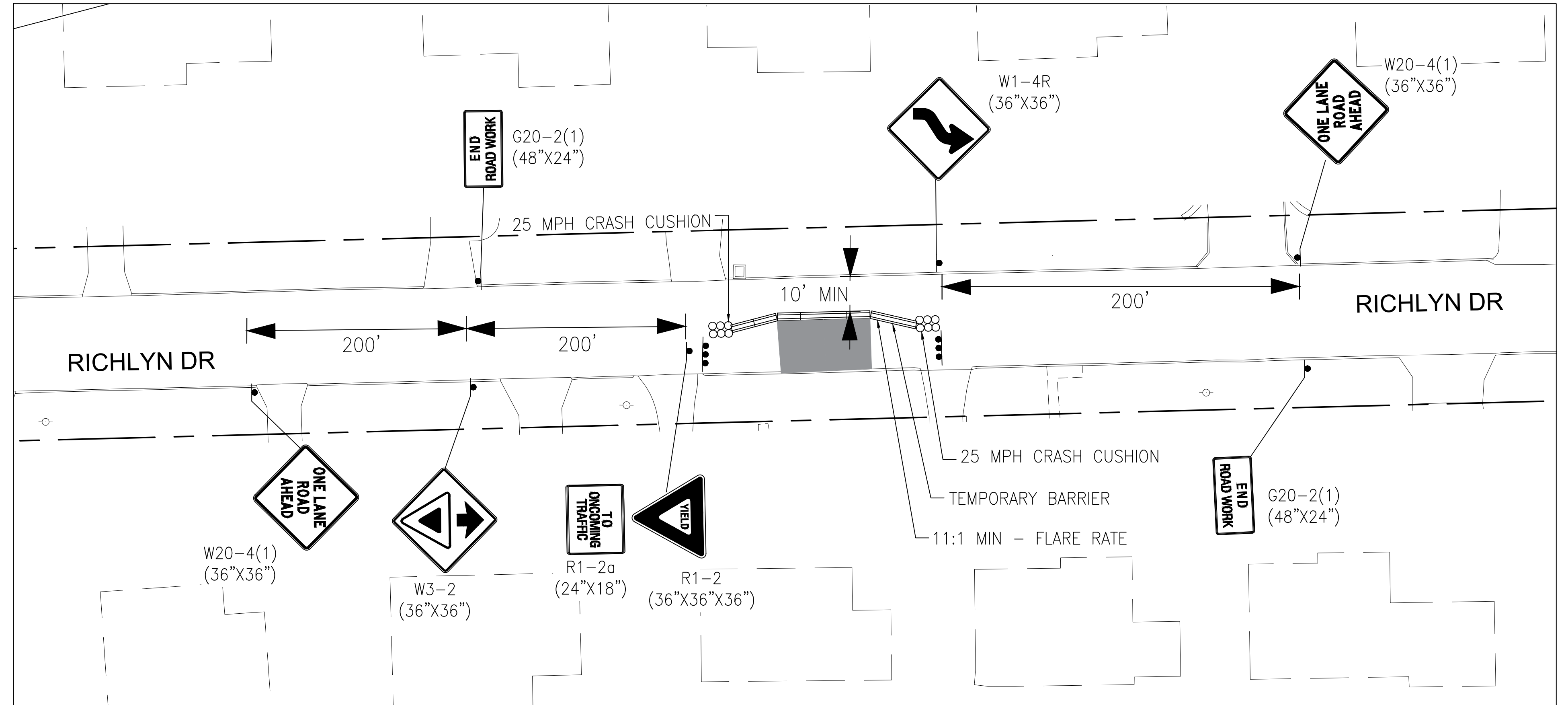
SUBDIVISION: RICHLYN MANOR PERRY HALL, MD

ELECTION DIST. NO.: 11C5

DWG. FILENAME:

TRAFFIC CONTROL GENERAL NOTES:

- ALL TRAFFIC CONTROL SIGNS, CHANNELIZATION DEVICES, AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, BALTIMORE COUNTY STANDARDS, AND MARYLAND SHA STANDARDS (INCLUDING LATEST EDITION AND ALL SUPPLEMENTS, ADDENDUM, ERRATA, ETC.).
- ALL TRAFFIC CONTROL SIGNS SHALL BE CONSTRUCTED WITH HIGH PERFORMANCE WIDE ANGLE RETRO REFLECTIVE FLUORESCENT ORANGE SHEETING.
- NO WORK IS TO BEGIN UNTIL ALL SIGNS, CHANNELIZING DEVICES ARE IN PLACE AND OPERATIONAL.
- A MINIMUM OF A 10' LANE MUST BE MAINTAINED AT ALL TIMES. AN ABSOLUTE MINIMUM OF A 9' LANE MUST BE MAINTAIN THROUGH THE RICHLYN DRIVE WORK ZONE. 10' LANE IS HIGHLY PREFERRED.
- ACCESS TO ALL DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
- IF STEEL PLATES ARE USED TO TEMPORARY RESTORE THE ROADWAY, THEY SHALL FOLLOW STANDARD NO. MD. 104.01-86. STEEL PLATE WARNING SIGNS SHALL BE INSTALLED ON ALL APPROACHES. STEEL PLATES FOR TRENCHES 5' AND WIDER SHALL REQUIRE SUPPORT SYSTEM DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND AND APPROVED BY THE BALTIMORE COUNTY ENGINEER.
- ALL WARNING SIGNS NOT IN USE SHALL BE FULLY COVERED WITH OPAQUE MATERIAL.
- TRAFFIC SIGNS SHALL NOT BE PLACED WHERE THEY WILL IMPEDE THE PATH OF PEDESTRIANS OR MOTORISTS.
- FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR ATSSA APPROVED/CERTIFIED FLAGGERS. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS IF THE FLAGGERS CANNOT SEE EACH OTHER OR IF THE LANE CLOSURE EXCEEDS 200 FEET.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO PROPERTY OWNERS WITH REFERENCE TO IMPACT TO EXISTING PARKING ONE WEEK IN ADVANCE PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 4 DAYS PRIOR TO BEGINNING OF WORK.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH BALTIMORE COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION DATED 2000 AND AMENDED.
- WHEN EXCAVATING FOR UTILITIES, ALL SOIL MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
- FULL COMPACTION IS REQUIRED FOR ALL TRENCHES.
- WHEN CROSSING EXISTING UTILITIES THE CONTRACTOR IS TO SUPPORT BRACE AND PROTECT SUCH UTILITIES DURING CONSTRUCTION.
- THE CONTRACTOR IS TO TEST PIT EXISTING UTILITIES PRIOR TO LAYING PIPE.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES TO THEIR OWN SATISFACTION PRIOR TO STARTING ANY WORK.



MOT SEQUENCE OF CONSTRUCTION:

- FORGE ROAD SECTION
 - DURING ALLOWABLE HOURS, CLOSE AND DETOUR FORGE ROAD.
 - TRAFFIC TO BE DETOURED ALONG HONEYGO BOULEVARD AND CROSS ROAD. SEE DETOUR SHEET.
 - CONSTRUCT PROPOSED 12" GRAVITY SEWER.
 - CONSTRUCT SECTIONS OF PROPOSED 12" FORCE MAIN FROM STA. 0+00 TO 7+00. LIMIT WORK ZONE SECTIONS FROM DRIVEWAY CENTERLINE TO DRIVEWAY CENTERLINE TO MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
 - RESTORE TRENCHED ROADWAY BACK TO EXISTING CONDITIONS WITH ASPHALT.
- RICHLYN DRIVE SECTION (FROM FORGE ROAD TO CARLYN ROAD)
 - CLOSE AND DETOUR RICHLYN DRIVE.
 - TRAFFIC TO BE DETOURED ALONG GUNFORGE ROAD AND CARLYN ROAD. SEE DETOUR SHEET.
 - CONSTRUCT SECTIONS OF PROPOSED 12" FORCE MAIN FROM STA. 7+00 TO 20+50. LIMIT WORK ZONE SECTIONS FROM DRIVEWAY CENTERLINE TO DRIVEWAY CENTERLINE TO MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
 - RESTORE TRENCHED ROADWAY BACK TO EXISTING CONDITIONS WITH ASPHALT.
- RICHLYN DRIVE SECTION (FROM CARLYN ROAD TO ACCESS ROAD)
 - INSTALL TRAFFIC CONTROL DEVICES TO USE A ONE LANE ROAD YIELD CONTROL SET UP. TEMPORARY CONCRETE BARRIER TO BE USED BETWEEN THE TRAVEL LANE AND WORKZONE. MAINTAIN A MINIMUM OF A 10' LANE. AN ABSOLUTE MINIMUM OF A 9' LANE MUST BE MAINTAIN THROUGH THE RICHLYN DRIVE WORK ZONE. 10' LANE IS HIGHLY PREFERRED. ANCHOR BARRIER. ONLY CONSTRUCT SECTIONS OF WORKZONE THAT MAINTAIN GOOD SIGHT DISTANCE 30' PAST WORKZONE FOR YIELD CONTROL. SEE TYPICAL SET-UP ON THIS SHEET.
 - WHERE SIGHT DISTANCES ARE NOT ACHIEVABLE FOR YIELD CONTROL USE ONE OF THE FOLLOWING METHODS:
 - UTILIZE PORTABLE TEMPORARY TRAFFIC SIGNALS TO CONTROL THE TRAFFIC FLOW.
 - UTILIZE 24 HOUR FLAGGING OPERATION 2-LANE, 2-WAY EQUAL/LESS THAN 40 MPH AS SHOWN ON MD. STANDARD 104.02-10. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF A 9'-0" LANE AT ALL TIMES. MAINTAIN WORK ZONE PROTECTION WITH TEMPORARY CONCRETE BARRIER.
 - CONSTRUCT SECTIONS OF PROPOSED 12" FORCE MAIN FROM 20+50 TO 39+25. LIMIT WORK ZONE SECTIONS FROM DRIVEWAY CENTERLINE TO DRIVEWAY CENTERLINE TO MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
 - RESTORE TRENCHED ROADWAY BACK TO EXISTING CONDITIONS WITH ASPHALT.
- ACCESS ROAD SECTION
 - CLOSE ACCESS ROAD.
 - CONSTRUCT SECTIONS OF PROPOSED 12" FORCE MAIN FROM 39+25 TO 44+45.
 - RESTORE TRENCHED ROADWAY BACK TO EXISTING CONDITIONS WITH ASPHALT.



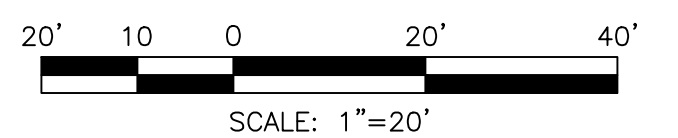
MOT TYPICAL - YIELD CONTROL (EAST OF CARYLN ROAD)
SCALE: 1"=20'-0"

YIELD CONTROL NOTES:

- A MINIMUM OF A 10' LANE MUST BE MAINTAINED AT ALL TIMES. AN ABSOLUTE MINIMUM OF A 9' LANE MUST BE MAINTAIN THROUGH THE RICHLYN DRIVE WORK ZONE. 10' LANE IS HIGHLY PREFERRED. IF 9' LANE CANNOT BE MAINTAIN WITH EXISTING ROADWAY:
 - OFFSET CONSTRUCTION TRENCH FROM FORCE MAIN CENTERLINE TO ALLOW MORE SPACE FOR TRAVEL LANE. MAXIMUM OFFSET SHALL BE 1'-0".
 - INSTALL TEMPORARY ASPHALT AS NEEDED. RETURN GRASS, MAILBOX, DRIVEWAYS BACK TO PRE-CONSTRUCTION CONDITIONS.
- LIMIT WORK ZONE LENGTHS TO THE FOLLOWING CRITERIA:
 - MAINTAIN DRIVEWAY ACCESS AT ALL TIMES.
 - MAINTAIN GOOD SIGHT DISTANCE FOR YIELDING VEHICLES TO SEE OUTGOING VEHICLES. VEHICLES SHOULD BE ABLE TO SEE 30' PAST THE WORKZONE WHERE ONCOMING VEHICLES WOULD BE LOCATED.
 - PENDING ABOVE CRITERIA, MAXIMUM OF 100' IN LENGTH.
 - IF SIGHT DISTANCE CANNOT BE MAINTAINED:
 - UTILIZE PORTABLE TEMPORARY TRAFFIC SIGNALS TO CONTROL THE TRAFFIC FLOW.
 - UTILIZE 24 HOUR FLAGGING OPERATION.
- AT DRIVEWAYS, IF STEEL PLATES ARE USED TO TEMPORARILY RESTORE THE ROADWAY, FOLLOW STANDARD NO MD. 104-01-86. TRENCHES 5' AND WIDER SHALL REQUIRE SUPPORT SYSTEM DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND AND APPROVED BY THE SHA ENGINEER.
- EMERGENCY SERVICES MUST BE MAINTAINED TO RESIDENTS.

LEGEND

- WORK AREA
- TYPE III BARRICADE
- SIGN AND SIGN POST
- TEMPORARY BARRIER
- 25 MPH CRASH CUSHION

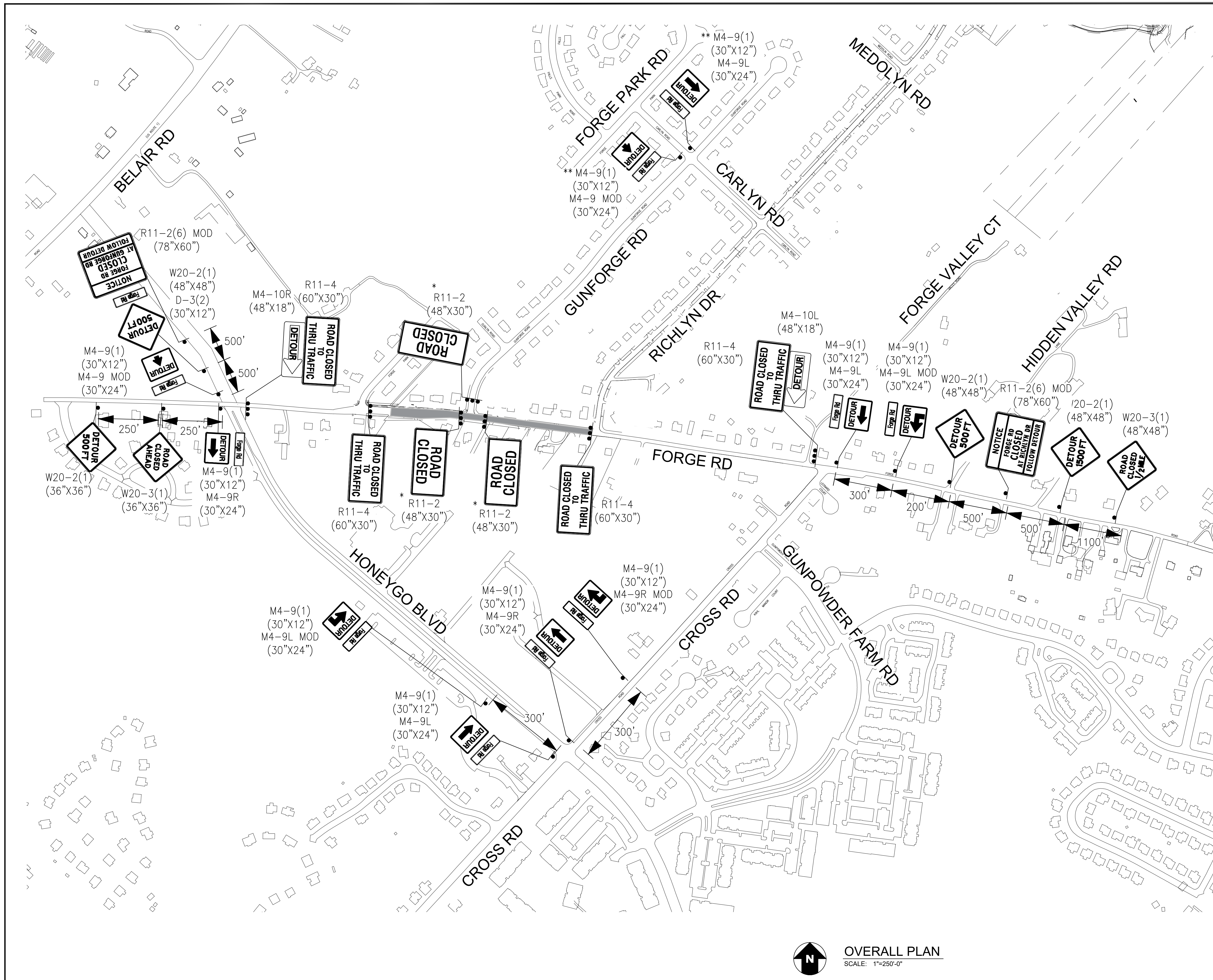


MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	SHT	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.					R.O.W. NO.	QSE	44NE32		PLAN SCALE: AS SHOWN	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	LICENSE NO. 14719 EXPIRATION DATE 12/16/2025		CONTRACT COMPLETION BOX					45NE33		PROFILE SCALE: N/A	
	ENGINEER: JOHNSON, MEMRIAN & THOMPSON 40 WIGHT AVENUE HUNT VALLEY, MD 21030		BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
AS-BUILT PER RECORD PRINT		REVIEWED BY:								BUR. OF ENGINEERING & CONSTRUCTION	
DATE: 07/23/2025		BY: [Signature]	DATE REVIEWED:							SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION		SHEET DESIGNATION	CONTRACT NUMBER
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN		MOT-1	24084SX0
MAINTENANCE OF TRAFFIC GENERAL NOTES / TYPICAL		PROJECT NUMBER	PROJ-10000060
SUBDIVISION: RICHLYN MANOR		SHEET 37 OF 39	
PERRY HALL, MD		DRAWING NUMBER	2024-1172
ELECTION DIST. NO.: 11C5		FILE NO.:	

DWG. FILENAME:



TRAFFIC CONTROL NOTES:

1. ALL STANDARD REGULATORY AND WARNING SIGNS USED FOR MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND MARYLAND EDITION OF THE BOOKLET STANDARD HIGHWAY SIGNS.
2. ALL TEMPORARY TRAFFIC SIGNS SHALL BE INSTALLED IN ACCORDANCE TO MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATION FOR CONSTRUCTION ON MATERIALS, SECTION 104.08 AND NCHRP 350.
3. ALL BARRICADES AND OTHER TRAFFIC CONTROL DEVICES MUST BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD LATEST EDITION) AND THE MARYLAND EDITION OF THE BOOKLET STANDARD HIGHWAY SIGNS.
4. ALL DETOUR SIGNS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
5. ANY CORRECTIONS, MODIFICATIONS, OR ADDITIONS TO THIS PLAN MUST BE APPROVED BY THE ENGINEER.
6. BALTIMORE COUNTY AND/OR STATE HIGHWAY ADMINISTRATIONS RESERVES THE RIGHT TO MODIFY OR ADJUST THIS PLAN TO FIT SITE CONDITIONS AT ANY TIME.
7. ADVANCE NOTICE SIGN SHALL BE PLACED AT THE POINT OF CLOSURE 2 WEEKS PRIOR TO CLOSURE. IF CLOSURE DOES NOT TAKE PLACE WITHIN 1 WEEK OF THE DATE STATED ON SIGN, DATE MUST BE CHANGED TO REFLECT CORRECT CLOSURE DATE AT NO COST TO BALTIMORE COUNTY.
8. SIGN INSTALLATION SHALL NOT LAST ANY LONGER THAN 15 MINUTES PER LOCATION. IF LONGER THAN 15 MINUTES APPROPRIATE TRAFFIC CONTROL AND PERMITS MUST BE USED.
9. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES. AT ANYTIME THE CONTRACTOR DOES NOT MAKE NECESSARY REPAIRS WITHIN 24 HOURS OF NOTIFICATION, APPROPRIATE WORK TIME REDUCTION AND/OR FINES MAY BE APPLIED.
10. FIELD ENGINEER SHALL DETERMINE EXACT PLACEMENT OF THE TYPE III BARRICADES.
11. ALL SIGNS SHALL CONFORM TO CURRENT MDOT SHA MATERIAL AND REFLECTIVITY REQUIREMENTS.
12. ALL DRIVEWAYS ENTRANCES MUST BE MAINTAINED AT ALL TIMES.
13. INSTALL A R11-2(6) MOD SIGN ALONG BOTH DIRECTIONS OF FORGE ROAD NEAR THE EXPECTED WORK ZONE TWO (2) WEEKS PRIOR TO THE ROAD CLOSURE. THE SIGN SHOULD BE REMOVED THE ACTUAL DATE OF THE ROAD CLOSURE.

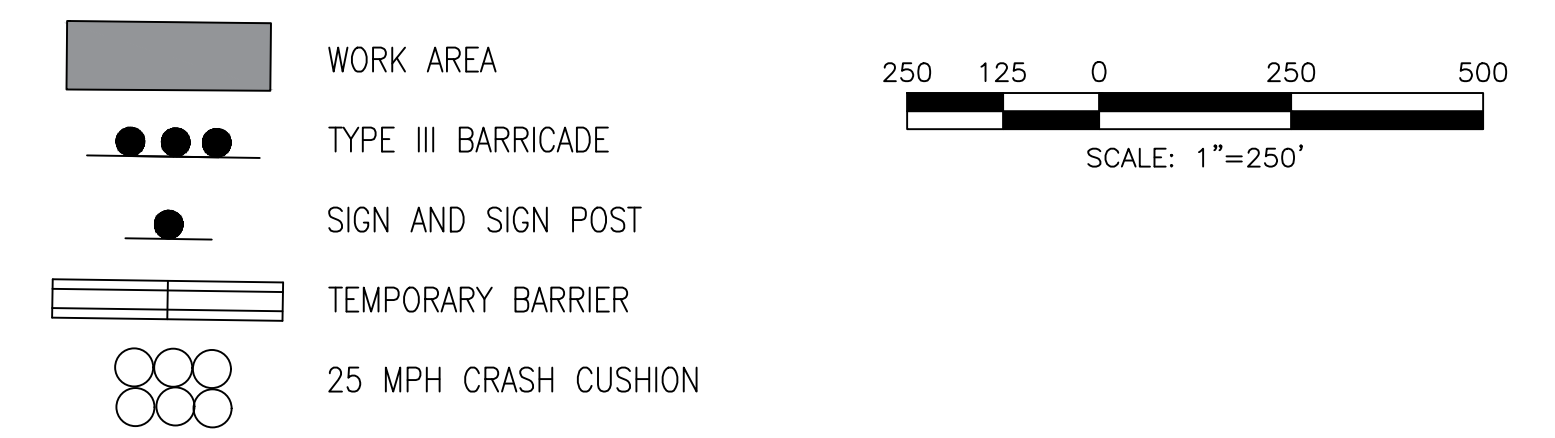


14. ROAD CLOSED SIGNS MARKED WITH * SHALL BE SHIFTED WITH THE WORK ZONE. FULL WORK ZONE SHAPE SHALL NOT BE CLOSED AT THE SAME TIME.
15. INSTALL DETOUR SIGNS MARKED WITH ** WHEN FORGE RD CLOSURE AFFECTS THE FORGE RD AT GUNFORGE RD INTERSECTION. ACCESS TO FORGE ROAD WILL BE MAINTAINED ALONG RICHLYN DRIVE.
16. FORGE RD CLOSURE TO ONLY OCCUR BETWEEN 9 AM - 3 PM. ANY CLOSURE OUTSIDE THESE TIMES NEEDS APPROVAL WITH THE BALTIMORE COUNTY BUREAU OF TRAFFIC.
17. STEEL PLATING DESIGN AND INSTALLATION SHALL FOLLOW SHA MDOT STANDARD NO. MD. 104.01-86. FOR TRENCH WIDTHS EQUAL TO OR GREATER THAN 5 FT, STEEL PLATE AND SUPPORT SYSTEM SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND AND APPROVED BY THE BALTIMORE COUNTY ENGINEER.

ROADWAY CLOSURE NOTIFICATION

CONTACT JASMINE SMITH AT JSMITH1@BALTIMORECOUNTYMD.GOV ONE WEEK PRIOR TO CLOSING WITH THE DATE OF THE CLOSURE AND THE EXPECTED REOPENING DATE.

LEGEND



OVERALL PLAN
SCALE: 1"=250'-0"

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14719 EXPIRATION DATE 12/16/2025		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH#	DRAWING SCALE	DPW AND TRANSPORTATION	
	ENGINEER: JOHNSON, MEMRAN & THOMPSON 40 WIGHT AVENUE HUNT VALLEY, MD 21030		CONTRACT COMPLETION BOX	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	
	DGN BY: JRM DWN BY: JRM BY: DATE:		REVIEWED BY:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES							
	AS-BUILT PER RECORD PRINT		DATE REVIEWED:	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES							

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN FORGE ROAD DETOUR PLAN		SHEET DESIGNATION MOT-2	CONTRACT NUMBER 24084SX0
SUBDIVISION: RICHLYN MANOR PERRY HALL, MD			PROJECT NUMBER PROJ-10000060 SHEET 38 OF 39 DRAWING NUMBER 2024-1173 FILE NO.:
ELECTION DIST. NO.: 11C5			

DWG. FILENAME:

TRAFFIC CONTROL NOTES:

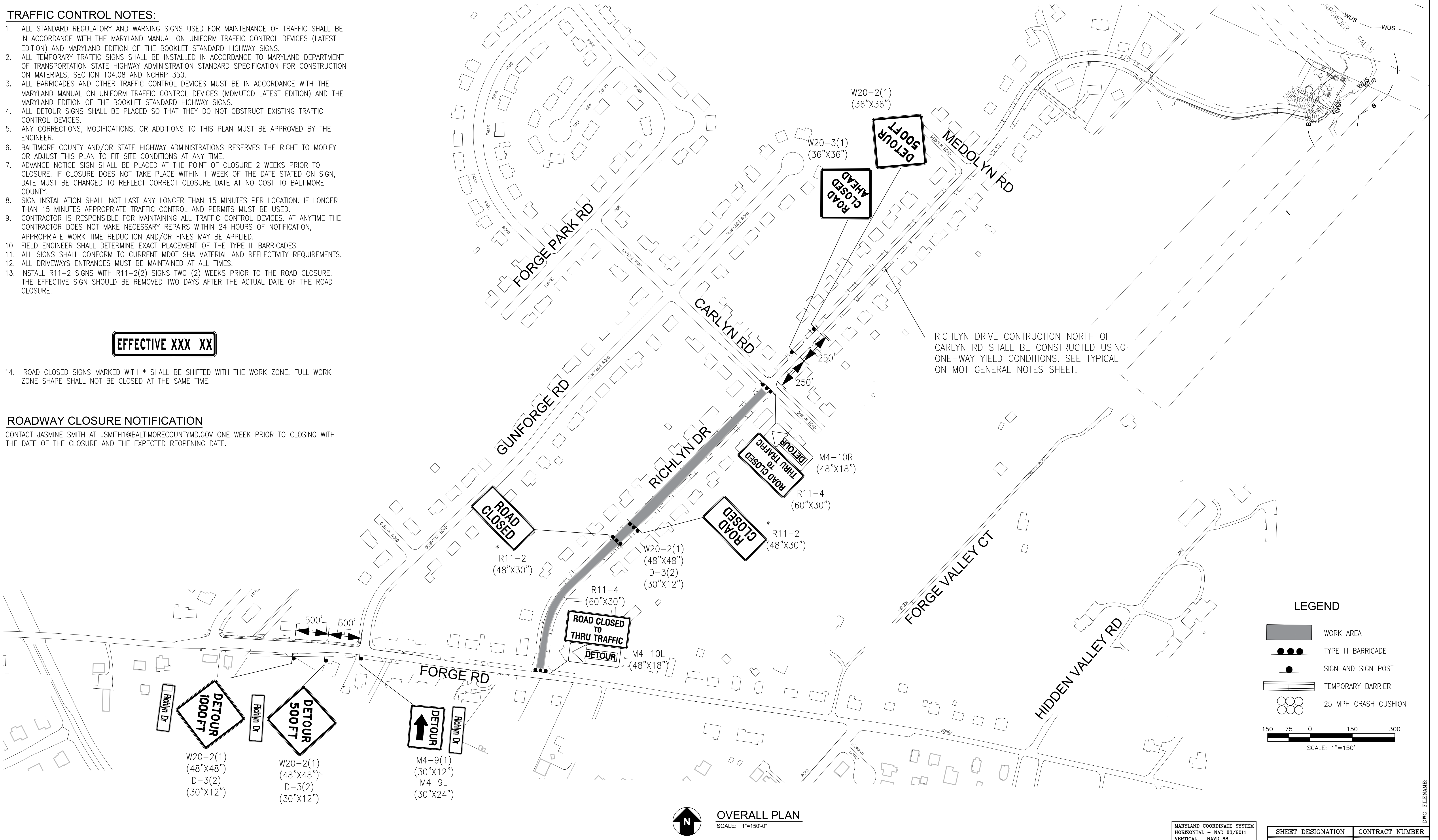
- ALL STANDARD REGULATORY AND WARNING SIGNS USED FOR MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND MARYLAND EDITION OF THE BOOKLET STANDARD HIGHWAY SIGNS.
- ALL TEMPORARY TRAFFIC SIGNS SHALL BE INSTALLED IN ACCORDANCE TO MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATION FOR CONSTRUCTION ON MATERIALS, SECTION 104.08 AND NCHRP 350.
- ALL BARRICADES AND OTHER TRAFFIC CONTROL DEVICES MUST BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD LATEST EDITION) AND THE MARYLAND EDITION OF THE BOOKLET STANDARD HIGHWAY SIGNS.
- ALL DETOUR SIGNS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
- ANY CORRECTIONS, MODIFICATIONS, OR ADDITIONS TO THIS PLAN MUST BE APPROVED BY THE ENGINEER.
- BALTIMORE COUNTY AND/OR STATE HIGHWAY ADMINISTRATIONS RESERVES THE RIGHT TO MODIFY OR ADJUST THIS PLAN TO FIT SITE CONDITIONS AT ANY TIME.
- ADVANCE NOTICE SIGN SHALL BE PLACED AT THE POINT OF CLOSURE 2 WEEKS PRIOR TO CLOSURE. IF CLOSURE DOES NOT TAKE PLACE WITHIN 1 WEEK OF THE DATE STATED ON SIGN, DATE MUST BE CHANGED TO REFLECT CORRECT CLOSURE DATE AT NO COST TO BALTIMORE COUNTY.
- SIGN INSTALLATION SHALL NOT LAST ANY LONGER THAN 15 MINUTES PER LOCATION. IF LONGER THAN 15 MINUTES APPROPRIATE TRAFFIC CONTROL AND PERMITS MUST BE USED.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES. AT ANYTIME THE CONTRACTOR DOES NOT MAKE NECESSARY REPAIRS WITHIN 24 HOURS OF NOTIFICATION, APPROPRIATE WORK TIME REDUCTION AND/OR FINES MAY BE APPLIED.
- FIELD ENGINEER SHALL DETERMINE EXACT PLACEMENT OF THE TYPE III BARRICADES.
- ALL SIGNS SHALL CONFORM TO CURRENT MDOT SHA MATERIAL AND REFLECTIVITY REQUIREMENTS.
- ALL DRIVEWAYS ENTRANCES MUST BE MAINTAINED AT ALL TIMES.
- INSTALL R11-2 SIGNS WITH R11-2(2) SIGNS TWO (2) WEEKS PRIOR TO THE ROAD CLOSURE. THE EFFECTIVE SIGN SHOULD BE REMOVED TWO DAYS AFTER THE ACTUAL DATE OF THE ROAD CLOSURE.

EFFECTIVE XXX XX

- ROAD CLOSED SIGNS MARKED WITH * SHALL BE SHIFTED WITH THE WORK ZONE. FULL WORK ZONE SHAPE SHALL NOT BE CLOSED AT THE SAME TIME.

ROADWAY CLOSURE NOTIFICATION

CONTACT JASMINE SMITH AT JSMITH1@BALTIMORECOUNTYMD.GOV ONE WEEK PRIOR TO CLOSING WITH THE DATE OF THE CLOSURE AND THE EXPECTED REOPENING DATE.



OVERALL PLAN
SCALE: 1"=150'-0"

MARYLAND COORDINATE SYSTEM
HORIZONTAL - NAD 83/2011
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. <u>14719</u> EXPIRATION DATE <u>12/16/2025</u>		AS-BUILT / REVISION BY: _____ DATE: _____	P.W.A. NO. _____ R.O.W. NO. _____	KEY SHEET _____ POSITION SHIT _____ 44NE32 44NE33 45NE33 46NE33 46NE34	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: N/A	DPW AND TRANSPORTATION SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES
	ENGINEER: JOHNSON, MEMRAN & THOMPSON 40 WIGHT AVENUE HUNT VALLEY, MD 21030 AS-BUILT PER RECORD PRINT		CONTRACT COMPLETION BOX BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER	QSE SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	BUR. OF ENGINEERING & CONSTRUCTION	SEE DRAWING 2024-1136 FOR ORIGINAL SIGNATURES	
	DGN BY: JRM DWN BY: JRM BY: _____ DATE: _____		REVIEWED BY: _____ DATE REVIEWED: _____	DATE: _____	DATE: _____	DATE: _____	DATE: _____
	CHK BY: DJD		DATE REVIEWED: _____	DATE: _____	DATE: _____	DATE: _____	DATE: _____

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN RICHLYN DRIVE DETOUR PLAN		SHEET DESIGNATION MOT-3	CONTRACT NUMBER 24084SX0
SUBDIVISION: RICHLYN MANOR PERRY HALL, MD		PROJECT NUMBER PROJ-10000060	SHEET 39 OF 39 DRAWING NUMBER 2024-1174
ELECTION DIST. NO.: 11C5		FILE NO.: _____	FILE NO.: _____

DWG. FILENAME: